

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: 2020-05-19
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: noase1001
 Investigator(s): DMP/ARK Section, Township, Range: sec 20 T046N R004W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.447337 Long: -90.896157 Datum: WGS84
 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 year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) The sample plot is located within a shallow swale in a hay field. Hydrophytic vegetation was observed, however no other wetland indicators were met.	

HYDROLOGY

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), 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 % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1. <u><i>Phleum pratense</i></u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
2. <u><i>Carex cf stricta</i></u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	
3. <u><i>Carex cf tenera</i></u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u><i>Ranunculus acris</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
5. <u><i>Lotus corniculatus</i></u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
6. <u><i>Fragaria virginiana</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>50</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 15 x 1 = 15
 FACW species 0 x 2 = 0
 FAC species 7 x 3 = 21
 FACU species 28 x 4 = 112
 UPL species 0 x 5 = 0
 Column Totals: 50 (A) 148 (B)
 Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH 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.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

The vegetation is representative of the depression. Sample plot contains vegetation that was found in the surrounding uplands and wetlands.

SOIL

Sampling Point: noase1001

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	7.5YR 3/2	100		0			CL	
7-20	5YR 4/4	100		0			C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</p> <p><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/></p>
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Remarks:
 The soil profile consists of a dark clay loam over a red clay. No hydric soil indicators were observed.



noase1001_E



noase1001_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Ashland Sampling Date: 2020-05-20
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: noase1005
 Investigator(s): DMP/ARK Section, Township, Range: sec 28 T046N R004W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.436774 Long: -90.881613 Datum: WGS84
 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 year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
 The sample point was taken within a depression, however no other hydrology indicators were observed.

VEGETATION – Use scientific names of plants.

Sampling Point: noase1005

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>7</u> x 4 = <u>28</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>7</u> (A) <u>28</u> (B) Prevalence Index = B/A = <u>4.0</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	1. _____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5</u>)	1. <u>Trifolium repens</u>	<u>5</u>	<u>Y</u> <u>FACU</u>	
2. <u>Trifolium pratense</u>	<u>2</u>	<u>Y</u> <u>FACU</u>		
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>7</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH 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. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>30</u>)	1. _____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>

Remarks: (Include photo numbers here or on a separate sheet.)

The vegetation within the sample point has been significantly disturbed by tillage. *Juncus effusus*, *Scirpus cyperinus*, *Eleocharis cf ovata*, *Alisma triviale*, and *Typha* sp. were observed just outside of the survey area in a wet meadow community.



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): ARK/DMP Section, Township, Range: sec 20 T046N R004W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.448023 Long: -90.898042 Datum: WGS84
 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 year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Moist depression in a hay field. This was assessed as a possible wetland before determining that it did not meet soil or vegetation parameters.	

HYDROLOGY

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

VEGETATION – Use scientific names of plants.

Sampling Point: noase1010

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Carex tenera</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Carex gracillima</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Phleum pratense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Trifolium repens</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
5. <u>Ranunculus acris</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
6. <u>Alopecurus pratensis</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
7. <u>Taraxacum officinale</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>32</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 0 x 2 = 0
 FAC species 13 x 3 = 39
 FACU species 19 x 4 = 76
 UPL species 0 x 5 = 0
 Column Totals: 32 (A) 115 (B)
 Prevalence Index = B/A = 3.59

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH 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.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No

Remarks: (Include photo numbers here or on a separate sheet.)
Sampled vegetation is representative of the feature.



noase1010_E



noase1010_N

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-28	Waterbody Survey ID: sasb006p_x1
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: Bad River	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.336244	Longitude: -90.652612
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: Southern bank of the Bad River at the edge of the survey corridor.			
Measurements			
Depth of Water: <u>5</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>50</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>50</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharinum, Fraxinus pennsylvanica, Matteuccia struthiopteris, Prunus virginiana			
Aquatic Habitats (ex: submerged or emergent aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Runs, pools, woody debris, overhanging vegetation.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Road, bridges.			
Observation Notes: The Bad River is a perennial waterbody that flows through surrounding floodplain forest.			



sasb006p_x1_E (downstream)



sasb006p_x1_N (across)



sasb006p_x1_W (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-28	Waterbody Survey ID: sasb006p_x2
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: Bad River	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.335548	Longitude: -90.652351
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: Northern bank of the Bad River at the edge of the survey corridor.			
Measurements			
Depth of Water: <u>5</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>50</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>50</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharinum, Fraxinus pennsylvanica, Matteuccia struthiopteris			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Runs, pools, woody debris, overhanging vegetation.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Road, bridges.			
Observation Notes: The Bad River is a perennial waterbody that flows through floodplain forest.			



sasb006p_x2_N (downstream)



sasb006p_x2_S (upstream)



sasb006p_x2_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-28	Waterbody Survey ID: sasb1003e
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: UNT	
Company: Enbridge	Crew Member Initials: KDF/SAM	Latitude: 46.386259	Longitude: -90.762358
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input checked="" type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The ephemeral stream is fed by groundwater discharge at the south end and overflow of surface water traveling downslope. There is a narrow fringe wetland present on either side of the feature.			
Measurements			
Depth of Water: <0.25 ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: 6 ft. N/A <input type="checkbox"/>	
OHWM Width: 2 ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Onoclea sensibilis, Osmunda claytoniana, Equisetum hyemale, Betula papyrifera			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Feature appears to receive polluted runoff resulting in a sheen on the surface of the water.			
Observation Notes: None.			



sasb1003e_NE (downstream)



sasb1003e_NW (across)



sasb1003e_SW (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-28	Waterbody Survey ID: sasd1004e
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.339164	Longitude: -90.625747
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: Natural ephemeral stream flowing through a forest.			
Measurements			
Depth of Water: <u>0.25</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>0.5</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>1</u> ft.			
OHWM Indicator: <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Abies balsamea, Populus tremuloides, Athyrium filix-femina, Carex sp.			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: The feature is a very narrow defined channel with flowing water between two hills. There are exposed rocks present within portions of the channel. There are areas of the feature where the flow goes below ground and then comes back up.			



sasd1004e_N (upstream)



sasd1004e_S (downstream)



sasd1004e_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-20	Waterbody Survey ID: sase006p_x
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: Bay City Creek	
Company: Enbridge	Crew Member Initials: SBR/DGL	Latitude: 46.550472	Longitude: -90.896330
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The feature is a perennial stream that weakly meanders with clear, moving water.			
Measurements			
Depth of Water: <u>0.3</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>8</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>12</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Abies balsamea, Populus tremuloides, Equisetum arvense, Matteuccia struthiopteris			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Shallow pools and downed woody debris are likely habitats for aquatic organisms.			
Aquatic Organisms Observed (list): Minnows were observed in the stream.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion from the steep banks is possible.			
Observation Notes: The stream flows from a forested area into an open area.			



sase006p_x_N (upstream)



sase006p_x_S (downstream)



sase006p_x_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-19	Waterbody Survey ID: sase1001e
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: UNT to Marengo River	
Company: Enbridge	Crew Member Initials: DMP/ARK	Latitude: 46.437269	Longitude: -90.884386
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input checked="" type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The artificial swale feature meanders through a tilled agricultural field. Water was not flowing at the time of survey, however there are pools of turbid water.			
Measurements			
Depth of Water: <u> 0 </u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u> 0 </u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u> 5 </u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Lolium perenne			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Pools of standing water were observed.			
Aquatic Organisms Observed (list): There were minnows observed in the pools of stream.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The stream is artificial and occurs within an agricultural field.			
Observation Notes: The ephemeral stream is artificial and occurs within an agricultural field.			



sase1001e_E (across)



sase1001e_N (downstream)



sase1001e_S (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-20	Waterbody Survey ID: sase1002e
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: DMP/ARK	Latitude: 46.437060	Longitude: -90.881213
Survey Type: <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other <i>(check one)</i>			
Waterbody Type: <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other <i>(check one)</i>			
Water Appearance: <input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other <i>(check one)</i>			
Existing Condition^a: <input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input checked="" type="checkbox"/> Functionally Impaired Stream <i>(check one)</i>			
Feature Description: <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated <i>(check one)</i>			
Flow Regime: <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale <i>(check one)</i>			
Sinuosity within Survey Corridor: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering <i>(check one)</i>			
Description Notes: There was no water observed within the feature during the field survey.			
Measurements			
Depth of Water: <u>N/A</u> ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/> <input type="checkbox"/> Unknown		Water Edge to Water Edge: <u>N/A</u> ft. <input type="checkbox"/> N/A <input checked="" type="checkbox"/> OHWM Width: <u>1</u> ft.	
OHWM Indicator: <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <i>(check all that apply)</i>			
<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <i>(check all that apply)</i>			
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Salix petiolaris, Phleum pratense, Scirpus cyperinus			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): No aquatic habitat was observed.			
Aquatic Organisms Observed (list): No aquatic organisms were observed.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): The feature occurs at the edge of a tilled crop field.			
Observation Notes: The ephemeral swale flows south to north and begins at the edge of a tilled crop field.			



sase1002e_N (across)



sase1002e_S (upstream)



sase1002e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-23	Waterbody Survey ID: sase1003e
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: ARK/DMP	Latitude: 46.430508	Longitude: -90.861430
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input checked="" type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		
Description Notes: Ephemeral feature with bed and bank naturally formed in the bottom of a roadside ditch. Bank measurements indicate naturally formed banks within the ditch, where the water would rise to at flood stage, and not the higher, constructed banks. Water is supplied from a culvert to the north, as well as from runoff from the adjacent gravel road and forest.			
Measurements			
Depth of Water: <u> 0 </u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u> 0 </u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u> 1 </u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Mosses, Hieracium cf. aurantiacum, Poa annua			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Mowing.			
Observation Notes: No water present at time of survey.			



sase1003e_E (across)



sase1003e_N (upstream)



sasc1003e_S (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-28	Waterbody Survey ID: sase1005e
State: Wisconsin	County/Parish: Ashland	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: ARK/DMP	Latitude: 46.366805	Longitude: -90.723369
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: Ephemeral feature with a poorly developed bed and bank, located in a forested swale. Conveys stormwater concentrated from higher in the landscape to a wetland outside the survey area.			
Measurements			
Depth of Water: <u>0.25</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>2</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>2</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharum, Onoclea sensibilis, Toxicodendron radicans			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: There is less vegetation in the bed of the channel than there is on the adjacent slopes.			



sase1005e_NE (downstream)



sase1005e_SE (across)



sase1005c_SW (upstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-25	Waterbody Survey ID: sirb1001e
State: Wisconsin	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: KDF/SAM	Latitude: 46.383099	Longitude: -90.546737
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The stream is located within mesic hardwood forest, connecting two forested wetlands.			
Measurements			
Depth of Water: <0.25 ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: 1 ft. N/A <input type="checkbox"/>	
OHWM Width: 1 ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Ostrya virginiana, Fraxinus nigra, Erythronium americanum, Athyrium filix-femina, Matteuccia struthiopteris			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Downed woody debris is present along the streambed.			
Aquatic Organisms Observed (list): American Toad, Wood Frog, Northern Leopard Frog.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Minor erosion is evident along the stream channel.			
Observation Notes: None.			



sirb1001e_E (upstream)



sirb1001e_S (across)



sirb1001e_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-26	Waterbody Survey ID: sirb1002e
State: Wisconsin	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: KDF/SAM	Latitude: 46.384749	Longitude: -90.546191
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input checked="" type="checkbox"/> Highly Functional Stream <input type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The feature is an ephemeral stream fed by discharge, flowing from a forested wetland.			
Measurements			
Depth of Water: <u>0.25</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>2</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>2</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Acer saccharum, Fraxinus nigra, Rubus idaeus, Equisetum pratense			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Downed woody debris is present within the feature.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Minor erosion evident along the shallow banks.			
Observation Notes: None.			



sirb1002e_E (upstream)



sirb1002e_N (across)



sirb1002e_NW (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-19	Waterbody Survey ID: sirc1002e
State: Wisconsin	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: EJO/JSW	Latitude: 46.459887	Longitude: -90.507550
Survey Type: <i>(check one)</i>	<input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input checked="" type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input checked="" type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: Feature is a small stream running through excavated area/gravel pit.			
Measurements			
Depth of Water: <u>0.5</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>2</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>2</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Salix sp., Plantago cf. lanceolata, Trifolium repens, Agrostis gigantea			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Low quality pool present.			
Aquatic Organisms Observed (list): None observed.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Waterbody located within excavated gravel pit.			
Observation Notes: Feature runs through gravel pit, flows under culvert, and drains outside of survey area to forest to the north.			



sirc1002e_N (downstream)



sirc1002e_S (upstream)



sirc1002e_SW (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-19	Waterbody Survey ID: sirc1002e
State: Wisconsin	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: EJO/JSW	Latitude: 46.459887	Longitude: -90.507550
Survey Type: <small>(check one)</small> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input checked="" type="checkbox"/> Other			
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other			
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input checked="" type="checkbox"/> Algal Mats <input type="checkbox"/> Other			
Existing Condition^a: <small>(check one)</small> <input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream			
Feature Description: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Flow Regime: <small>(check one)</small> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale			
Sinuosity within Survey Corridor: <small>(check one)</small> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering			
Description Notes: Feature is a small stream running through excavated area/gravel pit.			
Measurements			
Depth of Water: <u>0.5</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>2</u> ft. N/A <input type="checkbox"/>	
OHWM Indicator: <small>(check all that apply)</small> <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change			
Dominant Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic			
Observations			
Riparian Zone Present: <small>(check one)</small> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Vegetation Layers: <small>(check all that apply)</small> <input type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs			
Dominant Bank Vegetation (list): Salix sp., Plantago cf. lanceolata, Trifolium repens, Agrostis gigantea			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Low quality pool present.			
Aquatic Organisms Observed (list): None observed.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Waterbody located within excavated gravel pit.			
Observation Notes: Feature runs through gravel pit, flows under culvert, and drains outside of survey area to forest to the north.			



sirc1002e_N (downstream)



sirc1002e_S (upstream)



sirc1002e_SW (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-26	Waterbody Survey ID: sird1004i
State: Wisconsin	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: AGG/OTG	Latitude: 46.390259	Longitude: -90.545537
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: Intermittent feature meandering through a large forested wetland.			
Measurements			
Depth of Water: <u>0.75</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>1.5</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>2</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Athyrium filix-femina, Acer rubrum, Fraxinus nigra			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): None.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None.			
Observation Notes: None.			



sird1004i_E (upstream)



sird1004i_S (across)



sird1004i_W (downstream)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-26	Waterbody Survey ID: sird1005i
State: Wisconsin	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: KDF/AGG	Latitude: 46.388248	Longitude: -90.545324
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input checked="" type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The intermittent stream is located within mesic hardwood forest and fed by discharge from an adjacent forested wetland.			
Measurements			
Depth of Water: <u>0.25</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>3</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>3</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Betula alleghaniensis, Matteuccia struthiopteris, Fraxinus nigra, Athyrium filix-femina			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Downed woody debris and small pools are present within the feature.			
Aquatic Organisms Observed (list): Frogs.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Erosion of banks is more evident along the north end of the feature.			
Observation Notes: None.			



sird1005i_N (downstream)



sird1005i_SW (upstream)



sird1005i_W (across)

Waterbody Data Sheet

Description			
Project Name: Line 5 Relocation Project		Date: 2020-05-26	Waterbody Survey ID: sird1006e
State: Wisconsin	County/Parish: Iron	USGS Waterbody Name: None	
Company: Enbridge	Crew Member Initials: KDF/AGG	Latitude: 46.387494	Longitude: -90.545033
Survey Type: <i>(check one)</i>	<input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Facility <input type="checkbox"/> Other		
Waterbody Type: <i>(check one)</i>	<input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Swale <input type="checkbox"/> Canal <input type="checkbox"/> Other		
Water Appearance: <i>(check one)</i>	<input type="checkbox"/> No Water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on Surface <input type="checkbox"/> Surface Scum <input type="checkbox"/> Algal Mats <input type="checkbox"/> Other		
Existing Condition^a: <i>(check one)</i>	<input type="checkbox"/> Highly Functional Stream <input checked="" type="checkbox"/> Moderately Functional Stream <input type="checkbox"/> Functionally Impaired Stream		
Feature Description: <i>(check one)</i>	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated		
Flow Regime: <i>(check one)</i>	<input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial <input type="checkbox"/> Connecting Swale		
Sinuosity within Survey Corridor: <i>(check one)</i>	<input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		
Description Notes: The ephemeral stream is located within mesic hardwood forest flowing through a forested wetland and fed by discharge.			
Measurements			
Depth of Water: <u>0.25</u> ft. N/A <input type="checkbox"/> Unknown <input type="checkbox"/>		Water Edge to Water Edge: <u>1</u> ft. N/A <input type="checkbox"/>	
OHWM Width: <u>2</u> ft.			
OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Dominant Substrate: <i>(check all that apply)</i>	<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic		
Observations			
Riparian Zone Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(check one)</i>			
Vegetation Layers: <input checked="" type="checkbox"/> Trees <input checked="" type="checkbox"/> Saplings/Shrubs <input checked="" type="checkbox"/> Herbs <i>(check all that apply)</i>			
Dominant Bank Vegetation (list): Fraxinus nigra, Ostrya virginiana, Athyrium filix-femina, Erythronium americanum			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Downed woody debris is present within the feature.			
Aquatic Organisms Observed (list): None.			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Minor bank erosion is evident in areas of the stream.			
Observation Notes: None.			



sird1006e_E (across)



sird1006e_N (downstream)



sird1006e_S (upstream)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Ashland Sampling Date: 2020-05-18
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wase1001e_w
 Investigator(s): DMP/ARK Section, Township, Range: sec 18 T046N R004W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.466292 Long: -90.907443 Datum: WGS84
 Soil Map Unit Name: Kellogg-Allendale-Ashwabay complex, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> 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 within a roadside ditch associated with Highway 112 and adjacent to a homestead.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____

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

Remarks:
The hydrologic regime is seasonally saturated. The soils are saturated to the surface at the sample point, and standing water was observed in some areas within the feature.

VEGETATION – Use scientific names of plants.

Sampling Point: wase1001e_w

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>2</u> x 4 = <u>8</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>52</u> (A) <u>108</u> (B) Prevalence Index = B/A = <u>2.076923076923077</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Phalaris arundinacea</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Poa pratensis</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>52</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH 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. Woody vines – All woody vines greater than 3.28 ft in height.
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation at the sample point is representative of the the ditch, however meadow foxtail is sporadic outside of the plot and patches of dark green bulrush were observed within the southern portion of the wetland.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



wase1001e_w_N



wase1001e_w_S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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: sec 27 T046N R004W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.430817 Long: -90.859671 Datum: WGS84
 Soil Map Unit Name: Tonkey sandy loam, 0 to 2 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) The feature is a small wet meadow that is located in a gap within the forest canopy. This feature shares upland point wase1017_u with wase1017f.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) ___ High Water Table (A2) ___ Aquatic Fauna (B13) ___ Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>18</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>15</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The hydrologic regime is seasonally saturated. The water table was observed 18 inches below the surface.	

VEGETATION – Use scientific names of plants.

Sampling Point: wase1022e_w

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>35</u> x 1 = <u>35</u> FACW species <u>12</u> x 2 = <u>24</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>7</u> x 4 = <u>28</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>56</u> (A) <u>93</u> (B) Prevalence Index = B/A = <u>1.66</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Alnus incana</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Corylus americana</u>	<u>2</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Acer rubrum</u>	<u>2</u>	<u>Y</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>9</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Calamagrostis canadensis</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Carex crinita</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Rubus pubescens</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Solidago altissima</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Carex brunnescens</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>47</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH 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. Woody vines – All woody vines greater than 3.28 ft in height.
Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) The vegetation is representative of the wetland. Red maple, black ash, quaking aspen, and paper birch trees are overhanging the wetland, but are not rooted within it.				



wase1022e_w_N



wase1022e_w_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

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: sec 35 T046N R004W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.420334 Long: -90.827314 Datum: WGS84
 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 year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Feature is classified as a wet meadow community. Vegetation in this wetland suggests a history of disturbance. It may have been hayed in the past; if so, it has been left fallow long enough to allow extensive shrub development at the margin of the wetland and the surrounding upland.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>16</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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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.

VEGETATION – Use scientific names of plants.

Sampling Point: wase1052e_w

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. <u>Cornus racemosa</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>1</u> x 2 = <u>2</u> FAC species <u>17</u> x 3 = <u>51</u> FACU species <u>21</u> x 4 = <u>84</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>49</u> (A) <u>147</u> (B) Prevalence Index = B/A = <u>3.00</u>
2. <u>Viburnum lentago</u>	<u>2</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Cornus alba</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>8</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Carex gracillima</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
3. <u>Carex tenera</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Elymus repens</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Ranunculus acris</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
6. <u>Poa pratensis</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
7. <u>Scirpus cyperinus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
8. <u>Solidago altissima</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>41</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH 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. Woody vines – All woody vines greater than 3.28 ft in height.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.) 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

Sampling Point: wase1052e_w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/1	100		0			CL	
2-6	10YR 3/1	95	5YR 5/6	5	C	M	C	
6-20	5YR 4/2	98	5YR 5/6	2	C	M	C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)</p> <p><input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR K, L)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)</p> <p><input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)</p> <p><input type="checkbox"/> Red Parent Material (F21)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks:
Clay with redox.



wase1052e_w_N



wase1052e_w_W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 5 Relocation Project City/County: Ashland Sampling Date: 2020-06-04
 Applicant/Owner: Enbridge State: Wisconsin Sampling Point: wase1053e_w
 Investigator(s): ARK/DMP Section, Township, Range: sec 35 T046N R004W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%
 Subregion (LRR or MLRA): Northcentral Forests Lat: 46.420813 Long: -90.826942 Datum: WGS84
 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 year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Feature is classified as a wet meadow. The vegetation suggests a history of disturbance. Haying may have occurred in the past, before the shrubs developed, or the area may have been used as a pasture. Form paired with upland form wase1049_u.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>20</u> Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____

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

Remarks:
Seasonally saturated depression. Water table observed at 20 inches below surface.

VEGETATION – Use scientific names of plants.

Sampling Point: wase1053e_w

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>0</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>13</u> x 2 = <u>26</u> FAC species <u>25</u> x 3 = <u>75</u> FACU species <u>7</u> x 4 = <u>28</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>60</u> (A) <u>144</u> (B) Prevalence Index = B/A = <u>2.4</u>
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Cornus alba</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Scirpus cyperinus</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Carex tenera</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Ranunculus acris</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Poa pratensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Solidago gigantea</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
6. <u>Elymus repens</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
7. <u>Potentilla recta</u>	<u>1</u>	<u>N</u>	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>41</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>0</u> = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH 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. Woody vines – All woody vines greater than 3.28 ft in height.
Remarks: (Include photo numbers here or on a separate sheet.) Shrubs are restricted to wetland margins and overall cover is less than in this plot. Woolgrass is more abundant in the wettest portions.				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>



wase1053e_w_E



wase1053e_w_SW