WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersettg	Investigator #2:	A. Brasch
Soil Unit:	Haskins loam	NWI/WWI Classification:	--
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/26/12
County:	Porter
State:	Indiana
Wetland ID:	w-493c
Sample Point:	**1w**
Community ID:	EM1
Section:	11
Township:	36 N
Range:	5 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: Type 4 deep marsh with small pool open water center. Dominated by lake sedge, reed canary grass, cattail, and purple loosestrife.

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
- ☐ 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)

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	Depth: 1	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 0	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Haskins loam — Series Drainage Class: somewhat poorly

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	2/1	100	--	--	--	--	--	mucky silt loam
5	14	2	10YR	3/1	80	10YR	4/6	20	C	M	silty clay loam
14	20	3	10YR	4/2	70	10YR	4/6	30	C	M	clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-493c	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Ulmus americana*	10	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

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

1.	*Cephalanthus occidentalis*	10	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	40	Y	FACW
2.	*LYTHRUM SALICARIA*	40	Y	OBL
3.	*Typha latifolia*	10	N	OBL
4.	*Carex lacustris*	10	N	OBL
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		

Dominance Test Worksheet

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

Total Number of Dominant Species Across All Strata: 4 (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.	70	x 1 =	70
FACW spp.	50	x 2 =	100
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	120 (A)		170 (B)

Prevalence Index = B/A = ***1.417***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles silt loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/26/12
County:	Porter
State:	Indiana
Wetland ID:	w-493d
Sample Point:	**1u**
Community ID:	upland
Section:	1
Township:	36 N
Range:	5 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Riddles silt loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix	%	Mottles Color (Moist)		%	Type	Location	Texture (e.g. clay, sand, loam)
0	15	1	10YR	3/3	100	--	--	--	--	--	silty clay loam
15	18	2	10YR	4/4	100	--	--	--	--	--	clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-493d	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*POA PRATENSIS*	40	Y	FAC
2.	*BROMUS INERMIS*	40	Y	UPL
3.	*PHALARIS ARUNDINACEA*	20	Y	FACW
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		

Dominance Test Worksheet

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

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

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	20	x 2 =	40
FAC spp.	40	x 3 =	120
FACU spp.	0	x 4 =	0
UPL spp.	40	x 5 =	200
Total	100 (A)		360 (B)

Prevalence Index = B/A = ***3.600***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles silt loam	NWI/WWI Classification:	--
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/26/12		
County:	Porter		
State:	Indiana		
Wetland ID:	w-493d		
Sample Point:	**1w**		
Community ID:	EM1		
Section:	1		
Township:	36 N		
Range:	5	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: Type 1 seasonally flooded basin dominated by reed canary grass and Carex stricta.

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Riddles silt loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	18	1	10YR 4/2	70	10YR 4/6	30	C	M	silty clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-493d	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	70	Y	FACW
2.	*Carex stricta*	30	Y	OBL
3.	*Juncus tenuis*	5	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	105		

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: 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.	30	x 1 =	30
FACW spp.	70	x 2 =	140
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	105 (A)		185 (B)

Prevalence Index = B/A = ***1.762***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles silt loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	convex
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/26/12
County:	Porter
State:	Indiana
Wetland ID:	w-493e
Sample Point:	**1u**
Community ID:	upland
Section:	1
Township:	36 N
Range:	5 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ **Yes** ☑ **No**

Remarks:

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
- ☐ 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)

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	Depth:	na	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	na	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Riddles silt loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	4/3	90	10YR	4/6	10	C	M	silty clay loam
6	18	2	10YR	4/2	80	10YR	4/6	20	C	M	clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-493e	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	30	Y	FACU
2.	*Malus coronaria*	20	Y	NI
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	50		

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

1.	*ROSA MULTIFLORA*	10	N	FACU
2.	*LONICERA TATARICA*	5	N	FACU
3.	*Cornus racemosa*	70	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	85		

Herb Stratum (Plot size: 2 meter radius)

1.	*Ranunculus abortivus*	5	N	FACW
2.	*Cyperus esculentus*	5	N	FACW
3.	*Fragaria virginiana*	10	N	FAC
4.	*POA PRATENSIS*	20	Y	FAC
5.	*Solidago canadensis*	20	Y	FACU
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	60		

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: 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.	0	x 1 =	0
FACW spp.	80	x 2 =	160
FAC spp.	30	x 3 =	90
FACU spp.	65	x 4 =	260
UPL spp.	20	x 5 =	100
Total	195 (A)		610 (B)

Prevalence Index = B/A = ***3.128***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Houghton muck, drained	NWI/WWI Classification:	--
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/26/12
County:	Porter
State:	Indiana
Wetland ID:	w-493e
Sample Point:	**1w**
Community ID:	SS1
Section:	1
Township:	36 N
Range:	5 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: Type 3/6/7 shallow marsh (iris, skunk cabbage, and reed canary grass) with shrub scrub center (buttonbush, spicebush, and dogwood) and fringed by forested wetland (green ash, silver maple, cottonwood).

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
- ☐ 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)

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	Depth: 2	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 0	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

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

Taxonomy (Subgroup): Typic Medisaprists — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	2/1	100	--	--	--	--	--	mucky loam
5	12	2	10YR	3/1	90	10YR	3/6	10	C	M	silt loam
12	18	3	10YR	4/2	70	10YR	4/6	30	C	M	silty clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-493e	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	*Populus deltoides*	10	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	15		

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

1.	*Cornus racemosa*	60	Y	FACW
2.	*Lindera benzoin*	20	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	80		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	40	Y	OBL
2.	*Iris versicolor*	40	Y	OBL
3.	*PHALARIS ARUNDINACEA*	10	N	FACW
4.	*Carex vulpinoidea*	5	N	OBL
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		

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.	85	x 1 =	85
FACW spp.	95	x 2 =	190
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	190 (A)		305 (B)

Prevalence Index = B/A = ***1.605***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Pewamo silty clay loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	3	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	Porter
State:	Indiana
Wetland ID:	w-493z
Sample Point:	**1u**
Community ID:	upland
Section:	2
Township:	36 N
Range:	5 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ **Yes** ☑ **No**

Remarks:

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
- ☐ 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)

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	Depth:	na	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	na	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Pewamo silty clay loam — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Argiaquolls — 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; Locaiton: PL=Pore Lining, M=Matrix)

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

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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-493z	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	20	Y	FACU
2.	*Quercus velutina*	40	Y	FACU
3.	*Acer saccharum*	30	Y	FACU
4.	*Ulmus americana*	10	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	100		

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

1.	*LONICERA TATARICA*	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Podophyllum peltatum*	60	Y	FACU
2.	*Trillium recurvatum*	20	Y	FACU
3.	--	--	--	--
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: 6 (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.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	0	x 3 =	0
FACU spp.	180	x 4 =	720
UPL spp.	0	x 5 =	0
Total	190 (A)		740 (B)

Prevalence Index = B/A = ***3.895***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Pewamo silty clay loam	NWI/WWI Classification:	PFO1A
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	Porter
State:	Indiana
Wetland ID:	w-493z
Sample Point:	**1w**
Community ID:	FO1
Section:	2
Township:	36 N
Range:	5 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: Type 3/6 hillside, seep and creek fringe. Skunk cabbage, phragmites, spicebush.

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 2	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Pewamo silty clay loam — Series Drainage Class: very poorly

Taxonomy (Subgroup): Typic Argiaquolls — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix	%	Mottles Color (Moist)	Mottles	%	Type	Location	Texture (e.g. clay, sand, loam)
0	10	1	gley 1	2.5/N	100	--	--	--	--	--	mucky silt loam
10	18	2	gley 1	2.5/N	100	--	--	--	--	--	silty clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-493z	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharinum*	30	Y	FACW
2.	*Fraxinus pennsylvanica*	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

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

1.	*Lindera benzoin*	40	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	90	Y	OBL
2.	*Phragmites australis*	10	N	FACW
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		

Dominance Test Worksheet

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

Total Number of Dominant Species Across All Strata: 4 (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.	90	x 1 =	90
FACW spp.	90	x 2 =	180
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	180 (A)		270 (B)

Prevalence Index = B/A = ***1.500***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Haskins loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	1	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/26/12
County:	Porter
State:	Indiana
Wetland ID:	w-494a
Sample Point:	**1u**
Community ID:	upland
Section:	1
Township:	36 N
Range:	5 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:

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
- ☐ 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)

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	Depth:	na	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	na	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Haskins loam — Series Drainage Class: somewhat poorly

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix	%	Mottles Color (Moist)	Mottles	%	Type	Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR	3/3	100	--	--	--	--	--	silty clay loam
10	18	2	10YR	4/3	80	10YR	3/3	20	C	M	clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-494a	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*BROMUS INERMIS*	60	Y	UPL
2.	*DIPSACUS FULLONUM SUBSP. SYL*	30	Y	NI
3.	*TRIFOLIUM PRATENSE*	10	N	FACU
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		

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.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	10	x 4 =	40
UPL spp.	90	x 5 =	450
Total	100 (A)		490 (B)

Prevalence Index = B/A = ***4.900***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Milford silty clay loam	NWI/WWI Classification:	--
Landform:	depression, swale	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/26/12
County:	Porter
State:	Indiana
Wetland ID:	w-494a
Sample Point:	**1w**
Community ID:	SS1
Section:	1
Township:	36 N
Range:	5 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: Type 6 shrub scrub dominated by sandbar willow, spicebush, and buttonbush

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 4	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Milford silty clay loam — Series Drainage Class: poorly

Taxonomy (Subgroup): Typic 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR	3/1	90	10YR	3/6	10	C	M	silty clay loam
4	16	2	10YR	3/2	80	10YR	4/6	20	C	M	clay loam
16	20	3	10YR	4/2	70	10YR	4/6	30	C	M	clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-494a	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	*Salix exigua subsp. interior*	60	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	60		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	40	Y	FACW
2.	*Equisetum arvense*	30	Y	FAC
3.	*POA PRATENSIS*	40	Y	FAC
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	110		

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: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (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.	60	x 1 =	60
FACW spp.	40	x 2 =	80
FAC spp.	70	x 3 =	210
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	170 (A)		350 (B)

Prevalence Index = B/A = ***2.059***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles silt loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/27/12
County:	Porter
State:	Indiana
Wetland ID:	w-494c
Sample Point:	**1u**
Community ID:	upland
Section:	1
Township:	36 N
Range:	5 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Riddles silt loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

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

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-494c	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*BROMUS INERMIS*	90	N	UPL
2.	*DAUCUS CAROTA*	10	Y	UPL
3.	*POA PRATENSIS*	10	Y	FAC
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	110		

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: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	100	x 5 =	500
Total	110 (A)		530 (B)

Prevalence Index = B/A = ***4.818***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles loam	NWI/WWI Classification:	PFO1B
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/27/12
County:	Porter
State:	Indiana
Wetland ID:	w-494c
Sample Point:	**1w**
Community ID:	SS1
Section:	1
Township:	36 N
Range:	5 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: Type 6/7. Scrub-shrub dominated by spicebush, red oiser dogwood, skunk cabbage, carex, wet meadow. Forested: cottonwood, green ash.

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 8	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Riddles loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	2/1	100	--	--	--	--	--	silty clay loam
5	14	2	10YR	3/1	90	10YR	3/6	10	C	M	silty clay loam
14	18	3	10YR	3/2	90	10YR	3/6	10	C	M	silty clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-494c	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus deltoides*	10	Y	FAC
2.	*Prunus serotina*	5	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	15		

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

1.	*Sambucus canadensis*	5	N	FACW
2.	*Lindera benzoin*	20	Y	FACW
3.	*Prunus serotina*	5	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	50	Y	OBL
2.	*Carex lacustris*	30	Y	OBL
3.	*Carex stricta*	10	N	OBL
4.	*Impatiens capensis*	20	Y	FACW
5.	*Typha latifolia*	10	N	OBL
6	*Solidago gigantea*	5	N	FACW
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	125		

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: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***83.3%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	100	x 1 =	100
FACW spp.	50	x 2 =	100
FAC spp.	10	x 3 =	30
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	170 (A)		270 (B)

Prevalence Index = B/A = ***1.588***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Blount silt loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	convex
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/27/12
County:	Porter
State:	Indiana
Wetland ID:	w-494c
Sample Point:	**2u**
Community ID:	upland
Section:	1
Township:	36 N
Range:	5 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

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

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix	%	Mottles Color (Moist)	Mottles	%	Type	Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR	2/2	100	--	--	--	--	--	sandy loam
8	14	2	10YR	3/3	100	--	--	--	--	--	sandy clay loam
14	18	3	10YR	3/2	90	10YR	3/6	10	C	M	clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-494c	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Ulmus americana*	10	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

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

1.	*Ulmus americana*	30	Y	FACW
2.	*Lindera benzoin*	5	N	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	35		

Herb Stratum (Plot size: 2 meter radius)

1.	*PORTULACA OLERACEA*	90	Y	FAC
2.	*TARAXACUM OFFICINALE*	10	N	FACU
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		

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

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	45	x 2 =	90
FAC spp.	90	x 3 =	270
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	145 (A)		400 (B)

Prevalence Index = B/A = ***2.759***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Meyer	Investigator #2:	A. Binkowsi
Soil Unit:	Histosols and Aquolls	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☑, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/27/11
County:	La Porte
State:	Indiana
Wetland ID:	W-495a
Sample Point:	**1u**
Community ID:	Upland
Section:	31
Township:	37 N
Range:	4 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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Histosols and Aquolls — Series Drainage Class: very poorly

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 3/2	--	--	--	--	--	Sandy Loam
10	17	2	2.5Y 5/3	--	10YR 5/8	10	C	M	Sandy 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
- ☐ 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)

[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-495a	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	*Prunus serotina*	40	Y	FACU
3.	*Ulmus americana*	10	N	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	90		

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

1.	*Lindera benzoin*	100	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	100		

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.	*Toxicodendron radicans subsp. negunc*	10	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	10		

Dominance Test Worksheet

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***50.0%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	110	x 2 =	220
FAC spp.	10	x 3 =	30
FACU spp.	80	x 4 =	320
UPL spp.	0	x 5 =	0
Total	200 (A)		570 (B)

Prevalence Index = B/A = ***2.850***

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: While the prevalence index was less than three, the rapid and dominance tests for hydric vegetation were not met. In addition, the absence of wetland hydrology and soils supports an upland determination.

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Meyer	Investigator #2:	A. Binkowski
Soil Unit:	Histosols and Aquolls	NWI/WWI Classification:	PFO1C / PEMC
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/27/11
County:	La Porte
State:	Indiana
Wetland ID:	W-495a
Sample Point:	**1w**
Community ID:	PFO
Section:	31
Township:	37 N
Range:	4 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: --

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
- ☐ 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)

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	Depth: 0.5	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 0	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(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: 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; Locaiton: PL=Pore Lining, M=Matrix)

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

[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-495a	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Ulmus rubra*	40	Y	FAC
2.	*Salix sp.*	20	Y	--
3.	*Salix nigra*	10	N	OBL
4.	*Cornus stolonifera*	5	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	75		

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

1.	*Lindera benzoin*	10	Y	FACW
2.	*Rosa palustris*	5	Y	OBL
3.	*Ribes americanum*	5	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Leersia oryzoides*	90	Y	OBL
2.	*Solidago gigantea*	10	N	FACW
3.	*Aster firmus*	5	N	FACW
4.	*TYPHA ANGUSTIFOLIA*	2	N	OBL
5.	*Sicyos angulatus*	2	N	FACW
6	*Equisetum palustre*	2	N	FACW
7.	*Onoclea sensibilis*	2	N	FACW
8.	*PHALARIS ARUNDINACEA*	2	N	FACW
9.	--	--		--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	115		

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: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***83.3%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	107	x 1 =	107
FACW spp.	43	x 2 =	86
FAC spp.	40	x 3 =	120
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	190 (A)		313 (B)

Prevalence Index = B/A = ***1.647***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Meyer	Investigator #2:	A. Binkowski
Soil Unit:	Histosols and Aquolls	NWI/WWI Classification:	--
Landform:	--	Local Relief:	--
Slope (%):	--	Latitude: --	Longitude: -- Datum: --

Date:	10/27/11
County:	La Porte
State:	Indiana
Wetland ID:	W-495a
Sample Point:	**2u**
Community ID:	Upland
Section:	31
Township:	37 N
Range:	4 Dir: W

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: --

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: No primary wetland hydrology indicators were observed; only the FAC-Neutral test was met.

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/1	--	--	--	--	--	Silt Loam
4	27	2	10YR 4/1	--	10YR 3/3	--	--	--	Silty Clay 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
- ☐ 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)

[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: While soils are hydric, the area is several feet higher than the paired wetland point (W-495a-1w) and there are no primary wetland hydrology indicators. Professional judgement indicates this is an upland area.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Wetland ID:	W-495a	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus deltoides*	50	Y	FAC
2.	*Ulmus americana*	40	Y	FACW
3.	*Cornus racemosa*	5	N	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	95		

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

1.	*Lindera benzoin*	100	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	100		

Herb Stratum (Plot size: 2 meter radius)

1.	*Allium canadense*	30	Y	FACU
2.	*Viola labradorica*	20	Y	FAC
3.	*Parthenocissus quinquefolia*	20	Y	FAC
4.	*Aster firmus*	10	N	FACW
5.	*Hydrophyllum virginianum*	10	N	FACW
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		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***83.3%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	165	x 2 =	330
FAC spp.	90	x 3 =	270
FACU spp.	30	x 4 =	120
UPL spp.	0	x 5 =	0
Total	285 (A)		720 (B)

Prevalence Index = B/A = ***2.526***

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: While overstory and shrub vegetation is dominated by hydric species, the understory vegetation shifted from hydric species within the wetland to FACU and FAC species outside the wetland. Sample point is topographically several feet higher than corresponding wtl point.

Additional Remarks:

This area is topographically several feet higher than the corresponding wetland area, and understory vegetation shifted from a dominance of rice cut grass, slippery elm, and willow within the forested wetland, to a dominance of American elm, cottonwood, wild onion, wood vine, and Labrador violet within the upland. The absence of primary wetland hydrology indicators, shift in vegetation, and topographic position support this upland determination.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykendahl	Investigator #2:	A. Binkowski
Soil Unit:	Tracy sandy loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☑, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11
County:	La Porte
State:	Indiana
Wetland ID:	W-496a
Sample Point:	**1u**
Community ID:	Upland
Section:	32
Township:	37 N
Range:	4 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: Sample point is located approx. 3 ft higher than corresponding wetland point. 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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Tracy sandy loam — Series Drainage Class: well drained
Taxonomy (Subgroup): Ultic 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; Locaiton: PL=Pore Lining, M=Matrix)

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

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)

[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-496a	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	20	Y	FACW
2.	*Tilia americana*	10	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	30		

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

1.	*Acer negundo*	5	Y	FACW
2.	*Fraxinus pennsylvanica*	5	Y	FACW
3.	--		--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago canadensis*	5	N	FACU
2.	*ROSA MULTIFLORA*	5	N	FACU
3.	*Viola labradorica*	40	Y	FAC
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		

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.	0	x 1 =	0
FACW spp.	30	x 2 =	60
FAC spp.	40	x 3 =	120
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	90 (A)		260 (B)

Prevalence Index = B/A = ***2.889***

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: While vegetation is hydric, the absence of wetland soils and hydrology supports an upland determination. This sample point was approx. 3 feet higher than the corresponding wetland point (W-496a-1w).

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykendahl	Investigator #2:	A. Binkowski
Soil Unit:	Fluvaquents	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11
County:	La Porte
State:	Indiana
Wetland ID:	W-496a
Sample Point:	**1w**
Community ID:	PFO/PSS
Section:	32
Township:	37 N
Range:	4 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: --

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(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: Fluvaquents — Series Drainage Class: poorly to somewhat poorly
Taxonomy (Subgroup): NA — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	2.5Y	3/1	95	5YR	4/6	5	C	PL	Silt Loam
6	16	2	2.5Y	5/1	--	--	--	--	--	--	Silty Clay 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
- ☐ 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)

[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-496a	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer negundo*	10	Y	FACW
2.	*Fraxinus pennsylvanica*	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	20		

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

1.	*Alnus incana subsp. rugosa*	20	Y	OBL
2.	*Cornus stolonifera*	20	Y	FACW
3.	*Acer negundo*	20	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	60		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	60	Y	FACW
2.	*Equisetum arvense*	25	Y	FAC
3.	*Solidago canadensis*	5	N	FACU
4.	*Aster novae-angliae*	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		

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.	20	x 1 =	20
FACW spp.	125	x 2 =	250
FAC spp.	25	x 3 =	75
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	175 (A)		365 (B)

Prevalence Index = B/A = ***2.086***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313	Date:	11/10/11
Applicant:	Enbridge			County:	La Porte
Investigator #1:	B. Kuykendahl	Investigator #2:	A. Binkowski	State:	Indiana
Soil Unit:	Fluvaquents	NWI/WWI Classification:	--	Wetland ID:	W-496a
Landform:	--	Local Relief:	--	Sample Point:	**2u**
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)			☑ Yes ☐ No	Section:	32
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	37 N
Are Vegetation ☐, Soil ☑, or Hydrology ☐ naturally problematic?			☑ Yes ☐ No	Range:	4 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ **Yes** ☑ **No**

Remarks: Sample point located approx. 1ft higher than corresponding wetland point. 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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: No primary wetland hydrology indicators were observed; only FAC-Neutral was met.

SOILS

Map Unit Name: Fluvaquents — Series Drainage Class: poorly to somewhat poorly

Taxonomy (Subgroup): NA — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR 3/2	--	--	--	--	--	Sandy Loam
14	16	2	10YR 4/3	--	--	--	--	--	Sandy 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
- ☐ 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)

[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-496a	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer negundo*	20	Y	FACW
2.	*Fraxinus pennsylvanica*	20	Y	FACW
3.	*Quercus palustris*	5	N	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	45		

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

1.	*Acer negundo*	10	Y	FACW
2.	*Fraxinus pennsylvanica*	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Viola labradorica*	50	Y	FAC
2.	*Solidago gigantea*	5	N	FACW
3.	*Viola sororia*	5	N	FAC
4.	*Tofieldia glutinosa var. glutinosa*	5	N	OBL
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
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		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (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.	5	x 1 =	5
FACW spp.	70	x 2 =	140
FAC spp.	55	x 3 =	165
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	130 (A)		310 (B)

Prevalence Index = B/A = ***2.385***

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: While vegetation is hydric, the absence of wetland soils and primary hydrology indicators supports an upland determination. This sample point was approx. 1 feet higher than the corresponding wetland point (W-496a-1w).

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykedahl	Investigator #2:	A. Binkowski
Soil Unit:	Tracy sand loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11
County:	La Porte
State:	Indiana
Wetland ID:	W-496b
Sample Point:	**1u**
Community ID:	Upland
Section:	32
Township:	37 N
Range:	4 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: Sample point approx. 1 ft higher in elevation than corresponding wetland point

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: No primary wetland hydrology indicators were observed; only FAC-Neutral was met.

SOILS

Map Unit Name: Tracy sand loam — Series Drainage Class: well drained
Taxonomy (Subgroup): Ultic 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; Locaiton: PL=Pore Lining, M=Matrix)

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

[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-496b	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus palustris*	10	Y	FACW
2.	*Fraxinus pennsylvanica*	10	Y	FACW
3.	*Carya ovata*	5	N	FACU
4.	*Quercus rubra*	5	N	FACU
5.	*Acer negundo*	5	N	FACW
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	35		

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

1.	*Acer negundo*	10	Y	FACW
2.	*Prunus serotina*	5	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago gigantea*	5	Y	FACW
2.	*Toxicodendron radicans subsp. negunc*	5	Y	FAC
3.	--	--		--
4.	--	--		--
5.	--	--		--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	10		

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: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***83.3%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	40	x 2 =	80
FAC spp.	5	x 3 =	15
FACU spp.	15	x 4 =	60
UPL spp.	0	x 5 =	0
Total	60 (A)		155 (B)

Prevalence Index = B/A = ***2.583***

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: While vegetation is dominantly hydric, the absence of wetland soils and primary hydrology indicators supports an upland determination. The sample point was located approx. 1 foot higher than the corresponding wetland sample point (W-496b-1w).

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykendall	Investigator #2:	A. Binkowski
Soil Unit:	Tracy sandy loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11
County:	La Porte
State:	Indiana
Wetland ID:	W-496b
Sample Point:	**1w**
Community ID:	PEM
Section:	32
Township:	37 N
Range:	4 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: --

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
- ☐ 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)

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	Depth: 5	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 0	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(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: Tracy sandy loam — Series Drainage Class: well drained
Taxonomy (Subgroup): Ultic 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR	3/1	95	7.5YR	5/6	5	C	M	Silt Loam
9	16	2	10YR	4/1	98	10YR	5/6	2	C	M	Silty Clay 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
- ☐ 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)

[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: Inundation

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Wetland ID:	W-496b	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer negundo*	20	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	20		

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

1.	*Salix exigua subsp. interior*	10	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	80	Y	FACW
2.	*Polygonum amphibium*	5	N	OBL
3.	*Aster novae-angliae*	5	N	FACW
4.	*Aster borealis*	5	N	OBL
5.	*PHRAGMITES AUSTRALIS*	1	N	FACW
6	*Toxicodendron radicans subsp. negunc*	1	N	FAC
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	97		

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: 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

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	106	x 2 =	212
FAC spp.	1	x 3 =	3
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	127 (A)		235 (B)

Prevalence Index = B/A = ***1.850***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykedahl	Investigator #2:	A. Binkowski
Soil Unit:	Tracy sandy loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11
County:	La Porte
State:	Indiana
Wetland ID:	W-496b
Sample Point:	**2u**
Community ID:	Upland
Section:	32
Township:	37 N
Range:	4 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: Sample point is approx. 2 ft higher in elevation than corresponding wetland point

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: No primary hydrology indicators were observed; only the FAC-Neutral test was met.

SOILS

Map Unit Name: Tracy sandy loam — Series Drainage Class: well drained
Taxonomy (Subgroup): Ultic 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR 3/2	--	--	--	--	--	Silt Loam
7	16	2	10YR 4/3	--	--	--	--	--	Silty Clay 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
- ☐ 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)

[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-496b	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus palustris*	20	Y	FACW
2.	*Acer negundo*	15	Y	FACW
3.	*Fraxinus pennsylvanica*	10	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	45		

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

1.	*Acer negundo*	20	Y	FACW
2.	*Fraxinus pennsylvanica*	20	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*Toxicodendron radicans subsp. negunc*	10	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	10		

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: 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.	0	x 1 =	0
FACW spp.	85	x 2 =	170
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	95 (A)		200 (B)

Prevalence Index = B/A = ***2.105***

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: While vegetation is dominantly hydric, the absence of wetland soils and primary hydrology indicators supports an upland determination. The sample point was located approx. 3 foot higher than the corresponding wetland sample point (W-496b-1w).

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Terstegg	Investigator #2:	A. Brasch
Soil Unit:	Selfridge-Brems loamy sands	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-496c
Sample Point:	**1u**
Community ID:	upland
Section:	32
Township:	37 N
Range:	4 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 18	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Selfridge-Brems loamy sands Series Drainage Class: somewhat poorly

Taxonomy (Subgroup): multiple Subgroups 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR	4/4	100	--	--	--	--	--	sand clay loam
14	18	2	10YR	4/3	90	10YR	4/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-496c	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago canadensis*	40	Y	FACU
2.	*POA PRATENSIS*	20	Y	FAC
3.	*Panicum virgatum*	40	Y	FAC
4.	*Equisetum arvense*	5	N	FAC
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	105		

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: 2 (A)

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

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	65	x 3 =	195
FACU spp.	40	x 4 =	160
UPL spp.	0	x 5 =	0
Total	105 (A)		355 (B)

Prevalence Index = B/A = ***3.381***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Water, unclassified	NWI/WWI Classification:	--
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-496c
Sample Point:	**1w**
Community ID:	EM1
Section:	32
Township:	37 N
Range:	4 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: Type 5, shallow open water fringed with carex, phragmities, and cottonwood.

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
- ☐ 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)

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	Depth: 2	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: na	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: na	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Water, unclassified — Series Drainage Class: N/A

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix	%	Mottles Color (Moist)	Mottles	%	Type	Location	Texture (e.g. clay, sand, loam)
0	2	1	10YR	3/1	100	--	--	--	--	--	mucky loam
2	18	2	10YR	4/2	80	10YR	4/6	20	C	M	sandy clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-496c	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	*Salix exigua subsp. interior*	10	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex lacustris*	30	Y	OBL
2.	*Carex stricta*	10	N	OBL
3.	*Typha latifolia*	5	N	OBL
4.	*POA PRATENSIS*	20	Y	FAC
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
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		

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

Total % Cover of:		Multiply by:	
OBL spp.	55	x 1 =	55
FACW spp.	0	x 2 =	0
FAC spp.	20	x 3 =	60
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	75 (A)		115 (B)

Prevalence Index = B/A = ***1.533***

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: Open water

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Tracy sandy loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	3	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-496c
Sample Point:	**2u**
Community ID:	upland
Section:	32
Township:	37 N
Range:	4 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Tracy sandy loam — Series Drainage Class: well

Taxonomy (Subgroup): Ultic 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 4/4	100	-- --	--	--	--	sandy clay loam
10	18	2	10YR 4/3	80	10YR 4/6	20	C	M	sandy clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-496c	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	*Salix exigua subsp. interior*	20	Y	OBL
2.	*Salix serissima*	20	Y	OBL
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago canadensis*	40	Y	FACU
2.	*POA PRATENSIS*	50	Y	FAC
3.	*MEDICAGO SATIVA*	10	N	UPL
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		

Dominance Test Worksheet

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

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

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	40	x 1 =	40
FACW spp.	0	x 2 =	0
FAC spp.	50	x 3 =	150
FACU spp.	40	x 4 =	160
UPL spp.	10	x 5 =	50
Total	140 (A)		400 (B)

Prevalence Index = B/A = ***2.857***

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

Remarks:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	convex
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/27/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-496x
Sample Point:	**1u**
Community ID:	upland
Section:	5
Township:	36 N
Range:	4 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Riddles loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR 2/2	100	-- --	--	--	--	sandy loam
14	20	2	10YR 4/3	90	10YR 4/6	10	C	M	loamy sand
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--

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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-496x	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer saccharum*	40	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

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

1.	*Lindera benzoin*	10	Y	FACW
2.	*Acer saccharum*	30	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

Herb Stratum (Plot size: 2 meter radius)

1.	*Erythronium albidum*	30	Y	NI
2.	*Cardamine concatenata*	20	Y	FACU
3.	*Trillium recuvatum*	30	Y	NI
4.	*Podophyllum peltatum*	20	Y	FACU
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		

Dominance Test Worksheet

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***14.3%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	0	x 3 =	0
FACU spp.	110	x 4 =	440
UPL spp.	60	x 5 =	300
Total	180 (A)		760 (B)

Prevalence Index = B/A = ***4.222***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles loam	NWI/WWI Classification:	--
Landform:	slope, depression	Local Relief:	concave
Slope (%):	--	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/27/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-496x
Sample Point:	**1w**
Community ID:	FO1/SS1
Section:	5
Township:	36 N
Range:	4 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: Type 6/7 forested/SS hillside seep confined by road, dominated by skunk cabbage, spicebush, and green ash.

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 1	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Riddles loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	gley1 2.5/N	100	--	--	--	--	mucky silt loam
6	12	2	gley1 2.5/N	100	--	--	--	--	silt loam
12	18	3	10YR 3/1	100	--	--	--	--	clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-496x	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Fraxinus pennsylvanica*	40	Y	FACW
2.	*Acer saccharinum*	30	Y	FACW
3.	*Acer saccharum*	5	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	75		

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

1.	*Lindera benzoin*	50	Y	FACW
2.	*Cornus stolonifera*	10	N	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	60		

Herb Stratum (Plot size: 2 meter radius)

1.	*Symplocarpus foetidus*	80	Y	OBL
2.	*Ranunculus hispidus var. nitidus*	10	N	FACW
3.	*Equisetum arvense*	10	N	FAC
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		

Dominance Test Worksheet

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

Total Number of Dominant Species Across All Strata: 4 (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.	80	x 1 =	80
FACW spp.	140	x 2 =	280
FAC spp.	10	x 3 =	30
FACU spp.	5	x 4 =	20
UPL spp.	0	x 5 =	0
Total	235 (A)		410 (B)

Prevalence Index = B/A = ***1.745***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Southwest silt loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-496y
Sample Point:	**1u**
Community ID:	upland
Section:	32
Township:	37 N
Range:	4 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Southwest silt loam — Series Drainage Class: poorly

Taxonomy (Subgroup): Typic Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	14	1	10YR	3/2	100	--	--	--	--	--	sand clay loam
14	18	2	10YR	4/2	90	10YR	3/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-496y	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus deltoides*	10	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

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

1.	*Salix exigua subsp. interior*	5	--	OBL
2.	*Rhus glabra*	15	--	UPL
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*PHALARIS ARUNDINACEA*	10	N	FACW
2.	*POA PRATENSIS*	5	N	FAC
3.	*GLECHOMA HEDERACEA*	5	N	FACU
4.	*TARAXACUM OFFICINALE*	5	N	FACU
5.	*Solidago canadensis*	50	Y	FACU
6	*Carex sp.*	5	N	NI
7.	*CIRSIUM ARVENSE*	20	Y	FACU
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		

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

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	10	x 2 =	20
FAC spp.	15	x 3 =	45
FACU spp.	80	x 4 =	320
UPL spp.	20	x 5 =	100
Total	130 (A)		490 (B)

Prevalence Index = B/A = ***3.769***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Southwest silt loam	NWI/WWI Classification:	--
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-496y
Sample Point:	**1w**
Community ID:	EM1/SS1
Section:	32
Township:	37 N
Range:	4 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: Type 2/6. wet meadow dominated by reed canary grass & phragmites with a sandbar willow pocket in center.

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 1	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Southwest silt loam — Series Drainage Class: poorly

Taxonomy (Subgroup): Typic Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	4/1	80	10YR	4/6	20	C	M	clay loam
6	18	2	10YR	4/2	70	10YR	4/6	30	C	M	sand clay 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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-496y	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	*Salix exigua subsp. interior*	25	Y	OBL
2.	*Populus deltoides*	5	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	30		

Herb Stratum (Plot size: 2 meter radius)

1.	*Phragmites australis*	40	Y	FACW
2.	*PHALARIS ARUNDINACEA*	70	Y	FACW
3.	*Carex sp.*	5	N	NI
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	115		

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: 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

Total % Cover of:		Multiply by:	
OBL spp.	25	x 1 =	25
FACW spp.	110	x 2 =	220
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	5	x 5 =	25
Total	145 (A)		285 (B)

Prevalence Index = B/A = ***1.966***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	J. Currie
Soil Unit:	Fluvaquents	NWI/WWI Classification:	--
Landform:	Floodplain	Local Relief:	--
Slope (%):	--	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☑, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/03/11
County:	La Porte
State:	Indiana
Wetland ID:	W-497a
Sample Point:	1u
Community ID:	Upland
Section:	32
Township:	37 N
Range:	4 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: Area is lawn.

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: No primary wetland hydrology indicators were observed; only FAC-Neutral was met.

SOILS

Map Unit Name: Fluvaquents — Series Drainage Class: poorly to somewhat poorly
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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 3/2	100	--	--	--	--	Silty Clay Loam
8	15	2	10YR 4/1	95	10YR 4/6	5	C	M	Silty Clay 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
- ☐ 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)

[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: While soils and overstory vegetation are hydric, the absence of primary hydrology indicators and a FAC or drier herbaceous layer supports an upland determination.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Wetland ID:	W-497a	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Ulmus americana*	5	Y	FACW
2.	*Platanus occidentalis*	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	15		

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.	*POA PRATENSIS*	80	Y	FAC
2.	*DIGITARIA SANGUINALIS*	10	N	FACU
3.	*TRIFOLIUM PRATENSE*	5	N	FACU
4.	*TARAXACUM OFFICINALE*	5	N	FACU
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		

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

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	15	x 2 =	30
FAC spp.	80	x 3 =	240
FACU spp.	20	x 4 =	80
UPL spp.	0	x 5 =	0
Total	115 (A)		350 (B)

Prevalence Index = B/A = ***3.043***

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: Area is lawn. While dominant species are 100% FAC or wetter, the Prevalence Index was greater than 3 and the Rapid Test was not met. Herbaceous vegetation included FAC or drier species.

Additional Remarks:

Area is lawn. No primary wetland hydrology indicators were observed, and the understory vegetation is dominated by FAC or drier species. Based on professional judgement, this area is upland.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	J. Currie
Soil Unit:	Fluvaquents	NWI/WWI Classification:	PEM/FO1A
Landform:	Floodplain	Local Relief:	--
Slope (%):	--	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/03/11
County:	La Porte
State:	Indiana
Wetland ID:	W-497a
Sample Point:	**1w**
Community ID:	PFO
Section:	32
Township:	37 N
Range:	4 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: Wetland habitat is forested wetland broad-leaved deciduous.

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
- ☐ 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)

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	Depth: 2	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 0	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(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: Fluvaquents — Series Drainage Class: poorly to somewhat poorly
Taxonomy (Subgroup): NA — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	2/1	95	10YR	3/6	5	C	PL	Mucky Silt 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
- ☐ 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)

[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-497a	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus deltoides*	60	Y	FAC
2.	*Salix nigra*	20	Y	OBL
3.	*Ulmus rubra*	10	N	FAC
4.	*Fraxinus pennsylvanica*	5	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	95		

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.	*TYPHA ANGUSTIFOLIA*	60	Y	OBL
2.	*Carex sp.*	10	N	--
3.	--	--		--
4.	--	--		--
5.	--	--		--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	70		

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: 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

Total % Cover of:		Multiply by:	
OBL spp.	80	x 1 =	80
FACW spp.	5	x 2 =	10
FAC spp.	70	x 3 =	210
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	155 (A)		300 (B)

Prevalence Index = B/A = ***1.935***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	J. Currie
Soil Unit:	Fluvaquents	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☑, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/03/11
County:	La Porte
State:	Indiana
Wetland ID:	W-497a
Sample Point:	**2u**
Community ID:	Upland
Section:	31
Township:	37 N
Range:	4 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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Fluvaquents — Series Drainage Class: poorly to somewhat poorly

Taxonomy (Subgroup): NA — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	-- --	--	--	--	Sandy Loam
4	15	2	10YR 4/4	100	-- --	--	--	--	Loamy Sand
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--
--	--	--	-- --	--	-- --	--	--	--	--

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)

[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-497a	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus alba*	30	Y	FACU
2.	*Acer saccharum*	40	Y	FACU
3.	*Fagus grandifolia*	10	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	80		

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

1.	*LONICERA JAPONICA*	5	Y	FACU
2.	*Vitis riparia*	2	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	7		

Herb Stratum (Plot size: 2 meter radius)

1.	*POA PRATENSIS*	5	Y	FAC
2.	*Solidago flexicaulis*	2	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	7		

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: 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.	0	x 1 =	0
FACW spp.	2	x 2 =	4
FAC spp.	5	x 3 =	15
FACU spp.	87	x 4 =	348
UPL spp.	0	x 5 =	0
Total	94 (A)		367 (B)

Prevalence Index = B/A = ***3.904***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	J. Currie
Soil Unit:	Riddles loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/28/11
County:	La Porte
State:	Indiana
Wetland ID:	W-497b
Sample Point:	**1u**
Community ID:	Upland
Section:	33
Township:	37 N
Range:	4 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: --

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Riddles loam — Series Drainage Class: Well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 3/2	--	--	--	--	--	Sandy Clay Loam
6	15	2	10YR 4/3	99	10YR 4/6	1	C	M	Sandy Clay 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
- ☐ 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)

[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-497b	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Acer negundo*	5	Y	FACW
2.	*Prunus serotina*	5	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

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

1.	*Rosa arkansana*	5	Y	NI
2.	*Rubus idaeus var. strigosus*	10	Y	FACW
3.	*Sambucus canadensis*	5	Y	FACW
4.	*Cornus stolonifera*	2	N	FACW
5.	*ROSA MULTIFLORA*	5	Y	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	27		

Herb Stratum (Plot size: 2 meter radius)

1.	*DACTYLIS GLOMERATA*	88	Y	FACU
2.	*Ambrosia trifida*	5	N	FAC
3.	*Solidago canadensis*	5	N	FACU
4.	*ANTHRISCUS SYLVESTRIS*	2	N	NI
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		

Dominance Test Worksheet

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***42.9%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	22	x 2 =	44
FAC spp.	5	x 3 =	15
FACU spp.	103	x 4 =	412
UPL spp.	7	x 5 =	35
Total	137 (A)		506 (B)

Prevalence Index = B/A = ***3.693***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	J. Currie
Soil Unit:	Fluvaquents	NWI/WWI Classification:	PEMC
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/28/11
County:	La Porte
State:	Indiana
Wetland ID:	W-497b
Sample Point:	**1w**
Community ID:	PEM
Section:	33
Township:	37 N
Range:	4 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: --

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
- ☐ 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)

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	Depth: 3	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 0	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(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: Fluvaquents — Series Drainage Class: poorly to somewhat poorly
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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	20	1	10YR 2/1	--	--	--	--	--	Mucky 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
- ☐ 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)

[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-497b	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	*Salix nigra*	5	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*Leersia oryzoides*	80	Y	OBL
2.	*Epilobium leptophyllum*	10	N	OBL
3.	*Carex crinita*	2	N	FACW
4.	*Aster sp.*	5	N	--
5.	*TYPHA ANGUSTIFOLIA*	2	N	OBL
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		

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.	97	x 1 =	97
FACW spp.	2	x 2 =	4
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	99 (A)		101 (B)

Prevalence Index = B/A = ***1.020***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	J. Currie
Soil Unit:	Riddles loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	10/28/11
County:	La Porte
State:	Indiana
Wetland ID:	W-497b
Sample Point:	**2u**
Community ID:	Upland
Section:	33
Township:	37 N
Range:	4 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: --

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Riddles loam — Series Drainage Class: Well

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; Locaiton: PL=Pore Lining, M=Matrix)

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

[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-497b	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	*Salix nigra*	5	Y	OBL
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	5		

Herb Stratum (Plot size: 2 meter radius)

1.	*POA PRATENSIS*	70	Y	FAC
2.	*GLECHOMA HEDERACEA*	20	Y	FACU
3.	*TRIFOLIUM PRATENSE*	10	N	FACU
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		

Dominance Test Worksheet

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

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

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	5	x 1 =	5
FACW spp.	0	x 2 =	0
FAC spp.	70	x 3 =	210
FACU spp.	30	x 4 =	120
UPL spp.	0	x 5 =	0
Total	105 (A)		335 (B)

Prevalence Index = B/A = ***3.190***

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: While the dominance test is greater than 50%, the Prevalence Index was greater than 3 and the rapid test was not met.

Additional Remarks:

Although one hydrophytic indicator was positive for wetland vegetation, the lack of wetland hydrology and hydric soil supports an upland determination.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Riddles loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	3	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-479c
Sample Point:	**1u**
Community ID:	upland
Section:	33
Township:	37 N
Range:	4 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Riddles loam — Series Drainage Class: well

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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	15	1	10YR	3/3	100	--	--	--	--	--	sandy loam
15	18	2	10YR	4/3	90	10YR	4/6	10	C	M	loamy sand
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-479c	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	40	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

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

1.	*ROSA MULTIFLORA*	40	Y	FACU
2.	*Lindera benzoin*	10	N	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	50		

Herb Stratum (Plot size: 2 meter radius)

1.	*Podophyllum peltatum*	100	Y	FACU
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		

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.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	0	x 3 =	0
FACU spp.	180	x 4 =	720
UPL spp.	0	x 5 =	0
Total	190 (A)		740 (B)

Prevalence Index = B/A = ***3.895***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Southwest silt loam	NWI/WWI Classification:	--
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-497c
Sample Point:	**1w**
Community ID:	FO1
Section:	33
Township:	37 N
Range:	4 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: Type 5 with fringe of 6/7. Dominated by cattail, water lily, open water, spicebush, cottonwood.

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 2	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Southwest silt loam — Series Drainage Class: poorly

Taxonomy (Subgroup): Typic Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	5	1	10YR	2/1	100	--	--	--	--	--	mucky loam
5	12	2	10YR	2/1	100	--	--	--	--	--	sand loam
12	18	3	10YR	3/1	90	10YR	3/6	10	C	M	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
- ☐ 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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-497c	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Populus deltoides*	60	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	60		

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

1.	*Lindera benzoin*	80	Y	FACW
2.	*ROSA MULTIFLORA*	5	N	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	85		

Herb Stratum (Plot size: 2 meter radius)

1.	*Podophyllum peltatum*	10	Y	FACU
2.	*Smilacina racemosa*	2	N	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	12		

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: 2 (A)

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

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

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	80	x 2 =	160
FAC spp.	60	x 3 =	180
FACU spp.	17	x 4 =	68
UPL spp.	0	x 5 =	0
Total	157 (A)		408 (B)

Prevalence Index = B/A = ***2.599***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Southwest silt loam	NWI/WWI Classification:	--
Landform:	slope	Local Relief:	none
Slope (%):	2	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-497d
Sample Point:	**1u**
Community ID:	upland
Section:	33
Township:	37 N
Range:	4 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:

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: na	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: na	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: Southwest silt loam — Series Drainage Class: poorly

Taxonomy (Subgroup): Typic Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

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

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)

[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:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-497d	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Prunus serotina*	20	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	20		

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

1.	*ROBINIA PSEUDOACACIA*	5	Y	FACU
2.	*LONICERA TATARICA*	5	Y	FACU
3.	*Zanthoxylum americanum*	10	Y	UPL
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	20		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago canadensis*	30	Y	FACU
2.	*Galium aparine*	10	N	FACU
3.	*BROMUS INERMIS*	50	Y	UPL
4.	*DAUCUS CAROTA*	10	N	UPL
5.	*TARAXACUM OFFICINALE*	10	N	FACU
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	110		

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: 6 (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.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	80	x 4 =	320
UPL spp.	70	x 5 =	350
Total	150 (A)		670 (B)

Prevalence Index = B/A = ***4.467***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Stantec Project #:	193701660
Applicant:	Enbridge		
Investigator #1:	D. Tersteeg	Investigator #2:	A. Brasch
Soil Unit:	Southwest silt loam	NWI/WWI Classification:	--
Landform:	depression	Local Relief:	concave
Slope (%):	0	Latitude: --	Longitude: -- Datum: --

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	04/28/12
County:	LaPorte
State:	Indiana
Wetland ID:	w-497d
Sample Point:	**1w**
Community ID:	EM1/SS1
Section:	33
Township:	37 N
Range:	4 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: Type 3 shallow marsh with fringe of shrub-scrub. Polygonum, carex, and juncus along edge. Shrub-scrub dominated by cottonwood and black willow.

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
- ☐ 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)

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	Depth: na	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 12	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 6	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks:

SOILS

Map Unit Name: Southwest silt loam — Series Drainage Class: poorly
Taxonomy (Subgroup): Typic Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)		Matrix %	Mottles Color (Moist)		Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR	4/2	80	10YR	4/6	20	C	M	sand loam
6	14	2	10YR	4/1	70	10YR	4/6	30	C	M	sand loam
14	18	3	10YR	2/1	100	--	--	--	--	--	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
- ☐ 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)

[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: Horizon Layer 3 includes a buried A horizon.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Line 6B Phase 2 Replacement Project	Wetland ID:	w-497d	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	*Salix exigua subsp. interior*	5	N	OBL
2.	*Populus deltoides*	20	Y	FAC
3.	*Rubus idaeus var. strigosus*	10	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	35		

Herb Stratum (Plot size: 2 meter radius)

1.	*Carex stricta*	10	N	OBL
2.	*Solidago gigantea*	30	Y	FACW
3.	*Equisetum arvense*	30	Y	FAC
4.	*Phragmites australis*	30	Y	FACW
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		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (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.	15	x 1 =	15
FACW spp.	70	x 2 =	140
FAC spp.	50	x 3 =	150
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	135 (A)		305 (B)

Prevalence Index = B/A = ***2.259***

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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykendall	Investigator #2:	A. Binkowski
Soil Unit:	Washtenaw silt loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☑, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11
County:	La Porte
State:	Indiana
Wetland ID:	W-498a
Sample Point:	**1u**
Community ID:	Upland
Section:	27
Township:	37 N
Range:	4 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: Sample point approx. 2 feet higher than corresponding wetland point. Sany soils are present which are 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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Washtenaw silt loam — Series Drainage Class: very poorly

Taxonomy (Subgroup): Aeric Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	7	1	10YR 3/2	--	--	--	--	--	Sandy Loam
7	16	2	10YR 5/4	98	10YR 5/8	2	C	M	Sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

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)

[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: Soil is naturally problematic.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Wetland ID:	W-498a	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*ZEA MAYS*	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		

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

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

Prevalence Index = B/A = ***5.000***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykendall	Investigator #2:	A. Binkowski
Soil Unit:	Washtenaw silt loam	NWI/WWI Classification:	PEMC
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11		
County:	La Porte		
State:	Indiana		
Wetland ID:	W-498a		
Sample Point:	**1w**		
Community ID:	PEM		
Section:	27		
Township:	37 N		
Range:	4	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: --

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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☑ Yes	☐ No	Depth: 10	(in.)
Saturation Present?	☑ Yes	☐ No	Depth: 0	(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: Washtenaw silt loam — Series Drainage Class: very poorly

Taxonomy (Subgroup): Aeric Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	10	1	10YR 4/2	95	7.5YR 5/6	5	C	PL	Clay Loam
10	16	2	2.5Y 4/1	95	5YR 4/6	5	C	M	Clay 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
- ☐ 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)

[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: 0 to 10" = oxidized root channels

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Wetland ID:	W-498a	Sample Point	1w

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Panicum capillare*	70	Y	FAC
2.	*Alisma subcordatum*	5	N	OBL
3.	*TYPHA ANGUSTIFOLIA*	5	N	OBL
4.	*AMBROSIA ARTEMISIIFOLIA*	5	N	FACU
5.	*Solidago gigantea*	4	N	FACW
6	*DAUCUS CAROTA*	1	N	UPL
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		

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.	10	x 1 =	10
FACW spp.	4	x 2 =	8
FAC spp.	70	x 3 =	210
FACU spp.	5	x 4 =	20
UPL spp.	1	x 5 =	5
Total	90 (A)		253 (B)

Prevalence Index = B/A = ***2.811***

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: --

Additional Remarks:

--

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykendall	Investigator #2:	A. Binkowski
Soil Unit:	Washtenaw silt loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☑, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐, Soil ☑, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/10/11
County:	La Porte
State:	Indiana
Wetland ID:	W-498a
Sample Point:	**2u**
Community ID:	Upland
Section:	27
Township:	37 N
Range:	4 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: Active pasture land/cattle about 2 feet higher than wetland point = disturbed vegetation. 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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Washtenaw silt loam — Series Drainage Class: very poorly

Taxonomy (Subgroup): Aeric Fluvaquents — 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 3/3	--	--	--	--	--	Sandy Loam
8	16	2	7.5YR 4/4	--	--	--	--	--	Sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

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)

[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: Soil is naturally problematic.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Wetland ID:	W-498a	Sample Point	2u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% 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.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 2 meter radius)

1.	*Poa sp.*	90	Y	--
2.	*RUMEX CRISPUS*	2	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	92		

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

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	2	x 3 =	6
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	2 (A)		6 (B)

Prevalence Index = B/A = ***3.000***

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:

Dominant forb could not be identified to species due to pasture use. Although one hydrophytic vegetation indicator is positive, lack of wetland soils and hydrology support an upland determination.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313
Applicant:	Enbridge		
Investigator #1:	B. Kuykendahl	Investigator #2:	A. Binkowski
Soil Unit:	Tracy sandy Loam	NWI/WWI Classification:	--
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) ☑ Yes ☐ No

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation ☐ , Soil ☑, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	11/09/11
County:	La Porte
State:	Indiana
Wetland ID:	W-499a
Sample Point:	**1u**
Community ID:	Upland
Section:	27
Township:	37 N
Range:	4 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: 3 ft higher in elevation than wetland. 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
- ☐ 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)

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	Depth: N/A	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: N/A	(in.)
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: Tracy sandy Loam — Series Drainage Class: well drained
Taxonomy (Subgroup): Ultic 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR 3/2	--	--	--	--	--	Sandy Loam
9	16	2	10YR 5/4	--	--	--	--	--	Sandy Loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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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)

[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-499a	Sample Point	1u

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

Tree Stratum (Plot size: 10 meter radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	*Quercus rubra*	15	Y	FACU
2.	*Fraxinus pennsylvanica*	10	Y	FACW
3.	*Quercus palustris*	5	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	30		

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

1.	*Fraxinus pennsylvanica*	5	Y	FACW
2.	*Quercus rubra*	5	Y	FACU
3.	*Prunus serotina*	5	Y	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	15		

Herb Stratum (Plot size: 2 meter radius)

1.	*Solidago canadensis*	5	Y	FACU
2.	*GLECHOMA HEDERACEA*	5	Y	FACW
3.	*Toxicodendron radicans subsp. negunc*	5	Y	FAC
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	15		

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: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: ***55.6%*** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	25	x 2 =	50
FAC spp.	5	x 3 =	15
FACU spp.	30	x 4 =	120
UPL spp.	0	x 5 =	0
Total	60 (A)		185 (B)

Prevalence Index = B/A = ***3.083***

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: While the dominance test is greater than 50%, the Prevalence Index is greater than 3 and the rapid test was not met.

Additional Remarks:

Although one hydrophytic vegetation indicator is positive, the lack of wetland hydrology and hydric soil supports an upland determination.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Indiana Line 6B	Stantec Project #:	193701313	Date:	11/09/11
Applicant:	Enbridge			County:	La Porte
Investigator #1:	B. Kuykendahl	Investigator #2:	A. Binkowski	State:	Indiana
Soil Unit:	Tracy sandy loam	NWI/WWI Classification:	--	Wetland ID:	W-499a
Landform:	Depression	Local Relief:	Concave	Sample Point:	**1w**
Slope (%):	--	Latitude: -- / Longitude: --	Datum: --	Community ID:	PSS
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			☑ Yes ☐ No	Section:	27
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?		Are normal circumstances present?		Township:	37 N
Are Vegetation ☐, Soil ☑, or Hydrology ☐ naturally problematic?		☑ Yes ☐ No		Range:	4 Dir: W

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ **Yes** ☐ **No**

Remarks: Depressional area, bowl. 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
- ☐ 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)

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	Depth:	3	(in.)
Water Table Present?	☑ Yes ☐ No	Depth:	0	(in.)
Saturation Present?	☑ Yes ☐ No	Depth:	0	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

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

Remarks: Depressional area

SOILS

Map Unit Name: Tracy sandy loam — Series Drainage Class: well drained

Taxonomy (Subgroup): Ultic 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; Locaiton: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	Matrix %	Mottles Color (Moist)	Mottles %	Mottles Type	Mottles Location	Texture (e.g. clay, sand, loam)
0	2	1	2.5Y 2.5/1	--	--	--	--	--	Muck
2	16	2	10YR 5/2	--	7.5YR 5/6	--	C	M	Sand
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
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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)

[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: Organic matter in first horizon