



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 11/09/11
Applicant: Enbridge	Investigator #1: B. Kuykendahl	County: La Porte
Investigator #2: A. Binkowski	NWI/WWI Classification: PUBF, PFO1C	State: Indiana
Soil Unit: Houghton muck	Local Relief: Concave	Wetland ID: W-515a
Landform: Depression	Slope (%): -- Latitude: -- Longitude: -- Datum: --	Sample Point: 1w
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: PSS
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 30
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: 38 N
Remarks: --		Range: 2 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 3 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 0 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 0 (in.)	

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

Remarks: **Depressional area**

SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly**

Taxonomy (Subgroup): **Typic Haplosaprists** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)
			Color (Moist)	%	Color (Moist)	%	Type	Location		
0	10	1	2.5Y	2.5/2	--	--	--	--	--	Muck
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input checked="" type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	Indicators for Problematic Soils¹ <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: --		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-515a** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer negundo</i>	10	Y	FACW
2.	<i>Acer saccharinum</i>	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		20		

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>4</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>75.0%</u> (A/B)

Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Cephalanthus occidentalis</i>	50	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		50		

Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. <u>50</u>	x 1 = <u>50</u>
FACW spp. <u>20</u>	x 2 = <u>40</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>70</u> (A)	<u>90</u> (B)
Prevalence Index = B/A = <u>1.286</u>	

Herb Stratum (Plot size: 2 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Duckweed sp.</i>	2	Y	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		2		

Hydrophytic Vegetation Indicators:		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *

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

Woody Vine Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		

Definitions of Vegetation Strata:	
Tree	Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/Shrub	Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: --

Hydrophytic Vegetation Present Yes No

Additional Remarks:
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WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 11/09/11
Applicant: Enbridge	Investigator #1: B. Kuykendahl	County: La Porte
Investigator #2: A. Binkowski	NWI/WWI Classification: --	State: Indiana
Soil Unit: Houghton muck	Local Relief: --	Wetland ID: W-515a
Landform: --	Slope (%): --	Sample Point: 2u
Latitude: --	Longitude: --	Community ID: Upland
Datum: --		Section: 30
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: 2 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **4 ft higher in elevation than wetland point**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	

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

Remarks: **No primary hydrology indicators were observed; only FAC-Neutral was met.**

SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly**

Taxonomy (Subgroup): **Typic Haplosaprists** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	
0	4	1	10YR	4/2	--	--	--	--	Silt Loam
4	16	2	10YR	5/3	--	--	--	--	Silt Loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: --		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-515a** Sample Point **2u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	% Cover	Dominant	Ind. Status
1.	<i>Acer negundo</i>	10	Y	FACW
2.	<i>Acer saccharinum</i>	10	Y	FACW
3.	<i>Fraxinus pennsylvanica</i>	10	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		30		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Acer saccharinum</i>	10	Y	FACW
2.	<i>Acer negundo</i>	10	Y	FACW
3.	<i>Fraxinus pennsylvanica</i>	10	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		30		
Herb Stratum (Plot size: 2 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		0		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>60</u>	x 2 = <u>120</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>60</u> (A)	Total <u>120</u> (B)
Prevalence Index = B/A = <u>2.000</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

Although wetland vegetation present, soils and hydrology support upland determination.



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: B. Meyer
Investigator #2: D. Tersteeg
Date: 10/27/11
County: La Porte
State: Indiana
Wetland ID: W-516a
Sample Point: 1u
Community ID: Upland
Section: 19
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [] Yes [] No
Wetland Hydrology Present? [] Yes [] No
Hydric Soils Present? [] Yes [] No
Is This Sampling Point Within A Wetland? [] Yes [] No

Remarks: Soils are sandy and therefore naturally problematic

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present []):
Primary: A1 - Surface Water, A2 - High Water Table, A3 - Saturation, B1 - Water Marks, B2 - Sediment Deposits, B3 - Drift Deposits, B4 - Algal Mat or Crust, B5 - Iron Deposits, B7 - Inundation Visible on Aerial Imagery, B8 - Sparsely Vegetated Concave Surface
Secondary: B6 - Surface Soil Cracks, B10 - Drainage Patterns, C2 - Dry-Season Water Table, C8 - Crayfish Burrows, C9 - Saturation Visible on Aerial Imagery, D1 - Stunted or Stressed Plants, D2 - Geomorphic Position, D5 - FAC-Neutral Test

Field Observations:
Surface Water Present? [] Yes [] No
Water Table Present? [] Yes [] No
Saturation Present? [] Yes [] No
Depth: N/A (in.)
Wetland Hydrology Present? [] Yes [] No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A
Remarks: --

SOILS

Map Unit Name: Hanna sandy loam
Series Drainage Class: moderately well
Taxonomy (Subgroup): Aquultic Hapludalfs
Field Observations Confirm Mapped Type? [] Yes [] No

Table with 12 columns: Top Depth, Bottom Depth, Horizon, Matrix (Color, %), Mottles (Color, %, Type, Location), Texture (e.g. clay, sand, loam). Rows show soil profile data for horizons 1, 2, and 3.

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
A1 - Histosol, A2 - Histic Epipedon, A3 - Black Histic, A4 - Hydrogen Sulfide, A5 - Stratified Layers, A10 - 2 cm Muck, A11 - Depleted Below Dark Surface, A12 - Thick Dark Surface, S1 - Sandy Muck Mineral, S3 - 5 cm Mucky Peat or Peat
S4 - Sandy Gleyed Matrix, S5 - Sandy Redox, S6 - Stripped Matrix, F1 - Loamy Muck Mineral, F2 - Loamy Gleyed Matrix, F3 - Depleted Matrix, F6 - Redox Dark Surface, F7 - Depleted Dark Surface, F8 - Redox Depressions
Indicators for Problematic Soils: A16 - Coast Prairie Redox, F12 - Iron-Manganese Masses, Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present? [] Yes [] No

Remarks: --

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-516a** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>DACTYLIS GLOMERATA</i>	80	Y	FACU
2.	<i>ELYTRIGIA REPENS</i>	10	N	FACU
3.	<i>PHALARIS ARUNDINACEA</i>	10	N	FACW
4.	<i>Rosa arkansana</i>	2	N	NI
5.	<i>solidago gigantea</i>	2	N	FACW
6.	<i>DAUCUS CAROTA</i>	2	N	UPL
7.	<i>CIRSIIUM ARVENSE</i>	2	N	FACU
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		108		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>12</u>	x 2 = <u>24</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>92</u>	x 4 = <u>368</u>
UPL spp. <u>4</u>	x 5 = <u>20</u>
Total <u>108</u> (A)	<u>412</u> (B)
Prevalence Index = B/A = <u>3.815</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/27/11
Applicant: Enbridge	Investigator #1: B. Meyer	County: La Porte
Investigator #2: D. Tersteeg	NWI/WWI Classification: --	State: Indiana
Soil Unit: Houghton muck	Local Relief: --	Wetland ID: W-516a
Landform: --	Slope (%): --	Sample Point: 1w
Latitude: --	Longitude: --	Community ID: PEM
Datum: --	Section: 19	
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: --	

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 5 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly**

Taxonomy (Subgroup): **Typic Haplosaprists** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	10	1	10YR	4/1	80	7.5YR	3/4	20	C	PL	Silty Clay Loam
10	15	2	10YR	3/1	90	7.5YR	3/4	10	C	PL	Sandy Clay Loam
15	22	3	10YR	5/1	85	10YR	4/6	15	C	PL	Loamy Sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	Indicators for Problematic Soils¹ <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **N/A** Depth: **N/A**

Hydric Soil Present? Yes No

Remarks: **--**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-516a** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	PHALARIS ARUNDINACEA	100	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>100</u>	x 2 = <u>200</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>100</u> (A)	<u>200</u> (B)
Prevalence Index = B/A = <u>2.000</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Line 6B Phase 2 Replacement Project	Stantec Project #: 193701660	Date: 04/17/12
Applicant: Enbridge	Investigator #2: D. Tersteeg	County: LaPorte
Investigator #1: S. Kraszewski	Soil Unit: Tracy sandy loam, 6 to 12 percent slopes, erode	State: Indiana
Landform: -	NWI/WWI Classification: -	Wetland ID: W-516a2
Slope (%): -	Local Relief: -	Sample Point: 1u
Latitude: -	Longitude: -	Community ID: upland
Datum: -	Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 19
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: 1 Dir: W

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Upland mesic woodland upgradient of wetland.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D5 - FAC-Neutral Test
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<p>Field Observations:</p> Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: n/a (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: >18 (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: >18 (in.)	<p>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
--	--

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

Remarks: **Topographically 3 feet higher than wetland.**

SOILS

Map Unit Name: **Tracy sandy loam, 6 to 12 percent slopes, Series** Drainage Class: **well**

Taxonomy (Subgroup): **Ulitic Hapludalfs** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	8	1	10YR	3/3	100	--	--	--	--	--	sandy loam
8	12	2	10YR	3/2	95	10YR	3/6	5	C	M	sandy loam
12	18	3	10YR	3/1	100	--	--	--	--	--	sandy clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present <input type="checkbox"/>):</p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input checked="" type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	<p>Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
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Remarks: **While hydric soils were observed, the absence of wetland hydrology and vegetation supports an upland determination.**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Line 6B Phase 2 Replacement Project**

Wetland ID: **W-516a2** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Prunus serotina</i>	10	N	FACU
2.	<i>Acer saccharum</i>	70	Y	FACU
3.	<i>Fraxinus pennsylvanica</i>	5	N	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		85		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Cardamine concatenata</i>	20	Y	FACU
2.	<i>Trillium recurvatum</i>	20	Y	FACU
3.	<i>Trillium cernuum</i>	5	N	FAC
4.	<i>Parthenocissus quinquefolia</i>	5	N	FAC
5.	<i>Rubus idaeus var. strigosus</i>	5	N	FACW
6.	<i>Arisaema triphyllum</i>	5	N	FACW
7.	<i>Lindera benzoin</i>	5	N	FACW
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		65		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>20</u>	x 2 = <u>40</u>
FAC spp. <u>10</u>	x 3 = <u>30</u>
FACU spp. <u>120</u>	x 4 = <u>480</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>150</u> (A)	<u>550</u> (B)
Prevalence Index = B/A = <u>3.667</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Line 6B Phase 2 Replacement Project	Stantec Project #: 193701660	Date: 04/17/12
Applicant: Enbridge	Investigator #1: S. Kraszewski	County: LaPorte
Investigator #2: D. Tersteeg	NWI/WWI Classification: PFO/C	State: Indiana
Soil Unit: Houghton muck	Local Relief: concave	Wetland ID: W-516a2
Landform: Depression	Slope (%): - Latitude: - Longitude: - Datum: -	Sample Point: 1w
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: FO1
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 19
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: 38 N
		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Forested wetland,swamp basin. Seasonally inundated/saturated.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input checked="" type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input checked="" type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input checked="" type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: n/a (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 12 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 2 (in.)	

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

Remarks: **Butressed roots on trees. Depressional area.**

SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly**

Taxonomy (Subgroup): **Typic Haplosaprists** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	12	1	10YR	3/1	90	10YR	4/6	10	C	PL	silt loam
12	18	2	10YR	4/1	100	--	--	--	--	--	sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input checked="" type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
--	--	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: --		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Line 6B Phase 2 Replacement Project**

Wetland ID: **W-516a2** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Ulmus americana</i>	10	N	FACW
2.	<i>Fraxinus americana</i>	10	N	FACU
3.	<i>Acer saccharum</i>	50	Y	FACU
4.	<i>Prunus serotina</i>	5	N	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		75		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>POLYGONUM PERSICARIA</i>	10	Y	FACW
2.	<i>Impatiens capensis</i>	3	N	FACW
3.	<i>Parthenocissus quinquefolia</i>	5	Y	FAC
4.	<i>Symplocarpus foetidus</i>	3	N	OBL
5.	<i>Pilea pumila</i>	2	N	FACW
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		23		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	<i>Vitis riparia</i>	2	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		2		
Remarks:	--			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FACU: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FACU: 75.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>3</u>	x 1 = <u>3</u>
FACW spp. <u>27</u>	x 2 = <u>54</u>
FAC spp. <u>5</u>	x 3 = <u>15</u>
FACU spp. <u>65</u>	x 4 = <u>260</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>100</u> (A)	<u>332</u> (B)
Prevalence Index = B/A = <u>3.320</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/27/11
Applicant: Enbridge	Investigator #2: D. Tersteeg	County: La Porte
Investigator #1: B. Meyer	NWI/WWI Classification: --	State: Indiana
Soil Unit: Blount Silt Loam	Local Relief: --	Wetland ID: W-516a
Landform: --	Slope (%): -- Latitude: -- Longitude: -- Datum: --	Sample Point: 2u
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: Upland
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 19
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: 38 N
		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Remarks: **Soils are sandy and therefore naturally problematic**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: N/A (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: N/A (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Blount Silt Loam** Series Drainage Class: **somewhat poorly drained**

Taxonomy (Subgroup): **Aeric Epiaqualfs** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)
			Color (Moist)	%	Color (Moist)	%	Type	Location	
0	9	1	10YR	4/4	--	--	--	--	Sandy Loam
9	18	2	10YR	3/4	--	--	--	--	Sandy Clay Loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: --		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-516a** Sample Point **2u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	GLYCINE MAX	100	Y	UPL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>0</u>	x 2 = <u>0</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>100</u>	x 5 = <u>500</u>
Total <u>100</u> (A) <u>500</u> (B)	
Prevalence Index = B/A = <u>5.000</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: J. Wiater
Investigator #2: J. Currie
Date: 10/22/11
County: La Porte
State: Indiana
Soil Unit: Histosols and Aquolls
Landform: --
Slope (%): --
Latitude: --
Longitude: --
Datum: --
NWI/WWI Classification: --
Local Relief: --
Wetland ID: W-516b
Sample Point: 1u
Community ID: Upland
Section: 20
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [] Yes [x] No
Wetland Hydrology Present? [] Yes [x] No
Hydric Soils Present? [] Yes [x] No
Is This Sampling Point Within A Wetland? [x] Yes [] No
Remarks: --

HYDROLOGY
Wetland Hydrology Indicators (Check here if indicators are not present [x]):
Primary: [] A1 - Surface Water, [] A2 - High Water Table, [] A3 - Saturation, [] B1 - Water Marks, [] B2 - Sediment Deposits, [] B3 - Drift Deposits, [] B4 - Algal Mat or Crust, [] B5 - Iron Deposits, [] B7 - Inundation Visible on Aerial Imagery, [] B8 - Sparsely Vegetated Concave Surface
Secondary: [] B6 - Surface Soil Cracks, [] B10 - Drainage Patterns, [] B14 - True Aquatic Plants, [] C1 - Hydrogen Sulfide Odor, [] C3 - Oxidized Rhizospheres on Living Roots, [] C4 - Presence of Reduced Iron, [] C6 - Recent Iron Reduction in Tilled Soils, [] C7 - Thin Muck Surface, [] D9 - Gauge or Well Data, [] Other (Explain)

Field Observations:
Surface Water Present? [] Yes [x] No Depth: N/A (in.)
Water Table Present? [] Yes [x] No Depth: N/A (in.)
Saturation Present? [] Yes [x] No Depth: N/A (in.)
Wetland Hydrology Present? [] Yes [x] No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A
Remarks: Sample point taken on topographic high outside of wetland.

SOILS
Map Unit Name: Histosols and Aquolls
Series Drainage Class: very poorly drained
Taxonomy (Subgroup): n/a
Field Observations Confirm Mapped Type? [] Yes [x] No

Profile Description table with columns: Top Depth, Bottom Depth, Horizon, Matrix (Color, %), Mottles (Color, %), Type, Location, Texture (e.g. clay, sand, loam). Rows show soil profile data from 0 to 14 inches depth.

NRCS Hydric Soil Field Indicators (check here if indicators are not present [x]):
A1-Histosol, A2-Histic Epipedon, A3-Black Histic, A4-Hydrogen Sulfide, A5-Stratified Layers, A10-2 cm Muck, A11-Depleted Below Dark Surface, A12-Thick Dark Surface, S1-Sandy Muck Mineral, S3-5 cm Mucky Peat or Peat
S4-Sandy Gleyed Matrix, S5-Sandy Redox, S6-Stripped Matrix, F1-Loamy Muck Mineral, F2-Loamy Gleyed Matrix, F3-Depleted Matrix, F6-Redox Dark Surface, F7-Depleted Dark Surface, F8-Redox Depressions
Indicators for Problematic Soils: A16-Coast Prairie Redox, F12-Iron-Manganese Masses, Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present? [] Yes [x] No
Remarks: --

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-516b** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Ulmus rubra</i>	10	Y	FAC
2.	<i>Celtis occidentalis</i>	5	N	FAC
3.	<i>Morus rubra</i>	10	Y	FAC
4.	<i>Malus sp.</i>	5	N	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		30		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>ROSA MULTIFLORA</i>	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		10		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>ARCTIUM MINUS</i>	10	Y	UPL
2.	<i>Geum laciniatum</i>	10	Y	FACW
3.	<i>Toxicodendron radicans subsp. negunc</i>	10	Y	FAC
4.	<i>SOLANUM CAROLINENSE</i>	5	N	FACU
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		35		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: While the majority of the vegetation species are FAC, the absence of wetland hydrology and soil indicators suggest an upland determination.				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>10</u>	x 2 = <u>20</u>
FAC spp. <u>35</u>	x 3 = <u>105</u>
FACU spp. <u>15</u>	x 4 = <u>60</u>
UPL spp. <u>10</u>	x 5 = <u>50</u>
Total <u>70</u> (A)	<u>235</u> (B)
Prevalence Index = B/A = <u>3.357</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/22/11
Applicant: Enbridge	Investigator #1: J. Wiater	County: La Porte
Investigator #2: J. Currie	NWI/WWI Classification: PFO1C	State: Indiana
Soil Unit: Histosols and Aquolls	Local Relief: Concave	Wetland ID: W-516b
Landform: Depression	Slope (%): -- Latitude: -- Longitude: -- Datum: --	Sample Point: 1w
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: PFO
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 20
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: 38 N
Remarks: Mildly grazed pasture, very bare understory.		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input checked="" type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input checked="" type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input checked="" type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input checked="" type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input checked="" type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: N/A (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: N/A (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Histosols and Aquolls** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **n/a** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	11	1	10YR	4/1	--	10YR	3/6	5	C	M	Silt Loam
11	16	2	10YR	5/1	--	10YR	3/6	10	C	M	Silt Loam
11	16	2	10YR	5/1	--	10YR	4/4	5	C	M	Silt Loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input checked="" type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **N/A** Depth: **N/A**

Hydric Soil Present? Yes No

Remarks: **--**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-516b** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Fraxinus pennsylvanica</i>	10	Y	FACW
2.	<i>Acer negundo</i>	5	Y	FACW
3.	<i>Ulmus americana</i>	5	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		20		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		

Prevalence Index Worksheet

Total % Cover of:	Multiply by:	
OBL spp. <u>20</u>	x 1 =	<u>20</u>
FACW spp. <u>40</u>	x 2 =	<u>80</u>
FAC spp. <u>25</u>	x 3 =	<u>75</u>
FACU spp. <u>0</u>	x 4 =	<u>0</u>
UPL spp. <u>0</u>	x 5 =	<u>0</u>
Total <u>85</u> (A)		<u>175</u> (B)
Prevalence Index = B/A =		<u>2.059</u>

Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Pilea pumila</i>	10	Y	FACW
2.	<i>Boehmeria cylindrica</i>	10	Y	OBL
3.	<i>Toxicodendron radicans subsp. negunc</i>	10	Y	FAC
4.	<i>Ambrosia trifida</i>	10	Y	FAC
5.	<i>Carex lupulina</i>	10	Y	OBL
6.	<i>Carex intumescens</i>	10	Y	FACW
7.	<i>Phytolacca americana</i>	5	N	FAC
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		65		

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: **Very barren understory only about 50% coverage by herbs. A portion of the wetland has an emergent community with approximately 60% vegetative cover and is dominated by reed canary grass and barnyard grass.**

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: M. Van Loan
Investigator #2: J. Delmedico
Date: 10/21/11
County: La Porte
State: Indiana
Soil Unit: Riddles loam
NW/WWI Classification: --
Landform: --
Local Relief: --
Slope (%): --
Latitude: --
Longitude: --
Datum: --
Wetland ID: W-516c
Sample Point: 1u
Community ID: Upland
Section: 20
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [] Yes [x] No
Wetland Hydrology Present? [] Yes [x] No
Hydric Soils Present? [] Yes [x] No
Is This Sampling Point Within A Wetland? [x] Yes [] No

Remarks: Area is grazed.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present [x]):
Primary: [] A1 - Surface Water, [] A2 - High Water Table, [] A3 - Saturation, [] B1 - Water Marks, [] B2 - Sediment Deposits, [] B3 - Drift Deposits, [] B4 - Algal Mat or Crust, [] B5 - Iron Deposits, [] B7 - Inundation Visible on Aerial Imagery, [] B8 - Sparsely Vegetated Concave Surface
Secondary: [] B6 - Surface Soil Cracks, [] B10 - Drainage Patterns, [] B14 - True Aquatic Plants, [] C1 - Hydrogen Sulfide Odor, [] C3 - Oxidized Rhizospheres on Living Roots, [] C4 - Presence of Reduced Iron, [] C6 - Recent Iron Reduction in Tilled Soils, [] C7 - Thin Muck Surface, [] D9 - Gauge or Well Data, [] Other (Explain)

Field Observations:
Surface Water Present? [] Yes [x] No Depth: N/A (in.)
Water Table Present? [] Yes [x] No Depth: N/A (in.)
Saturation Present? [] Yes [x] No Depth: N/A (in.)
Wetland Hydrology Present? [] Yes [x] No

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

Remarks: --

SOILS

Map Unit Name: Riddles loam
Series Drainage Class: well drained
Taxonomy (Subgroup): Typic Hapludalfs
Field Observations Confirm Mapped Type? [] Yes [] No

Table with 12 columns: Top Depth, Bottom Depth, Horizon, Matrix (Color (Moist), %), Mottles (Color (Moist), %), Type, Location, Texture (e.g. clay, sand, loam). All cells contain dashes.

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
A1 - Histosol, A2 - Histic Epipedon, A3 - Black Histic, A4 - Hydrogen Sulfide, A5 - Stratified Layers, A10 - 2 cm Muck, A11 - Depleted Below Dark Surface, A12 - Thick Dark Surface, S1 - Sandy Muck Mineral, S3 - 5 cm Mucky Peat or Peat
S4 - Sandy Gleyed Matrix, S5 - Sandy Redox, S6 - Stripped Matrix, F1 - Loamy Muck Mineral, F2 - Loamy Gleyed Matrix, F3 - Depleted Matrix, F6 - Redox Dark Surface, F7 - Depleted Dark Surface, F8 - Redox Depressions
Indicators for Problematic Soils 1: A16 - Coast Prairie Redox, F12 - Iron-Manganese Masses, Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present? [] Yes [x] No

Remarks: Did not dig due to landowner; potential safety issue. However, upland soils are assumed due to absence of wetland hydrology and vegetation.

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-516c** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--		--	--
2.	--		--	--
3.	--		--	--
4.	--		--	--
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--		--	--
2.	--		--	--
3.	--		--	--
4.	--		--	--
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Daucus carota</i>	20	Y	UPL
2.	<i>Solidago sp.</i>	20	Y	--
3.	<i>Rubus occidentalis</i>	10	N	UPL
4.	<i>PLANTAGO MAJOR</i>	5	N	FAC
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
11.	--		--	--
12.	--		--	--
13.	--		--	--
14.	--		--	--
15.	--		--	--
Total Cover =		55		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--		--	--
2.	--		--	--
3.	--		--	--
5.	--		--	--
4.	--		--	--
Total Cover =		0		
Remarks: Vegetation disturbed from cattle.				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>0</u>	x 2 = <u>0</u>
FAC spp. <u>5</u>	x 3 = <u>15</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>30</u>	x 5 = <u>150</u>
Total <u>35</u> (A)	<u>165</u> (B)
Prevalence Index = B/A = <u>4.714</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: M. Van Loan	County: La Porte
Investigator #2: J. Delmedico	NWI/WWI Classification: --	State: Indiana
Soil Unit: Riddles loam	Local Relief: --	Wetland ID: W-516c
Landform: --	Latitude: --	Sample Point: 1w
Slope (%): --	Longitude: --	Community ID: PEM
Datum: --		Section: 20
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 38 N
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Area is grazed.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input checked="" type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 3 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Riddles loam** Series Drainage Class: **well drained**

Taxonomy (Subgroup): **Typic Hapludalfs** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)
			Color (Moist)	%	Color (Moist)	%	Type	Location	
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	Indicators for Problematic Soils¹ <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: A soil pit was not dug to a landowner issue; potential safety concern. However, given hydric soils and wetland vegetation, hydric soils are assumed.		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-516c** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)					
Tree Stratum (Plot size: 10 meter radius)					
	<u>Species Name</u>	% Cover	Dominant	Ind. Status	
1.	<i>Salix nigra</i>	5	Y	OBL	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
Total Cover =		5			
Sapling/Shrub Stratum (Plot size: 5 meter radius)					
1.	<i>Cephalanthus occidentalis</i>	<2	Y	OBL	Prevalence Index Worksheet Total % Cover of: Multiply by: OBL spp. <u>25</u> x 1 = <u>25</u> FACW spp. <u>20</u> x 2 = <u>40</u> FAC spp. <u>0</u> x 3 = <u>0</u> FACU spp. <u>0</u> x 4 = <u>0</u> UPL spp. <u>0</u> x 5 = <u>0</u> Total <u>45</u> (A) <u>65</u> (B) Prevalence Index = B/A = <u>1.444</u>
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
Total Cover =		0			
Herb Stratum (Plot size: 2 meter radius)					
1.	<i>PHALARIS ARUNDINACEA</i>	20	Y	FACW	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Dominance Test is > 50% <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Prevalence Index is ≤ 3.0 * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Morphological Adaptations (Explain) * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Problem Hydrophytic Vegetation (Explain) * * Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.	<i>Sium suave</i>	<2	N	OBL	
3.	<i>POLYGONUM HYDROPIPER</i>	20	Y	OBL	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
11.	--	--	--	--	
12.	--	--	--	--	
13.	--	--	--	--	
14.	--	--	--	--	
15.	--	--	--	--	
Total Cover =		40			
Woody Vine Stratum (Plot size: 10 meter radius)					
1.	--	--	--	--	Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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.
2.	--	--	--	--	
3.	--	--	--	--	
5.	--	--	--	--	
4.	--	--	--	--	
Total Cover =		0			
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Remarks: Disturbed veg. from cattle					

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: M. Van Loan
Investigator #2: J. Delmedico
Date: 10/21/11
County: La Porte
State: Indiana
Wetland ID: W-517a
Sample Point: 1u
Community ID: Upland
Section: 20
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present?
Wetland Hydrology Present?
Hydric Soils Present?
Is This Sampling Point Within A Wetland?

Remarks: Area is grazed.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):
Primary: A1 - Surface Water, A2 - High Water Table, A3 - Saturation, B1 - Water Marks, B2 - Sediment Deposits, B3 - Drift Deposits, B4 - Algal Mat or Crust, B5 - Iron Deposits, B7 - Inundation Visible on Aerial Imagery, B8 - Sparsely Vegetated Concave Surface
Secondary: B6 - Surface Soil Cracks, B10 - Drainage Patterns, B14 - True Aquatic Plants, C1 - Hydrogen Sulfide Odor, C3 - Oxidized Rhizospheres on Living Roots, C4 - Presence of Reduced Iron, C6 - Recent Iron Reduction in Tilled Soils, C7 - Thin Muck Surface, D9 - Gauge or Well Data, Other (Explain)

Field Observations:
Surface Water Present?
Water Table Present?
Saturation Present?
Wetland Hydrology Present?

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

SOILS

Map Unit Name: Tracy Sandy Loam
Series Drainage Class: Well drained
Taxonomy (Subgroup): Ultic Hapludalfs
Field Observations Confirm Mapped Type?

Table with 11 columns: Top Depth, Bottom Depth, Horizon, Matrix (Color (Moist), %), Mottles (Color (Moist), %), Type, Location, Texture (e.g. clay, sand, loam). Rows contain data for soil profile observations.

NRCS Hydric Soil Field Indicators (check here if indicators are not present):
Indicators for Problematic Soils
A1 - Histosol, A2 - Histic Epipedon, A3 - Black Histic, A4 - Hydrogen Sulfide, A5 - Stratified Layers, A10 - 2 cm Muck, A11 - Depleted Below Dark Surface, A12 - Thick Dark Surface, S1 - Sandy Muck Mineral, S3 - 5 cm Mucky Peat or Peat, S4 - Sandy Gleyed Matrix, S5 - Sandy Redox, S6 - Stripped Matrix, F1 - Loamy Muck Mineral, F2 - Loamy Gleyed Matrix, F3 - Depleted Matrix, F6 - Redox Dark Surface, F7 - Depleted Dark Surface, F8 - Redox Depressions, A16 - Coast Prairie Redox, F12 - Iron-Manganese Masses, Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present?

Remarks: Did not dig so as not to upset landowner. Landowner already uphappy with Endbridge for recent digging that had occurred over existing pipeline. Upland soils assumed due to absence of wetland hydrology and vegetation.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517a** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)					<p>Dominance Test Worksheet</p> <p>Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)</p>
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	--	--	--	--	
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
Total Cover =		0			
Sapling/Shrub Stratum (Plot size: 5 meter radius)					<p>Prevalence Index Worksheet</p> <p>Total % Cover of: Multiply by:</p> <p>OBL spp. <u>0</u> x 1 = <u>0</u></p> <p>FACW spp. <u>0</u> x 2 = <u>0</u></p> <p>FAC spp. <u>0</u> x 3 = <u>0</u></p> <p>FACU spp. <u>29</u> x 4 = <u>116</u></p> <p>UPL spp. <u>0</u> x 5 = <u>0</u></p> <p>Total <u>29</u> (A) <u>116</u> (B)</p> <p>Prevalence Index = B/A = <u>4.000</u></p>
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	--	--	--	--	
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
Total Cover =		0			
Herb Stratum (Plot size: 2 meter radius)					<p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Dominance Test is > 50%</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Prevalence Index is ≤ 3.0 *</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Morphological Adaptations (Explain) *</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Problem Hydrophytic Vegetation (Explain) *</p> <p>* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	<i>TRIFOLIUM PRATENSE</i>	20	Y	FACU	
2.	<i>CIRSIUM VULGARE</i>	2	N	FACU	
3.	<i>ROSA MULTIFLORA</i>	2	N	FACU	
4.	<i>Solidago canadensis</i>	5	N	FACU	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
11.	--	--	--	--	
12.	--	--	--	--	
13.	--	--	--	--	
14.	--	--	--	--	
15.	--	--	--	--	
Total Cover =		29			
Woody Vine Stratum (Plot size: 10 meter radius)					<p>Definitions of Vegetation Strata:</p> <p>Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p>Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall</p> <p>Woody Vines - All woody vines greater than 3.28 ft. in height.</p>
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	--	--	--	--	
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
Total Cover =		0			
Remarks: Veg disturbed from cattle.					<p>Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
Additional Remarks:					

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: M. Van Loan
Investigator #2: J. Delmedico
Date: 10/21/11
County: La Porte
State: Indiana
Soil Unit: Histosols and Aquolls
NW/WWI Classification: PFO1C
Wetland ID: W-517a
Sample Point: 1w
Community ID: PFO
Section: 20
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [x] Yes [] No
Wetland Hydrology Present? [x] Yes [] No
Hydric Soils Present? [x] Yes [] No
Is This Sampling Point Within A Wetland? [x] Yes [] No
Remarks: Area is grazed.

HYDROLOGY
Wetland Hydrology Indicators (Check here if indicators are not present []):
Primary: [] A1 - Surface Water, [x] A3 - Saturation, [] B1 - Water Marks, [] B2 - Sediment Deposits, [] B3 - Drift Deposits, [] B4 - Algal Mat or Crust, [] B5 - Iron Deposits, [] B7 - Inundation Visible on Aerial Imagery, [] B8 - Sparsely Vegetated Concave Surface
Secondary: [x] B9 - Water-Stained Leaves, [] B13 - Aquatic Fauna, [] B14 - True Aquatic Plants, [] C1 - Hydrogen Sulfide Odor, [] C3 - Oxidized Rhizospheres on Living Roots, [] C4 - Presence of Reduced Iron, [] C6 - Recent Iron Reduction in Tilled Soils, [] C7 - Thin Muck Surface, [] D9 - Gauge or Well Data, [] Other (Explain)
[] B6 - Surface Soil Cracks, [] B10 - Drainage Patterns, [] C2 - Dry-Season Water Table, [] C8 - Crayfish Burrows, [] C9 - Saturation Visible on Aerial Imagery, [] D1 - Stunted or Stressed Plants, [] D2 - Geomorphic Position, [x] D5 - FAC-Neutral Test

Field Observations:
Surface Water Present? [] Yes [x] No Depth: N/A (in.)
Water Table Present? [] Yes [x] No Depth: N/A (in.)
Saturation Present? [x] Yes [] No Depth: 0 (in.)
Wetland Hydrology Present? [x] Yes [] No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A
Remarks: --

SOILS

Map Unit Name: Histosols and Aquolls
Series Drainage Class: very poorly drained
Taxonomy (Subgroup): n/a
Field Observations Confirm Mapped Type? [] Yes [] No

Table with 12 columns: Top Depth, Bottom Depth, Horizon, Matrix (Color (Moist), %), Mottles (Color (Moist), %), Type, Location, Texture (e.g. clay, sand, loam). All cells contain dashes.

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
[] A1 - Histosol, [] A2 - Histic Epipedon, [] A3 - Black Histic, [] A4 - Hydrogen Sulfide, [] A5 - Stratified Layers, [] A10 - 2 cm Muck, [] A11 - Depleted Below Dark Surface, [] A12 - Thick Dark Surface, [] S1 - Sandy Muck Mineral, [] S3 - 5 cm Mucky Peat or Peat
[] S4 - Sandy Gleyed Matrix, [] S5 - Sandy Redox, [] S6 - Stripped Matrix, [] F1 - Loamy Muck Mineral, [] F2 - Loamy Gleyed Matrix, [] F3 - Depleted Matrix, [] F6 - Redox Dark Surface, [] F7 - Depleted Dark Surface, [] F8 - Redox Depressions
Indicators for Problematic Soils 1: [] A16 - Coast Prairie Redox, [] F12 - Iron-Manganese Masses, [] Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present? [x] Yes [] No

Remarks: Did not dig so as not to upset landowner. Landowner already unhappy with Enbridge for digging up property over existing pipeline. Hydric soils are assumed given wetland hydrology and vegetation.

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517a** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Acer negundo</i>	50	Y	FACW
2.	<i>Salix nigra</i>	20	Y	OBL
3.	<i>Populus deltoides</i>	10	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		80		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>LONICERA JAPONICA</i>	5	N	FACU
2.	<i>Cephalanthus occidentalis</i>	5	N	OBL
3.	<i>Acer negundo</i>	20	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		30		
Herb Stratum (Plot size: 2 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Solidago gigantea</i>	20	Y	FACW
2.	<i>Toxicodendron radicans subsp. negunc</i>	20	Y	FAC
3.	<i>Pilea pumila</i>	10	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		50		
Woody Vine Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Vitis riparia</i>	10	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		10		
Remarks:	Veg disturbed due to grazing			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:	
OBL spp. <u>25</u>	x 1 =	<u>25</u>
FACW spp. <u>110</u>	x 2 =	<u>220</u>
FAC spp. <u>30</u>	x 3 =	<u>90</u>
FACU spp. <u>5</u>	x 4 =	<u>20</u>
UPL spp. <u>0</u>	x 5 =	<u>0</u>
Total <u>170</u> (A)		<u>355</u> (B)
Prevalence Index = B/A =		<u>2.088</u>

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

Wetland may extend into existing ROW. ROW recently worked on and restored. Soil wet due to recent rain.



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: M. Van Loan
Investigator #2: J. Delmedico
Date: 10/21/11
County: La Porte
State: Indiana
Soil Unit: Riddles loam
NW/WWI Classification: --
Landform: --
Local Relief: --
Slope (%): --
Latitude: --
Longitude: --
Datum: --
Wetland ID: W-517b
Sample Point: 1u
Community ID: Upland
Section: 20
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [] Yes [x] No
Wetland Hydrology Present? [] Yes [x] No
Hydric Soils Present? [] Yes [x] No
Is This Sampling Point Within A Wetland? [x] Yes [] No

Remarks: Area is grazed.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present [x]):
Primary: [] A1 - Surface Water, [] A2 - High Water Table, [] A3 - Saturation, [] B1 - Water Marks, [] B2 - Sediment Deposits, [] B3 - Drift Deposits, [] B4 - Algal Mat or Crust, [] B5 - Iron Deposits, [] B7 - Inundation Visible on Aerial Imagery, [] B8 - Sparsely Vegetated Concave Surface
Secondary: [] B6 - Surface Soil Cracks, [] B10 - Drainage Patterns, [] B14 - True Aquatic Plants, [] C1 - Hydrogen Sulfide Odor, [] C3 - Oxidized Rhizospheres on Living Roots, [] C4 - Presence of Reduced Iron, [] C6 - Recent Iron Reduction in Tilled Soils, [] C7 - Thin Muck Surface, [] D9 - Gauge or Well Data, [] Other (Explain)

Field Observations:
Surface Water Present? [] Yes [x] No Depth: N/A (in.)
Water Table Present? [] Yes [x] No Depth: N/A (in.)
Saturation Present? [] Yes [x] No Depth: N/A (in.)
Wetland Hydrology Present? [] Yes [x] No

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

Remarks: --

SOILS

Map Unit Name: Riddles loam
Series Drainage Class: well drained
Taxonomy (Subgroup): Typic Hapludalfs
Field Observations Confirm Mapped Type? [] Yes [] No

Table with 12 columns: Top Depth, Bottom Depth, Horizon, Matrix (Color (Moist), %), Mottles (Color (Moist), %), Type, Location, Texture (e.g. clay, sand, loam). All cells contain '--'.

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
A1 - Histosol, A2 - Histic Epipedon, A3 - Black Histic, A4 - Hydrogen Sulfide, A5 - Stratified Layers, A10 - 2 cm Muck, A11 - Depleted Below Dark Surface, A12 - Thick Dark Surface, S1 - Sandy Muck Mineral, S3 - 5 cm Mucky Peat or Peat
S4 - Sandy Gleyed Matrix, S5 - Sandy Redox, S6 - Stripped Matrix, F1 - Loamy Muck Mineral, F2 - Loamy Gleyed Matrix, F3 - Depleted Matrix, F6 - Redox Dark Surface, F7 - Depleted Dark Surface, F8 - Redox Depressions
Indicators for Problematic Soils 1: A16 - Coast Prairie Redox, F12 - Iron-Manganese Masses, Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present? [] Yes [x] No

Remarks: Did not dig pit so as not to upset landowner. Landowner already unhappy with Enbridge for digging up existing line. Given absence of wetland hydrology and vegetation, upland soils were assumed.

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517b** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **0**

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--

Total Cover = **0**

Herb Stratum (Plot size: 2 meter radius)

1.	TARAXACUM OFFICINALE	20	Y	FACU
2.	TRIFOLIUM PRATENSE	10	Y	FACU
3.	PLANTAGO MAJOR	5	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--

Total Cover = **35**

Woody Vine Stratum (Plot size: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--

Total Cover = **0**

Remarks: **Veg. disturbed from grazing**

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:	
OBL spp. <u>0</u>	x 1 =	<u>0</u>
FACW spp. <u>0</u>	x 2 =	<u>0</u>
FAC spp. <u>5</u>	x 3 =	<u>15</u>
FACU spp. <u>30</u>	x 4 =	<u>120</u>
UPL spp. <u>0</u>	x 5 =	<u>0</u>

Total 35 (A) 135 (B)

Prevalence Index = B/A = 3.857

Hydrophytic Vegetation Indicators:

- Yes No Rapid Test for Hydrophytic Vegetation
- Yes No Dominance Test is > 50%
- Yes No Prevalence Index is ≤ 3.0 *
- Yes No Morphological Adaptations (Explain) *
- Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: M. Van Loan
Investigator #2: J. Delmedico
Date: 10/21/11
County: La Porte
State: Indiana
Wetland ID: W-517b
Sample Point: 1w
Community ID: PSS
Section: 20
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [x] Yes [] No
Wetland Hydrology Present? [x] Yes [] No
Hydric Soils Present? [x] Yes [] No
Is This Sampling Point Within A Wetland? [x] Yes [] No
Remarks: --

HYDROLOGY
Wetland Hydrology Indicators (Check here if indicators are not present []):
Primary: [x] A1 - Surface Water, [x] A2 - High Water Table, [x] A3 - Saturation, [] B1 - Water Marks, [] B2 - Sediment Deposits, [] B3 - Drift Deposits, [] B4 - Algal Mat or Crust, [] B5 - Iron Deposits, [] B7 - Inundation Visible on Aerial Imagery, [] B8 - Sparsely Vegetated Concave Surface
Secondary: [] B6 - Surface Soil Cracks, [] B10 - Drainage Patterns, [] B14 - True Aquatic Plants, [] C1 - Hydrogen Sulfide Odor, [] C3 - Oxidized Rhizospheres on Living Roots, [] C4 - Presence of Reduced Iron, [] C6 - Recent Iron Reduction in Tilled Soils, [] C7 - Thin Muck Surface, [] D9 - Gauge or Well Data, [] Other (Explain)

Field Observations:
Surface Water Present? [x] Yes [] No Depth: 12 (in.)
Water Table Present? [x] Yes [] No Depth: 0 (in.)
Saturation Present? [x] Yes [] No Depth: 0 (in.)
Wetland Hydrology Present? [x] Yes [] No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A
Remarks: --

SOILS
Map Unit Name: Riddles Loam Series Drainage Class: Well drained
Taxonomy (Subgroup): Typic Hapludalfs Field Observations Confirm Mapped Type? [] Yes [] No
Profile Description table with columns: Top Depth, Bottom Depth, Horizon, Matrix (Color, %), Mottles (Color, %), Type, Location, Texture

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
A1 - Histosol, A2 - Histic Epipedon, A3 - Black Histic, A4 - Hydrogen Sulfide, A5 - Stratified Layers, A10 - 2 cm Muck, A11 - Depleted Below Dark Surface, A12 - Thick Dark Surface, S1 - Sandy Muck Mineral, S3 - 5 cm Mucky Peat or Peat
S4 - Sandy Gleyed Matrix, S5 - Sandy Redox, S6 - Stripped Matrix, F1 - Loamy Muck Mineral, F2 - Loamy Gleyed Matrix, F3 - Depleted Matrix, F6 - Redox Dark Surface, F7 - Depleted Dark Surface, F8 - Redox Depressions
Indicators for Problematic Soils 1: A16 - Coast Prairie Redox, F12 - Iron-Manganese Masses, Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present? [x] Yes [] No
Remarks: Did not dig pits so as not to upset landowner. Landowner was already upset with Enbridge for digging up property to repair existing pipeline. Given wetland hydrology and vegetation, wetland soils are assumed.

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517b** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Populus deltoides</i>	2	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		2		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Salix nigra</i>	5	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		5		
Herb Stratum (Plot size: 2 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		0		
Woody Vine Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks:	--			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>5</u>	x 1 = <u>5</u>
FACW spp. <u>0</u>	x 2 = <u>0</u>
FAC spp. <u>2</u>	x 3 = <u>6</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>7</u> (A)	<u>11</u> (B)
Prevalence Index = B/A = <u>1.571</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: M. Van Loan	County: La Porte
Investigator #2: J. Delmedico	Soil Unit: Warners Silt Loam	State: Indiana
Landform: --	NWI/WWI Classification: --	Wetland ID: W-517c
Slope (%): --	Local Relief: --	Sample Point: 1u
Latitude: --	Longitude: --	Community ID: Upland
Datum: --		Section: 20
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: --	

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Warners Silt Loam** Series Drainage Class: **Very poorly drained**

Taxonomy (Subgroup): **Fluvaquentic Endoaquolls** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	12	1	10YR	4/2	100	--	--	--	Clay Loam		
12	18	2	10YR	5/2	50	10YR	6/4	50	C	M	Clay Loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **N/A** Depth: **N/A**

Hydric Soil Present? Yes No

Remarks: **--**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517c** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Juglans nigra</i>	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		10		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Solidago canadensis</i>	30	Y	FACU
2.	<i>Rubus idaeus var. strigosus</i>	10	Y	FACW
3.	<i>SETARIA FABERI</i>	10	Y	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		50		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>10</u>	x 2 = <u>20</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>50</u>	x 4 = <u>200</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>60</u> (A)	<u>220</u> (B)
Prevalence Index = B/A = <u>3.667</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: M. Van Loan	County: La Porte
Investigator #2: J. Delmedico	Soil Unit: Warners silt loam	State: Indiana
Landform: --	NWI/WWI Classification: PEMF	Wetland ID: W-517c
Slope (%): --	Local Relief: --	Sample Point: 1w
Latitude: --	Longitude: --	Community ID: PSS
Datum: --	Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 20
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: --	

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input checked="" type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input checked="" type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
---	--	--

Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Warners silt loam** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **Fluvaquentic Endoaquolls** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	1	1	10YR	2/1	100	--	--	--	Organic		
1	4	2	10YR	3/2	100	--	--	--	Clay Loam		
4	16	3	10YR	5/1	60	10YR	4/6	40	C	M	Clay
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
--	--	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **N/A** Depth: **N/A**

Hydric Soil Present? Yes No

Remarks: **--**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517c** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--		--	--
2.	--		--	--
3.	--		--	--
4.	--		--	--
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Cephalanthus occidentalis</i>	80	Y	OBL
2.	<i>Salix nigra</i>	10	N	OBL
3.	--		--	--
4.	--		--	--
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
Total Cover =		90		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Saururus cernuus</i>	10	Y	OBL
2.	<i>Toxicodendron radicans subsp. negunc</i>	10	Y	FAC
3.	--		--	--
4.	--		--	--
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
11.	--		--	--
12.	--		--	--
13.	--		--	--
14.	--		--	--
15.	--		--	--
Total Cover =		20		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--		--	--
2.	--		--	--
3.	--		--	--
5.	--		--	--
4.	--		--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>100</u>	x 1 = <u>100</u>
FACW spp. <u>0</u>	x 2 = <u>0</u>
FAC spp. <u>10</u>	x 3 = <u>30</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>110</u> (A)	<u>130</u> (B)
Prevalence Index = B/A = <u>1.182</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: M. Van Loan	Investigator #2: J. Delmedico
Soil Unit: Warners silt loam	NWI/WWI Classification: --	Wetland ID: W-517d
Landform: Hillslope	Local Relief: --	Sample Point: 1u
Slope (%): --	Latitude: --	Longitude: --
Datum: --		Community ID: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section: 20
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Area is mowed pasture. Significant topographic relief present. Sample point approx. 2 feet higher than wetland.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

Primary:		Secondary:
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B14 - True Aquatic Plants	<input type="checkbox"/> C2 - Dry-Season Water Table
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C8 - Crayfish Burrows
<input type="checkbox"/> B2 - Sediment Deposits	<input checked="" type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> D1 - Stunted or Stressed Plants
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D2 - Geomorphic Position
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input checked="" type="checkbox"/> D5 - FAC-Neutral Test
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> D9 - Gauge or Well Data	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other (Explain)	

Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	

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

Remarks: **Despite the presence of two hydrology indicators, no hydric soils were found. Given the significant topographic relief of this area, the area was determined to be upland.**

SOILS

Map Unit Name: **Warners silt loam** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **Fluvaquentic Endoaquolls** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type		Location	
0	2	1	10YR	4/3	--	--	--	--	--	Loam	
2	12	2	10YR	5/3	--	5YR	4/6	--	C	PL	Loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol	<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> A16 - Coast Prairie Redox
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S5 - Sandy Redox	<input type="checkbox"/> F12 - Iron-Manganese Masses
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> S6 - Stripped Matrix	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F1 - Loamy Muck Mineral	
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	
<input type="checkbox"/> A10 - 2 cm Muck	<input type="checkbox"/> F3 - Depleted Matrix	
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions	
<input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat		

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **N/A** Depth: **N/A**

Hydric Soil Present? Yes No

Remarks: **Refusal at 12'**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517d** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Solidago canadensis</i>	5	N	FACU
2.	<i>Toxicodendron radicans subsp. negunc</i>	2	N	FAC
3.	TRIFOLIUM PRATENSE	2	N	FACU
4.	BROMUS INERMIS	10	N	UPL
5.	PHALARIS ARUNDINACEA	80	Y	FACW
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		99		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: Area is a mowed pasture. Despite the presence of reed canary grass, this area was determined to be non-wetland due to the absence of hydric soils.				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>80</u>	x 2 = <u>160</u>
FAC spp. <u>2</u>	x 3 = <u>6</u>
FACU spp. <u>7</u>	x 4 = <u>28</u>
UPL spp. <u>10</u>	x 5 = <u>50</u>
Total <u>99</u> (A)	<u>244</u> (B)
Prevalence Index = B/A = <u>2.465</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

Based on lack of hydric soils and the presence of significant topographic relief, this area was determined to be upland based on best professional judgement.



WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: M. Van Loan	County: La Porte
Investigator #2: J. Delmedico	NWI/WWI Classification: --	State: Indiana
Soil Unit: Warners silt loam	Local Relief: Concave	Wetland ID: W-517d
Landform: Depression	Slope (%): -- Latitude: -- Longitude: -- Datum: --	Sample Point: 1w
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: PEM
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 20
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: 38 N
		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Small swale in a hay field**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<u>Primary:</u> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input checked="" type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<u>Secondary:</u> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
--	---	---

Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Warners silt loam** Series Drainage Class: **very poorly drained**

Taxonomy (Subgroup): **Fluvaquentic Endoaquolls** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	1	1	10YR	2/1	--	--	--	--	--	Muck	
1	16	2	10YR	5/1	50	10YR	4/6	50	C	M	Clay
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input checked="" type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **N/A** Depth: **N/A**

Hydric Soil Present? Yes No

Remarks: **--**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517d** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>PHALARIS ARUNDINACEA</i>	80	Y	FACW
2.	<i>Polygonum pensylvanicum</i>	5	N	FACW
3.	<i>Carex lacustris</i>	5	N	OBL
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		90		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>5</u>	x 1 = <u>5</u>
FACW spp. <u>85</u>	x 2 = <u>170</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>90</u> (A)	<u>175</u> (B)
Prevalence Index = B/A = <u>1.944</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: M. Van Loan	Investigator #2: J. Delmedico
Soil Unit: Blount silt loam	NWI/WWI Classification: --	Wetland ID: W-517e
Landform: --	Local Relief: --	Sample Point: 1u
Slope (%): --	Latitude: --	Longitude: --
	Datum: --	Community ID: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section: 20
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **--**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

Primary:		Secondary:
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B14 - True Aquatic Plants	<input type="checkbox"/> C2 - Dry-Season Water Table
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C8 - Crayfish Burrows
<input type="checkbox"/> B2 - Sediment Deposits	<input checked="" type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> D1 - Stunted or Stressed Plants
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D2 - Geomorphic Position
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input type="checkbox"/> D5 - FAC-Neutral Test
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> D9 - Gauge or Well Data	
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> Other (Explain)	

Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	

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

Remarks: **While area has oxidized root channels, the presence of non-hydric soils and vegetation support an upland determination.**

SOILS

Map Unit Name: **Blount silt loam** Series Drainage Class: **somewhat poorly**

Taxonomy (Subgroup): **Aeric Epiaquafls** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	2	1	10YR	4/3	100	--	--	--	--	Loam	
2	16	2	10YR	5/3	75	10YR	4/6	25	C	PL	Loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol	<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> A16 - Coast Prairie Redox
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S5 - Sandy Redox	<input type="checkbox"/> F12 - Iron-Manganese Masses
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> S6 - Stripped Matrix	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F1 - Loamy Muck Mineral	
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	
<input type="checkbox"/> A10 - 2 cm Muck	<input type="checkbox"/> F3 - Depleted Matrix	
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface	
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F7 - Depleted Dark Surface	
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F8 - Redox Depressions	
<input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat		

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **N/A** Depth: **N/A**

Hydric Soil Present? Yes No

Remarks: **--**



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517e** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>PHALARIS ARUNDINACEA</i>	50	Y	FACW
2.	<i>TRIFOLIUM PRATENSE</i>	20	Y	FACU
3.	<i>DAUCUS CAROTA</i>	20	Y	UPL
4.	<i>Fragaria virginiana</i>	10	N	FAC
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>50</u>	x 2 = <u>100</u>
FAC spp. <u>10</u>	x 3 = <u>30</u>
FACU spp. <u>20</u>	x 4 = <u>80</u>
UPL spp. <u>20</u>	x 5 = <u>100</u>
 Total <u>100</u> (A)	 <u>310</u> (B)
Prevalence Index = B/A = <u>3.100</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

Area is an upland pasture/hayfield adjacent to wetland.



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: M. Van Loan
Investigator #2: J. Delmedico
Date: 10/21/11
County: La Porte
State: Indiana
Soil Unit: Blount silt loam
NW/WWI Classification: PFO1B
Wetland ID: W-517e
Sample Point: 1w
Community ID: PEM
Section: 20
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [x] Yes [] No
Wetland Hydrology Present? [x] Yes [] No
Hydric Soils Present? [x] Yes [] No
Is This Sampling Point Within A Wetland? [x] Yes [] No
Remarks: --

HYDROLOGY
Wetland Hydrology Indicators (Check here if indicators are not present []):
Primary: [x] A1 - Surface Water, [x] A2 - High Water Table, [x] A3 - Saturation, [] B1 - Water Marks, [] B2 - Sediment Deposits, [] B3 - Drift Deposits, [] B4 - Algal Mat or Crust, [] B5 - Iron Deposits, [] B7 - Inundation Visible on Aerial Imagery, [] B8 - Sparsely Vegetated Concave Surface
Secondary: [] B6 - Surface Soil Cracks, [] B10 - Drainage Patterns, [] B14 - True Aquatic Plants, [] C1 - Hydrogen Sulfide Odor, [] C3 - Oxidized Rhizospheres on Living Roots, [] C4 - Presence of Reduced Iron, [] C6 - Recent Iron Reduction in Tilled Soils, [] C7 - Thin Muck Surface, [] D9 - Gauge or Well Data, [] Other (Explain)

Field Observations:
Surface Water Present? [x] Yes [] No Depth: 4 (in.)
Water Table Present? [x] Yes [] No Depth: 0 (in.)
Saturation Present? [x] Yes [] No Depth: 0 (in.)
Wetland Hydrology Present? [x] Yes [] No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A
Remarks: --

SOILS
Map Unit Name: Blount silt loam
Series Drainage Class: somewhat poorly
Taxonomy (Subgroup): Aerlic Epiaquafls
Field Observations Confirm Mapped Type? [] Yes [x] No
Profile Description table with columns: Top Depth, Bottom Depth, Horizon, Matrix (Color, %), Mottles (Color, %, Type, Location), Texture (e.g. clay, sand, loam)

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
Indicators for Problematic Soils 1
[] A1 - Histosol, [] A2 - Histic Epipedon, [] A3 - Black Histic, [] A4 - Hydrogen Sulfide, [] A5 - Stratified Layers, [] A10 - 2 cm Muck, [] A11 - Depleted Below Dark Surface, [] A12 - Thick Dark Surface, [] S1 - Sandy Muck Mineral, [] S3 - 5 cm Mucky Peat or Peat
[] S4 - Sandy Gleyed Matrix, [] S5 - Sandy Redox, [] S6 - Stripped Matrix, [] F1 - Loamy Muck Mineral, [] F2 - Loamy Gleyed Matrix, [x] F3 - Depleted Matrix, [] F6 - Redox Dark Surface, [] F7 - Depleted Dark Surface, [] F8 - Redox Depressions
[] A16 - Coast Prairie Redox, [] F12 - Iron-Manganese Masses, [] Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A Depth: N/A
Hydric Soil Present? [x] Yes [] No
Remarks: --

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517e** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)																																																				
Tree Stratum (Plot size: 10 meter radius)																																																				
	<u>Species Name</u>	% Cover	Dominant	Ind. Status																																																
1.	--		--	--																																																
2.	--		--	--																																																
3.	--		--	--																																																
4.	--		--	--																																																
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9.	--		--	--																																																
10.	--		--	--																																																
Total Cover =		0																																																		
Sapling/Shrub Stratum (Plot size: 5 meter radius)																																																				
1.	<i>Cephalanthus occidentalis</i>	10	Y	OBL																																																
2.	--		--	--																																																
3.	--		--	--																																																
4.	--		--	--																																																
5.	--		--	--																																																
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9.	--		--	--																																																
10.	--		--	--																																																
Total Cover =		10																																																		
Herb Stratum (Plot size: 2 meter radius)																																																				
1.	<i>PHALARIS ARUNDINACEA</i>	90	Y	FACW																																																
2.	--		--	--																																																
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14.	--		--	--																																																
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Total Cover =		90																																																		
Woody Vine Stratum (Plot size: 10 meter radius)																																																				
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2.	--		--	--																																																
3.	--		--	--																																																
5.	--		--	--																																																
4.	--		--	--																																																
Total Cover =		0																																																		
Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</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>100.0%</u> (A/B)																																																				
Prevalence Index Worksheet <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Total % Cover of:</td> <td style="width: 10%;"></td> <td style="width: 10%;">Multiply by:</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>OBL spp.</td> <td><u>10</u></td> <td>x 1 =</td> <td><u>10</u></td> <td></td> <td></td> </tr> <tr> <td>FACW spp.</td> <td><u>90</u></td> <td>x 2 =</td> <td><u>180</u></td> <td></td> <td></td> </tr> <tr> <td>FACU spp.</td> <td><u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> <td></td> <td></td> </tr> <tr> <td>UPL spp.</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>x 5 =</td> <td><u>0</u></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;">Total</td> <td></td> <td><u>100</u> (A)</td> <td></td> <td><u>190</u> (B)</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">Prevalence Index = B/A =</td> <td colspan="2"><u>1.900</u></td> </tr> </table>					Total % Cover of:		Multiply by:				OBL spp.	<u>10</u>	x 1 =	<u>10</u>			FACW spp.	<u>90</u>	x 2 =	<u>180</u>			FACU spp.	<u>0</u>	x 3 =	<u>0</u>			UPL spp.	<u>0</u>	x 4 =	<u>0</u>					x 5 =	<u>0</u>			Total			<u>100</u> (A)		<u>190</u> (B)			Prevalence Index = B/A =		<u>1.900</u>	
Total % Cover of:		Multiply by:																																																		
OBL spp.	<u>10</u>	x 1 =	<u>10</u>																																																	
FACW spp.	<u>90</u>	x 2 =	<u>180</u>																																																	
FACU spp.	<u>0</u>	x 3 =	<u>0</u>																																																	
UPL spp.	<u>0</u>	x 4 =	<u>0</u>																																																	
		x 5 =	<u>0</u>																																																	
Total			<u>100</u> (A)		<u>190</u> (B)																																															
		Prevalence Index = B/A =		<u>1.900</u>																																																
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Dominance Test is > 50% <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Prevalence Index is ≤ 3.0 * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Morphological Adaptations (Explain) * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Problem Hydrophytic Vegetation (Explain) * * Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																																				
Definitions of Vegetation Strata: <p>Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p>Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</p> <p>Woody Vines - All woody vines greater than 3.28 ft. in height.</p>																																																				
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																				
Remarks: Reed canary grass fringe around open water																																																				

Additional Remarks:

Location is on the western boundary of a large wetland.



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: J. Currie	County: La Porte
Investigator #2: _____	Investigator #2: _____	State: Indiana
Soil Unit: Riddles loam	NWI/WWI Classification: --	Wetland ID: W-517e
Landform: --	Local Relief: --	Sample Point: 2u
Slope (%): --	Latitude: --	Community ID: Upland
	Longitude: --	Datum: --
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section: 20
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Soils are sandy and therefore naturally problematic.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D5 - FAC-Neutral Test
---	--	---

Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Riddles loam** Series Drainage Class: **Well drained**

Taxonomy (Subgroup): **Typic Hapludalfs** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type		Location
0	3	1	10YR	4/3	--	--	--	--	--	Sandy Loam
3	18	2	10YR	6/4	--	--	--	--	--	Sandy Loam
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: --		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517e** Sample Point **2u**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Prunus serotina</i>	25	Y	FACU
2.	<i>Acer saccharum</i>	10	N	FACU
3.	<i>Quercus rubra</i>	25	Y	FACU
4.	<i>Acer rubrum</i>	10	N	FAC
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		70		

Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Prunus serotina</i>	5	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		5		

Herb Stratum (Plot size: 2 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Solidago gigantea</i>	10	Y	FACW
2.	<i>Geum canadense</i>	5	Y	FAC
3.	<i>Carex sp.</i>	2	N	NI
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		17		

Woody Vine Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		

Remarks: --

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 5 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>10</u>	x 2 = <u>20</u>
FAC spp. <u>15</u>	x 3 = <u>45</u>
FACU spp. <u>65</u>	x 4 = <u>260</u>
UPL spp. <u>2</u>	x 5 = <u>10</u>
Total <u>92</u> (A)	<u>335</u> (B)
Prevalence Index = B/A = <u>3.641</u>	

Hydrophytic Vegetation Indicators:

- Yes No Rapid Test for Hydrophytic Vegetation
- Yes No Dominance Test is > 50%
- Yes No Prevalence Index is ≤ 3.0 *
- Yes No Morphological Adaptations (Explain) *
- Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: J. Currie	County: La Porte
Investigator #2: _____	NWI/WWI Classification: PFO1B	State: Indiana
Soil Unit: Houghton muck	Local Relief: --	Wetland ID: W-517e
Landform: --	Latitude: --	Sample Point: 2w
Slope (%): --	Longitude: --	Community ID: PEM
Datum: --		Section: 20
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input checked="" type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydic Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Soils are sandy and therefore naturally problematic. This portion of the wetland has seasonal hydrology and is therefore naturally problematic.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<u>Primary:</u> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input checked="" type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<u>Secondary:</u> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	

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

Remarks: **Area has seasonal hydrology, but oxidized rhizospheres on living roots were observed as a primary indicator of hydrology.**

SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly**

Taxonomy (Subgroup): **Typic Haplosaprists** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type			
0	6	1	10YR	4/2	--	--	--	--	Sandy loam		
6	18	2	10YR	4/1	--	10YR	5/1	5	D	PL	Sandy loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydic Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input checked="" type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	Indicators for Problematic Soils¹ <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydic Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Oxidized roots		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517e** Sample Point **2w**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--		--	--
2.	--		--	--
3.	--		--	--
4.	--		--	--
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Lindera benzoin</i>	10	Y	FACW
2.	--		--	--
3.	--		--	--
4.	--		--	--
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
Total Cover =		10		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>PHALARIS ARUNDINACEA</i>	80	Y	FACW
2.	<i>Polygonum amphibium</i>	5	N	OBL
3.	<i>Cirsium muticum</i>	5	N	OBL
4.	<i>Geum laciniatum</i>	5	N	FACW
5.	--		--	--
6.	--		--	--
7.	--		--	--
8.	--		--	--
9.	--		--	--
10.	--		--	--
11.	--		--	--
12.	--		--	--
13.	--		--	--
14.	--		--	--
15.	--		--	--
Total Cover =		95		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--		--	--
2.	--		--	--
3.	--		--	--
5.	--		--	--
4.	--		--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>10</u>	x 1 = <u>10</u>
FACW spp. <u>95</u>	x 2 = <u>190</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>105</u> (A)	<u>200</u> (B)
Prevalence Index = B/A = <u>1.905</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: J. Wiater	County: La Porte
Investigator #2: J. Currie	NWI/WWI Classification: --	State: Indiana
Soil Unit: Blount silt loam	Local Relief: --	Wetland ID: W-517f
Landform: --	Slope (%): --	Sample Point: 1u
Latitude: --	Longitude: --	Community ID: Upland
Datum: --		Section: 20
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 38 N
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: 1 Dir: W
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Area is a planted agricultural field.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> D9 - Gauge or Well Data <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: N/A (in.)	

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

Remarks: **Point in planted ag field**

SOILS

Map Unit Name: **Blount silt loam** Series Drainage Class: **somewhat poorly**

Taxonomy (Subgroup): **Aeric Epiaquafls** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	
0	10	1	10YR	3/3	--	--	--	--	Silt Loam
10	15	2	10YR	4/4	--	10YR	2/1	2	Silt Loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: --		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517f** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	TRIFOLIUM PRATENSE	40	Y	FACU
2.	TRIFOLIUM REPENS	30	Y	FACU
3.	SETARIA FABERI	10	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		80		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>0</u>	x 2 = <u>0</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>80</u>	x 4 = <u>320</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>80</u> (A)	<u>320</u> (B)
Prevalence Index = B/A = <u>4.000</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: **Planted hay field**

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/21/11
Applicant: Enbridge	Investigator #1: J. Wiater	County: La Porte
Investigator #2: J. Currie	NWI/WWI Classification: --	State: Indiana
Soil Unit: Blount silt loam	Local Relief: Concave	Wetland ID: W-517f
Landform: Swale	Slope (%): -- Latitude: -- Longitude: -- Datum: --	Sample Point: 1w
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: PEM
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 20
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: 38 N
		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks: **Swale between ag fields. Soils are sandy and therefore naturally problematic.**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test
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<p>Field Observations:</p> Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 4 (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 8 (in.) Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 8 (in.)	<p>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks: **--**

SOILS

Map Unit Name: **Blount silt loam** Series Drainage Class: **somewhat poorly**

Taxonomy (Subgroup): **Aeric Epiaquafls** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Locaton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type		Location	
0	10	1	10YR	4/1	--	10YR	3/6	5	C	M	Sandy loam
10	16	2	10YR	5/1	--	10YR	3/6	5	C	M	Clay loam
10	16	2	10YR	5/1	--	10YR	4/4	5	C	M	Clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A10 - 2 cm Muck <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat	<input type="checkbox"/> S4 - Sandy Gleyed Matrix <input checked="" type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Muck Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	Indicators for Problematic Soils¹ <input type="checkbox"/> A16 - Coast Prairie Redox <input type="checkbox"/> F12 - Iron-Manganese Masses <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sandy soil		



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-517f** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	% Cover	Dominant	Ind. Status
1.	--		--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Cephalanthus occidentalis</i>	5	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		5		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>PHALARIS ARUNDINACEA</i>	70	Y	FACW
2.	<i>Solidago gigantea</i>	10	N	FACW
3.	<i>Polygonum amphibium</i>	10	N	OBL
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		90		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>15</u>	x 1 = <u>15</u>
FACW spp. <u>80</u>	x 2 = <u>160</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>95</u> (A)	Total <u>175</u> (B)
Prevalence Index = B/A = <u>1.842</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:



WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Line 6B Phase 2 Replacement Project
Applicant: Enbridge
Investigator #1: Matt Arsenault
Investigator #2: Anthony Terwall
Date: 06/05/12
City/County: Portage/Porter
State: Indiana
Soil Unit: Blount silt loam, 0 to 3% slopes
Landform: mowed lawn
Slope (%): 1
Latitude: 41.73222
Longitude: -86.53352 -86.53358
Datum: --
Are climatic/hydrologic conditions on the site typical for this time of year? [x] Yes [] No
Are Vegetation [x], Soil [], or Hydrology [] significantly disturbed?
Are Vegetation [], Soil [], or Hydrology [] naturally problematic?
Are normal circumstances present? [] Yes [x] No
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [] Yes [x] No
Wetland Hydrology Present? [] Yes [x] No
Hydic Soils Present? [] Yes [] No
Is This Sampling Point Within A Wetland? [x] Yes [] No
Remarks: Sample point is in mowed lawn adjacent to wetland. Soil pit not dug out of respect for landowner landscaping

HYDROLOGY
Wetland Hydrology Indicators (Check here if indicators are not present [x]):
Primary:
[] A1 - Surface Water
[] A2 - High Water Table
[] A3 - Saturation
[] B1 - Water Marks
[] B2 - Sediment Deposits
[] B3 - Drift Deposits
[] B4 - Algal Mat or Crust
[] B5 - Iron Deposits
[] B7 - Inundation Visible on Aerial Imagery
[] B8 - Sparsely Vegetated Concave Surface
Secondary:
[] B9 - Water-Stained Leaves
[] B13 - Aquatic Fauna
[] B14 - True Aquatic Plants
[] C1 - Hydrogen Sulfide Odor
[] C3 - Oxidized Rhizospheres on Living Roots
[] C4 - Presence of Reduced Iron
[] C6 - Recent Iron Reduction in Tilled Soils
[] C7 - Thin Muck Surface
[] D9 - Gauge or Well Data
[] Other (Explain)
[] B6 - Surface Soil Cracks
[] B10 - Drainage Patterns
[] C2 - Dry-Season Water Table
[] C8 - Crayfish Burrows
[] C9 - Saturation Visible on Aerial Imagery
[] D1 - Stunted or Stressed Plants
[] D2 - Geomorphic Position
[] D5 - FAC-Neutral Test

Field Observations:
Surface Water Present? [] Yes [x] No Depth: n/a (in.)
Water Table Present? [] Yes [x] No Depth: n/a (in.)
Saturation Present? [] Yes [x] No Depth: n/a (in.)
Wetland Hydrology Present? [] Yes [x] No

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

SOILS
Map Unit Name: Blount silt loam, 0 to 3% slopes Series Drainage Class: somewhat poorly drained
Taxonomy (Subgroup): Aerlic Epiaqualfs Field Observations Confirm Mapped Type? [] Yes [] No
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)
Table with columns: Top Depth, Bottom Depth, Horizon, Matrix (Color, %), Mottles (Color, Type, Location), Texture (e.g. clay, sand, loam)

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
[] A1 - Histosol
[] A2 - Histic Epipedon
[] A3 - Black Histic
[] A4 - Hydrogen Sulfide
[] A5 - Stratified Layers
[] A10 - 2 cm Muck
[] A11 - Depleted Below Dark Surface
[] A12 - Thick Dark Surface
[] S1 - Sandy Muck Mineral
[] S3 - 5 cm Mucky Peat or Peat
[] B4 - Sandy Gleyed Matrix
[] B5 - Sandy Redox
[] B6 - Stripped Matrix
[] F1 - Loamy Muck Mineral
[] F2 - Loamy Gleyed Matrix
[] F3 - Depleted Matrix
[] F6 - Redox Dark Surface
[] F7 - Depleted Dark Surface
[] F8 - Redox Depressions
Indicators for Problematic Soils 1
[] A16 - Coast Prairie Redox
[] F12 - Iron-Manganese Masses
[] Other (Explain in Remarks)

Restrictive Layer (if Observed) Type: n/a Depth: n/a
Hydic Soil Present? [] Yes [] No
Remarks: soil pit not dug in mowed lawn area adjacent to wetland; the absence of wetland hydrology and vegetation supports an upland determination.

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Line 6B Phase 2 Replacement Project**

Wetland ID: **W-518-aa** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	TRIFOLIUM REPENS	30	Y	FACU
2.	PLANTAGO MAJOR	3	N	FAC
3.	grass (vegetative and mowed)	70	Y	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		103		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks:	Vegetation is mowed			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>0</u>	x 2 = <u>0</u>
FAC spp. <u>3</u>	x 3 = <u>9</u>
FACU spp. <u>30</u>	x 4 = <u>120</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>33</u> (A)	<u>129</u> (B)
Prevalence Index = B/A = <u>3.909</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:
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WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Line 6B Phase 2 Replacement Project
Applicant: Enbridge
Investigator #1: Matt Arsenault
Investigator #2: Anthony Terwall
Date: 06/05/12
City/County: Portage/Porter
State: Indiana
Soil Unit: Blount silt loam, 0 to 3% slopes
Landform: isolated depression
Slope (%): 0
Latitude: 41.73235
Longitude: -86.53358
Datum: --
Are climatic/hydrologic conditions on the site typical for this time of year? [x] Yes [] No
Are Vegetation [], Soil [], or Hydrology [] significantly disturbed?
Are Vegetation [], Soil [], or Hydrology [] naturally problematic?
Are normal circumstances present? [x] Yes [] No
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [x] Yes [] No
Wetland Hydrology Present? [x] Yes [] No
Hydric Soils Present? [x] Yes [] No
Is This Sampling Point Within A Wetland? [x] Yes [] No
Remarks: --

HYDROLOGY
Wetland Hydrology Indicators (Check here if indicators are not present []):
Primary:
[] A1 - Surface Water
[] A2 - High Water Table
[] A3 - Saturation
[x] B1 - Water Marks
[] B2 - Sediment Deposits
[] B3 - Drift Deposits
[] B4 - Algal Mat or Crust
[] B5 - Iron Deposits
[x] B7 - Inundation Visible on Aerial Imagery
[] B8 - Sparsely Vegetated Concave Surface
Secondary:
[x] B6 - Surface Soil Cracks
[] B10 - Drainage Patterns
[] C2 - Dry-Season Water Table
[] C8 - Crayfish Burrows
[] C9 - Saturation Visible on Aerial Imagery
[] D1 - Stunted or Stressed Plants
[x] D2 - Geomorphic Position
[x] D5 - FAC-Neutral Test
[] B9 - Water-Stained Leaves
[] B13 - Aquatic Fauna
[] B14 - True Aquatic Plants
[] C1 - Hydrogen Sulfide Odor
[] C3 - Oxidized Rhizospheres on Living Roots
[] C4 - Presence of Reduced Iron
[] C6 - Recent Iron Reduction in Tilled Soils
[] C7 - Thin Muck Surface
[] D9 - Gauge or Well Data
[] Other (Explain)

Field Observations:
Surface Water Present? [] Yes [x] No Depth: n/a (in.)
Water Table Present? [] Yes [x] No Depth: >18 (in.)
Saturation Present? [] Yes [x] No Depth: >18 (in.)
Wetland Hydrology Present? [x] Yes [] No

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

SOILS
Map Unit Name: Blount silt loam, 0 to 3% slopes Series Drainage Class: somewhat poorly drained
Taxonomy (Subgroup): Aerice Epiaqualfs Field Observations Confirm Mapped Type? [] Yes [x] No
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)
Table with columns: Top Depth, Bottom Depth, Horizon, Matrix (Color, %), Mottles (Color, %), Type, Location, Texture (e.g. clay, sand, loam)

NRCS Hydric Soil Field Indicators (check here if indicators are not present []):
A1 - Histosol
A2 - Histic Epipedon
A3 - Black Histic
A4 - Hydrogen Sulfide
A5 - Stratified Layers
A10 - 2 cm Muck
A11 - Depleted Below Dark Surface
A12 - Thick Dark Surface
S1 - Sandy Muck Mineral
S3 - 5 cm Mucky Peat or Peat
B4 - Sandy Gleyed Matrix
B5 - Sandy Redox
B6 - Stripped Matrix
F1 - Loamy Muck Mineral
F2 - Loamy Gleyed Matrix
F3 - Depleted Matrix
F6 - Redox Dark Surface
F7 - Depleted Dark Surface
F8 - Redox Depressions
Indicators for Problematic Soils 1
A16 - Coast Prairie Redox
F12 - Iron-Manganese Masses
Other (Explain in Remarks)

Restrictive Layer (if Observed) Type: n/a Depth: n/a
Hydric Soil Present? [x] Yes [] No
Remarks: --

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: **Line 6B Phase 2 Replacement Project**

Wetland ID: **W-518-aa** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>PHALARIS ARUNDINACEA</i>	60	Y	FACW
2.	<i>Persicaria maculosa</i>	30	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		90		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		
Remarks: --				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>90</u>	x 2 = <u>180</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>90</u> (A)	Total <u>180</u> (B)
Prevalence Index = B/A = <u>2.000</u>	

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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

Additional Remarks:

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WETLAND DETERMINATION DATA FORM
Northcentral and Northeast Region

Stantec

Project/Site: Indiana Line 6B		Stantec Project #: 193701313		Date: 10/20/11
Applicant: Enbridge		Investigator #2: J. Currie		County: St. Joseph
Investigator #1: J. Wiater		Soil Unit: Water		State: Indiana
Landform: --		NW1/WW1 Classification: --		Wetland ID: W-519a
Slope (%): --		Local Relief: --		Sample Point: 1u
Latitude: --		Longitude: --		Community ID: Upland
Datum: --		Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section: 22
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?				Range: 1 Dir: W

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: --	

HYDROLOGY	
Wetland Hydrology Indicators (Check here if indicators are not present): <input checked="" type="checkbox"/>	
<u>Primary:</u> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<u>Secondary:</u> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain)	

Field Observations:	
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: n/a (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: n/a (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: n/a (in.)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A
Remarks: --

SOILS											
Map Unit Name: Water				Series Drainage Class: NA							
Taxonomy (Subgroup): NA				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%	Color (Moist)	%	Type	Location			
0	4	1	10YR	3/1	--	--	--	--	--	--	Clay Loam
4	16	2	10YR	3/1	--	10YR	6/1	5	D	M	Clay
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input type="checkbox"/>		Indicators for Problematic Soils¹	
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> F1 - Loamy Muck Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input checked="" type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF2 - Red Parent Material <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)	
Restrictive Layer (If Observed) Type: N/A Depth: N/A		Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Remarks: While soils are hydric, the absence of wetland hydrology and vegetation supports an upland determination.	
---	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Northcentral and Northeast Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-519a** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Tilia americana</i>	20	Y	FACU
2.	<i>Populus deltoides</i>	15	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		35		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 6 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	<u>0</u>	x 1 =	<u>0</u>
FACW spp.	<u>35</u>	x 2 =	<u>70</u>
FAC spp.	<u>15</u>	x 3 =	<u>45</u>
FACU spp.	<u>40</u>	x 4 =	<u>160</u>
UPL spp.	<u>30</u>	x 5 =	<u>150</u>
Total		<u>120</u> (A)	<u>425</u> (B)
Prevalence Index = B/A =		<u>3.542</u>	

Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		

Hydrophytic Vegetation Indicators:

- Yes No Rapid Test for Hydrophytic Vegetation
- Yes No Dominance Test is > 50%
- Yes No Prevalence Index is ≤ 3.0 *
- Yes No Morphological Adaptations (Explain) *
- Yes No Problem Hydrophytic Vegetation (Explain) *

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

Herb Stratum (Plot size: 2 meter radius)				
1.	<i>ARCTIUM MINUS</i>	30	Y	UPL
2.	<i>Solidago canadensis</i>	10	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		40		

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: 10 meter radius)				
1.	<i>Rubus idaeus var. strigosus</i>	30	Y	FACW
2.	<i>Vitis labrusca</i>	10	Y	FACU
3.	<i>Vitis riparia</i>	5	N	FACW
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		45		

Hydrophytic Vegetation Present Yes No

Remarks: --

Additional Remarks:

--



WETLAND DETERMINATION DATA FORM
Northcentral and Northeast Region

Stantec

Project/Site: Indiana Line 6B
Applicant: Enbridge
Investigator #1: M. Van Loan
Investigator #2: J. Delmedico
Date: 10/20/11
County: St. Joseph
State: Indiana
Soil Unit: Water
NW1/WW1 Classification: PUBGX
Landform: --
Local Relief: --
Slope (%): --
Latitude: --
Longitude: --
Datum: --
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks) [X] Yes [] No
Are Vegetation [], Soil [], or Hydrology [] significantly disturbed?
Are normal circumstances present? [X] Yes [] No
Are Vegetation [], Soil [], or Hydrology [] naturally problematic? [X] Yes [] No
Wetland ID: W-519a
Sample Point: 1w
Community ID: PFO/PSS
Section: 22
Township: 38 N
Range: 1 Dir: W

SUMMARY OF FINDINGS
Hydrophytic Vegetation Present? [X] Yes [] No
Wetland Hydrology Present? [X] Yes [] No
Hydric Soils Present? [X] Yes [] No
Is This Sampling Point Within A Wetland? [X] Yes [] No
Remarks: --

HYDROLOGY
Wetland Hydrology Indicators (Check here if indicators are not present): []
Primary:
[X] A1 - Surface Water
[X] A2 - High Water Table
[X] A3 - Saturation
[] B1 - Water Marks
[] B2 - Sediment Deposits
[] B3 - Drift Deposits
[] B4 - Algal Mat or Crust
[] B5 - Iron Deposits
[] B7 - Inundation Visible on Aerial Imagery
[] B8 - Sparsely Vegetated Concave Surface
Secondary:
[] B6 - Surface Soil Cracks
[] B10 - Drainage Patterns
[] B16 - Moss Trim Lines
[] C2 - Dry-Season Water Table
[] C8 - Crayfish Burrows
[] C9 - Saturation Visible on Aerial Imagery
[] D1 - Stunted or Stressed Plants
[] D2 - Geomorphic Position
[] D3 - Shallow Aquitard
[] D4 - Microtopographic Relief
[X] D5 - FAC-Neutral Test

Field Observations:
Surface Water Present? [X] Yes [] No Depth: 1 (in.)
Water Table Present? [X] Yes [] No Depth: 0 (in.)
Saturation Present? [X] Yes [] No Depth: 0 (in.)
Wetland Hydrology Present? [X] Yes [] No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A
Remarks: Some standing water present.

SOILS
Map Unit Name: Water Series Drainage Class: NA
Taxonomy (Subgroup): NA Field Observations Confirm Mapped Type? [X] Yes [] No
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)
Table with columns: Top Depth, Bottom Depth, Horizon, Matrix (Color (Moist), %), Mottles (Color (Moist), %), Type, Location, Texture (e.g. clay, sand, loam)
Rows: 0, 2, 6, --, --, --, --

NRCS Hydric Soil Field Indicators (check here if indicators are not present): []
Indicators for Problematic Soils 1
[] A1 - Histosol
[] A2 - Histic Epipedon
[] A3 - Black Histic
[] A4 - Hydrogen Sulfide
[] A5 - Stratified Layers
[] A11 - Depleted Below Dark Surface
[] A12 - Thick Dark Surface
[] S1 - Sandy Muck Mineral
[] S4 - Sandy Gleyed Matrix
[] S5 - Sandy Redox
[] S6 - Stripped Matrix
[] S7 - Dark Surface (LRR R, MLRA 149B)
[] S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
[] S9 - Thin Dark Surface (LRR R, MLRA 149B)
[] F1 - Loamy Muck Mineral (LRR K, L)
[X] F2 - Loamy Gleyed Matrix
[] F3 - Depleted Matrix
[] F6 - Redox Dark Surface
[] F7 - Depleted Dark Surface
[] F8 - Redox Depressions
[] A10 - 2 cm Muck (LRR K, L, MLRA149B)
[] A16 - Coast Prairie Redox (LRR K, L, R)
[] S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
[] S7 - Dark Surface (LRR K, L)
[] S8 - Polyvalue Below Surface (LRR K, L)
[] S9 - Thin Dark Surface (LRR K, L)
[] F12 - Iron-Manganese Masses (LRR K, L, R)
[] F19 - Piedmont Floodplain Soils (MLRA 149B)
[] TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
[] TF2 - Red Parent Material
[] TF12 - Very Shallow Dark Surface
[] Other (Explain in Remarks)

Restrictive Layer (if Observed) Type: N/A Depth: N/A
Hydric Soil Present? [X] Yes [] No
Remarks: --

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.



WETLAND DETERMINATION DATA FORM
Northcentral and Northeast Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-519a** Sample Point **1w**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Salix nigra</i>	40	Y	OBL
2.	<i>RHAMNUS CATHARTICA</i>	30	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		70		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
 Total Number of Dominant Species Across All Strata: 5 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	<u>90</u>	x 1 =	<u>90</u>
FACW spp.	<u>80</u>	x 2 =	<u>160</u>
FAC spp.	<u>0</u>	x 3 =	<u>0</u>
FACU spp.	<u>30</u>	x 4 =	<u>120</u>
UPL spp.	<u>0</u>	x 5 =	<u>0</u>
Total		<u>200</u> (A)	<u>370</u> (B)
Prevalence Index = B/A =		<u>1.850</u>	

Sapling/Shrub Stratum (Plot size: 5 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Cephalanthus occidentalis</i>	30	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		30		

Hydrophytic Vegetation Indicators:

- Yes No Rapid Test for Hydrophytic Vegetation
- Yes No Dominance Test is > 50%
- Yes No Prevalence Index is ≤ 3.0 *
- Yes No Morphological Adaptations (Explain) *
- Yes No Problem Hydrophytic Vegetation (Explain) *

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

Herb Stratum (Plot size: 2 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>PHALARIS ARUNDINACEA</i>	80	Y	FACW
2.	<i>Boehmeria cylindrica</i>	20	Y	OBL
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		

Hydrophytic Vegetation Present Yes No

Remarks: --

Additional Remarks:

--



WETLAND DETERMINATION DATA FORM
Northcentral and Northeast Region

Stantec

Project/Site: Indiana Line 6B	Stantec Project #: 193701313	Date: 10/20/11
Applicant: Enbridge	Investigator #1: M. Van Loan	County: St. Joseph
Investigator #2: J. Delmedico	NWI/WWI Classification: --	State: Indiana
Soil Unit: Houghton muck	Local Relief: --	Wetland ID: W-519b
Landform: --	Slope (%): --	Sample Point: 1u
Latitude: --	Longitude: --	Community ID: Upland
Datum: --	Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Section: 22
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: 38 N
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: 1 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Remarks: **--**

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
---	--	--

Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: n/a (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: n/a (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: n/a (in.)	

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

Remarks: **--**

SOILS

Map Unit Name: **Houghton muck** Series Drainage Class: **very poorly**

Taxonomy (Subgroup): **Typic Haplosaprists** Field Observations Confirm Mapped Type? Yes No

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix		Mottles			Texture (e.g. clay, sand, loam)	
			Color (Moist)	%	Color (Moist)	%	Type		Location
0	2	1	10YR	3/2	--	--	--	--	Loam
2	8	2	10YR	7/1	--	--	--	--	Clay Loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> F1 - Loamy Muck Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF2 - Red Parent Material <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
---	--	---

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if Observed) Type: refusal Depth: 8in	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

Remarks: **Refusal at 8in. While hydric soils are present, the absence of wetland hydrology and vegetation supports an upland determination.**



WETLAND DETERMINATION DATA FORM
Northcentral and Northeast Region

Project/Site: **Indiana Line 6B**

Wetland ID: **W-519b** Sample Point **1u**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 10 meter radius)

	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	<i>Ulmus americana</i>	20	Y	FACW
2.	<i>Carya ovata</i>	20	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		40		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	<u>0</u>	x 1 =	<u>0</u>
FACW spp.	<u>20</u>	x 2 =	<u>40</u>
FAC spp.	<u>0</u>	x 3 =	<u>0</u>
FACU spp.	<u>60</u>	x 4 =	<u>240</u>
UPL spp.	<u>20</u>	x 5 =	<u>100</u>
Total		<u>100</u> (A)	<u>380</u> (B)
Prevalence Index = B/A =		<u>3.800</u>	

Sapling/Shrub Stratum (Plot size: 5 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		

Hydrophytic Vegetation Indicators:

- Yes No Rapid Test for Hydrophytic Vegetation
- Yes No Dominance Test is > 50%
- Yes No Prevalence Index is ≤ 3.0 *
- Yes No Morphological Adaptations (Explain) *
- Yes No Problem Hydrophytic Vegetation (Explain) *

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

Herb Stratum (Plot size: 2 meter radius)

1.	<i>ROSA MULTIFLORA</i>	20	Y	FACU
2.	<i>Solidago canadensis</i>	20	Y	FACU
3.	<i>Rubus occidentalis</i>	20	Y	UPL
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		60		

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: 10 meter radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
Total Cover =		0		

Hydrophytic Vegetation Present Yes No

Remarks: --

Additional Remarks:

--