APPENDIX A

Line 6B Phase 2 Replacement Project

Wetland Impacts in Lake, Porter, LaPorte, and St. Joseph Counties, Indiana

County	Pipeline Milepost	Wetland ID	Latitude	Longitude	Wetland Type a/	Dominant Species	Proposed Tree Species	Crossing Length (ft) b/	Temporary Wetland Impacts (Acre) c/	Temporary Forested Wetland Impact (Acre) d/	Permanent Forested Wetland Impact (Acre) e/	Temporary Excavation Impacts (ft^2) f/	Excavation Volume (yd^3) g/
La Porte	517.8	W-517-f	86° 32' 38.94" W	41° 43' 52.76" N	PEM	Common buttonbush (*Cephalanthus occidentalis*) Reed canarygrass (*Phalaris arundinacea*)	--	25.7	0.06	0.00	0.00	385.74	60.00
La Porte	518.9	W-518-aa	86 ° 32′ 1.04″ W	41 ° 43′ 56.61″ N	PEM	Reed canarygrass (*Phalaris arundinacea*) Spotted ladysthumb (*Persicaria maculosa*)	--	0.0	<0.01	0.00	0.00	0.00	0.00
							LA PORTE COUNTY (SEGMENT 2A) SUBTOTAL	**3,585.8**	**7.16**	**3.14**	**0.31**	**53,787.56**	**8,366.99**
St. Joseph	519.2	W-519-a	86° 31' 12.65" W	41° 44' 8.41" N	PEM/PFO	Black Willow (*Salix nigra*) Buckthorn (*Rhamnus cathartica*) Common buttonbush (*Cephalanthus occidentalis*) Reed canarygrass (*Phalaris arundinacea*) Smallspike false nettle (*Boehmeria cylindrical*)	Swamp white oak (*Quercus bicolor*)	0.0	0.15	0.15	0.00	0.00	0.00
St. Joseph	519.3	W-519-b	86° 31' 1.96" W	41° 44' 11.95" N	PSS	Common buttonbush (*Cephalanthus occidentalis*) Black willow (*Salix nigra*) Reed canarygrass (*Phalaris arundinacea*)	--	403.6	0.76	0.00	0.00	6053.77	941.70
St. Joseph	519.5	W-519-c	86° 30' 53.70" W	41° 44' 15.04" N	PSS	Black willow (*Salix nigra*) Common buttonbush (*Cephalanthus occidentalis*) Reed canarygrass (*Phalaris arundinacea*) Pennsylvania smartweed (*Polygonum pensylvanicum*)	--	459.9	0.84	0.00	0.00	6898.90	1073.16
St. Joseph	520.0	W-519-d	86° 30' 20.44" W	41° 44' 27.95" N	PFO	Black Willow (*Salix nigra*) White elm (*Ulmus americana*) Common buttonbush (*Cephalanthus occidentalis*)	Swamp white oak (*Quercus bicolor*) Pin oak (*Quercus palustris*)	0.0	0.02	0.02	0.00	0.00	0.00
St. Joseph	520.1	W-520-c	86° 30' 13.80" W	41° 44' 29.29" N	PFO	White elm (*Ulmus americana*) Silver maple (*Acer saccharinum*) Eastern cottonwood (*Populus deltoides*) Broadleaf arrowhead (*Sagittaria latifolia* var. *latifolia*) Giant goldenrod (*Solidago gigantean*)	Pin oak (*Quercus palustris*) Shellbark hickory (*Carya laciniosa*)	639.6	1.14	1.14	0.15	9594.13	1492.42
St. Joseph	520.5	W-520-e	86° 29' 46.25" W	41° 44' 35.56" N	PSS	American elm (*Ulmus americana*) Silver maple (*Acer saccharinum*) Gray dogwood (*Cornus racemosa*) Common buttonbush (*Cephalanthus occidentalis*) Fox sedge (*Carex vulpinoidea*) Sedge sp. (*Carex* sp.) Broadleaf arrowhead (*Sagittaria latifolia* var. *latifolia*)	--	0.0	0.02	0.00	0.00	0.00	0.00

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County	Pipeline Milepost	Wetland ID	Latitude	Longitude	Wetland Type a/	Dominant Species	Proposed Tree Species	Crossing Length (ft) b/	Temporary Wetland Impacts (Acre) c/	Temporary Forested Wetland Impact (Acre) d/	Permanent Forested Wetland Impact (Acre) e/	Temporary Excavation Impacts (ft^2) f/	Excavation Volume (yd^3) g/
St. Joseph	520.7	W-520-f	86° 29' 33.05" W	41° 44' 36.88" N	PFO	Silver maple (*Acer saccharinum*) American basswood (*Tilia americana*) Eastern cottonwood (*Populus deltoides*) Fox sedge (*Carex vulpinoidea*) Harlequin blueflag (*Iris versicolor*) Broadleaf arrowhead (*Sagittaria latifolia* var. *latifolia*) Broadleaf cattail (*Typha latifolia*)	Pin oak (*Quercus palustris*) Shellbark hickory (*Carya laciniosa*)	658.3	1.22	1.22	0.15	9875.04	1536.12
St. Joseph	520.8	W-520-a	86° 29' 26.89" W	41° 44' 37.69" N	PFO	American basswood (*Tilia americana*) Sugar maple (*Acer saccharum*) Pin oak (*Quercus palustris*) Silver maple (*Acer saccharinum*) Common buttonbush (*Cephalanthus occidentalis*) Broom sedge (*Carex scoparia*) Giant goldenrod (*Solidago gigantean*)	Pin oak (*Quercus palustris*) Shellbark hickory (*Carya laciniosa*)	127.0	0.18	0.18	0.02	1905.42	296.40
St. Joseph	520.9	W-520-b	86° 29' 21.06" W	41° 44' 39.05" N	PEM	Barnyardgrass (*Echinochloa crusgalli*)	--	93.0	0.18	0.00	0.00	1394.72	216.96
St. Joseph	521.1	W-521-a	86° 29' 6.90" W	41° 44' 41.07" N	PFO	Black Willow (*Salix nigra*) White elm (*Ulmus americana*) Japenese honeysuckle (*Lonicera japonica*) Multiflora rose (*Rosa multiflora*) Mannagrass sp. (*Glyceria* sp.) Barnyardgrass (*Echinochloa crusgalli*)	Swamp white oak (*Quercus bicolor*) Pin oak (*Quercus palustris*)	187.5	0.38	0.38	0.04	2812.01	437.42
St. Joseph	521.2	W-521-b	86° 28' 58.28" W	41° 44' 42.03" N	PEM/PSS	Black willow (*Salix nigra*) Common buttonbush (*Cephalanthus occidentalis*) Reed canarygrass (*Phalaris arundinacea*)	--	231.4	0.41	0.00	0.00	3470.76	539.90
St. Joseph	522.3	W-522-a	86° 33' 15.90" W	41° 43' 45.25" N	PEM	Red mulberry (*Morus rubra*) Dogwood sp. (*Cornus* sp.) Reed canarygrass (*Phalaris arundinacea*) Narrowleaf cattail (*Typha angustifolia*) Broadleaf cattail (*Typha latifolia*)	--	18.8	0.05	0.00	0.00	281.28	43.76
St. Joseph	524.9	W-524-a	86° 24' 52.25" W	41° 45' 16.64" N	PFO	Pin oak (*Quercus palustris*) Sugar maple (*Acer saccharum*) Wild red raspberry (*Rubus idaeus* var. *strigosus*) Smooth sumac (*Rhus glabra*) Northern spicebush (*Lindera benzoin*) Reed canarygrass (*Phalaris arundinacea*)	Pin oak (*Quercus palustris*) Shellbark hickory (*Carya laciniosa*)	0.0	<0.01	<0.01	0.00	0.00	0.00
							ST. JOSEPH COUNTY SUBTOTAL	**2,819.1**	**5.35**	**3.10**	**0.36**	**42,286.03**	**6,577.84**
							SEGMENT 2A SUBTOTAL	**6,404.9**	**12.51**	**6.24**	**0.67**	**96,073.59**	**14,944.83**
							TOTAL IMPACTS	**22,145.2**	**44.00**	**18.89**	**2.28**	**332,175.37**	**51,671.73**

APPENDIX A

Line 6B Phase 2 Replacement Project

Wetland Impacts in Lake, Porter, LaPorte, and St. Joseph Counties, Indiana

County	Pipeline Milepost	Wetland ID	Latitude	Longitude	Wetland Type a/	Dominant Species	Proposed Tree Species	Crossing Length (ft) b/	Temporary Wetland Impacts (Acre) c/	Temporary Forested Wetland Impact (Acre) d/	Permanent Forested Wetland Impact (Acre) e/	Temporary Excavation Impacts (ft^2) f/	Excavation Volume (yd^3) g/

a/ Wetland type within construction workspace based on Cowardin, et. al (1979). PEM = Palustrine Emergent; PSS = Palustrine Scrub-shrub; PFO = Palustrine Forested

b/ Crossing length of proposed pipeline centerline across wetlands. A crossing length of 0.0 indicates the wetland is within the construction workspace, but is not crossed by the proposed pipeline.

c/ Area of wetland impacts within the construction workspace based on an 80-foot-wide workspace, including temporary dredge and fill areas, travel lanes, and staging areas.

d/ Temporary forested wetland impacts include total impacts where forested wetland clearing was necessary within the construction workspace.

e/ Permanent forested wetland impacts include the 10-foot-wide area within the new permanent easement where the pipeline corridor will be maintained by periodic clearing activities.

f/ Temporary excavation and storage impacts include the area where the trench will be excavated and where the trench material will be stored. These areas are generally 15 feet wide along the length of the pipeline that crosses the wetland.

g/ The temporary excavation and storage volumes are based on an average trench width of 9 feet and average trench depth of 7 feet. Volume (yd^3) = (crossing length x 63 ft^2)/27). Excavated material will be returned to the trench after placement of the pipe. See supplement for further information.

h/ A data sheet is not available for this wetland due to landowner access constraints.

APPENDIX A-1
Line 6B 2012 Maintenance and Rehabilitation Program
Wetland Impacts in Lake and LaPorte Counties, Indiana

County	Pipeline Milepost	Wetland ID	Latitude	Longitude	Wetland Type a/	Dominant Species	Proposed Tree Species	Crossing Length (ft) b/	Temporary Wetland Impacts (Acre) c/	Temporary Forested Wetland Impact (Acre) d/	Permanent Forested Wetland Impact (Acre) e/	Temporary Excavation Impacts (ft^2) f/	Excavation Volume (yd^3) g/
GRIFFITH SEGMENT													
Lake	465.9	w-465-a	87° 26' 33.19" W	41° 31' 0.02" N	PEM	Narrowleaf willow (*Salix exigua*); Upright sedge (*Carex stricta*); Grass-leaved goldenrod (*Solidago graminifolia*)	--	537.3	1.69	--	--	8,059.5	1,253.7
Lake	466.1	w-466-f	87° 26' 6.88" W	41° 31' 8.08" N	PEM	Reed canary grass (*Phalaris arundinacea*)	--	0.0	0.08	--	--	0	0.0
Lake	466.5	w-466r-a	87° 25' 54.30" W	41° 31' 0.76" N	PFO/PEM/ PSS	Eastern cottonwood (*Populus deltoides*) Reed canary grass (*Phalaris arundinacea*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*); Swamp white oak (*Quercus bicolor*)	1,381.8	2.86	0.71	--	20,727	3,224.2
Lake	466.8	w-466-b	87° 25' 45.28" W	41° 30' 41.70" N	PEM	Red stemmed dogwood (*Cornus stolonifera*); American elderberry (*Sambuscus Canadensis*); Box Elder (*Acer negundo*); Reed canary grass (*Phalaris arundinacea*); Orange jewelweed (*Impatiens capensis*)	--	18.8	0.04	--	--	282	43.9
Lake	466.8	w-466-c	87° 25' 39.24" W	41° 30' 45.25" N	PEM	Reed canary grass (*Phalaris arundinacea*); Marsh seedbox (*Ludwigia palustris*)	--	16.2	0.03	--	--	243	37.8
Lake	466.9	w-466-d	87° 25' 36.51" W	41° 30' 44.91" N	PEM	Reed canary grass (*Phalaris arundinacea*); Common spikerush (*Eleocharis palustris*)	--	0.0	0.01	--	--	0	0.0
Lake	467.1	w-466-e	87° 25' 18.98" W	41° 30' 40.09" N	PFO/PEM	Reed canary grass (*Phalaris arundinacea*); Swamp white oak (*Quercus bicolor*); Silver maple (*Acer saccharinum*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*); Swamp white oak (*Quercus bicolor*)	1,254.9	2.21	1.25	0.16	18,823.5	2,928.1
Lake	467.2	w-467-c	87° 25' 16.20" W	41° 30' 42.14" N	PSS	Reed canary grass (*Phalaris arundinacea*); Narrowleaf willow (*Salix exigua*); American elm (*Ulmus americana*);	--	36.8	0.06	--	--	552	85.9
Lake	467.5	w-467-f	87° 24' 53.50" W	41° 30' 38.80" N	PFO	Eastern cottonwood (*Populus deltoides*); Silver maple (*Acer saccharinum*); Box elder (*Acer negundo*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*)	314.9	0.50	0.50	0.07	4,723.5	734.8
Lake	467.6	w-467-e	87° 24' 45.45" W	41° 30' 38.52" N	PEM	Narrowleaf willow (*Salix exigua*); Green bulrush *(Scirpus atrovirens);* Lake sedge *(Carex lacustris)*	--	90.9	0.19	--	--	1,363.5	212.1
Lake	467.7	w-467-b	87° 24' 39.80" W	41° 30' 39.60" N	PFO/PEM	Silver maple (*Acer saccharinum)* Reed canary grass (*Phalaris arundinacea*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*)	297.0	0.54	0.08	--	4,455	693.0
Lake	468.5	w-467-d	87° 23' 53.82" W	41° 30' 33.19" N	PFO/PEM	Black willow (*Salix nigra*); Eastern cottonwood (*Populus deltoides*); Pin oak (*Quercus palustris*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*); Swamp white oak (*Quercus bicolor*)	6,243.2	11.44	3.83	0.52	93,648	14,567.5
Lake	469.2	w-469-d	87° 23' 3.24" W	41° 30' 27.48" N	PEM/PSS	Reed canary grass (*Phalaris arundinacea*); Eastern cottonwood (*Populus deltoides*)	--	526.8	0.98	--	--	7,902	1,229.2
Lake	469.3	w-469-c	87° 22' 53.55" W	41° 30' 27.10" N	PEM/PSS	Canada goldenrod (*Solidago altissima*) Tall fescue (*Festuca arundinacea*)	--	336.9	0.70	--	--	5,053.5	786.1
Lake	469.7	w-469-b	87° 22' 29.50" W	41° 30' 22.42" N	PFO/PEM	Reed canary grass (*Phalaris arundinacea*); Eastern cottonwood (*Populus deltoides*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*)	2,586.8	4.87	0.50	0.01	38,802	6,035.9
Lake	470.1	PEM-1 h/	87° 21' 56.88" W	41° 30' 16.28" N	PEM	See footnote.	--	514.2	1.19	--	--	7,713	1,199.8
Lake	470.1	PFO-1 h/	87° 22' 0.50" W	41° 30' 16.91" N	PFO	See footnote.	TBD	74.4	0.12	0.12	0.02	1,116	173.6

APPENDIX A-1
Line 6B 2012 Maintenance and Rehabilitation Program
Wetland Impacts in Lake and LaPorte Counties, Indiana

County	Pipeline Milepost	Wetland ID	Latitude	Longitude	Wetland Type a/	Dominant Species	Proposed Tree Species	Crossing Length (ft) b/	Temporary Wetland Impacts (Acre) c/	Temporary Forested Wetland Impact (Acre) d/	Permanent Forested Wetland Impact (Acre) e/	Temporary Excavation Impacts (ft^2) f/	Excavation Volume (yd^3) g/
Lake	470.3	PEM-2 h/	87° 21' 48.52" W	41° 30' 15.00" N	PEM	See footnote.	--	185.5	0.34	--	--	2,782.5	432.8
Lake	470.3	PFO-2 h/	87° 21' 42.76" W	41° 30' 14.17" N	PFO	See footnote.	TBD	668.5	1.37	1.37	0.15	10,027.5	1,559.8
Lake	470.3	PEM-3 h/	87° 21' 36.92" W	41° 30' 13.18" N	PEM	See footnote.	--	125.3	0.22	--	--	1,879.5	292.4
							Lake County Subtotal	**15,327.8**	**29.44**	**8.36**	**0.93**	**228,153.0**	**35,490.5**
LAPORTE SEGMENT													
LaPorte	501.0	w-501-a	86° 49' 38.47" W	41° 38' 3.70" N	PFO	American elm (*Ulmus americana*); Orange jewelweed (*Impatiens capensis*)	Pin oak (*Quercus palustris*) Shellbark Hickory (*Carya laciniosa*)	0.0	0.12	0.12	--	--	--
LaPorte	501.2	w-501-b	86° 49' 22.19" W	41° 38' 11.65" N	PFO/PEM	American elm (*Ulmus americana*); Black ash (*Fraxinus nigra*) Northern spicebush (*Lindera benzoin*)	Pin oak (*Quercus palustris*); Swamp white oak (*Quercus bicolor*)	130.9	0.23	0.06	0.03	1,963.5	293.3
LaPorte	501.7	w-501-c	86° 48' 57.93" W	41° 38' 22.52" N	PEM	Reed canary grass (*Phalaris arundinacea*); Fox sedge *(Carex vulpinoidea)*	--	5.3	<0.01	--	--	79.5	--
LaPorte	502.0	w-501-d	86° 48' 36.89" W	41° 38' 29.74" N	PEM	Lake sedge *(Carex lacustris);* Woolgrass *(Scirpus cyperinus)* Broadleaf cattail *(Typha latifolia)*	--	0.0	0.01	--	--	--	--
LaPorte	503.5	w-503-a	86° 47' 8.59" W	41° 38' 52.13" N	PFO/PEM	Green or red ash (*Fraxinus pennsylvanica*); Eastern cottonwood (*Populus deltoides*); Pin oak (*Quercus palustris*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*)	80.7	0.13	0.04	--	1,210.5	188.3
LaPorte	504.1	w-503-d	86° 46' 27.95" W	41° 38' 51.74" N	PEM	Spotted ladysthumb (*Polygonum persicaria*)	--	0.0	0.13	--	--	--	--
LaPorte	504.3	w-504-a	86° 46' 13.27" W	41° 38' 52.00" N	PFO/PEM	Silver maple (*Acer saccharinum*); Green or red ash (*Fraxinus pennsylvanica*)	Pin oak (*Quercus palustris*); Shellbark Hickory (*Carya laciniosa*)	1,260.4	2.22	0.93	--	18,906	2,940.9
LaPorte	504.5	w-504-b	86° 45' 58.41" W	41° 38' 53.73" N	PEM	Curly dock (*Rumex crispus*) Soybean (*Glycine max*)	--	0.0	0.02	--	--	--	--
							LaPorte County Subtotal	**1,581.7**	**2.86**	**1.15**	**0.03**	**22,159.5**	**3,447.0**
							TOTAL IMPACTS	**16,909.5**	**32.30**	**9.51**	**0.96**	**250,312.5**	**38,937.5**

a/ Wetland type within construction workspace based on Cowardin, et. al (1979). PEM = Palustrine Emergent; PSS = Palustrine Scrub-shrub; PFO = Palustrine Forested

b/ Crossing length of proposed pipeline centerline across wetlands. A crossing length of 0.0 indicates the wetland is within the construction workspace, but is not crossed by the proposed pipeline.

c/ Area of wetland impacts within the construction workspace based on an 80-foot-wide workspace, including temporary dredge and fill areas, travel lanes, and staging areas.

d/ Temporary forested wetland impacts include total impacts where forested wetland clearing was necessary within the construction workspace.

e/ Permanent forested wetland impacts include the 10-foot-wide area within the new permanent easement where the pipeline corridor will be maintained by periodic clearing activities.

f/ Temporary excavation and storage impacts include the area where the trench will be excavated and where the trench material will be stored. These areas are generally 15 feet wide along the length of the pipeline that crosses the wetland.

g/ The temporary excavation and storage volumes are based on an average trench width of 9 feet and average trench depth of 7 feet. Volume (yd^3) = (crossing length x 63 ft^2)/27). Excavated material will be returned to the trench after placement of the pipe. See supplement for further information.

h/ The location of these wetlands have not yet been surveyed and are assumed to be wetland to help estimate a worst case scenario and expedite the permitting process until they can be surveyed prior to construction. Enbridge will submit the data to the appropriate agencies when survey becomes available.

APPENDIX B:

MITIGATION SITE WETLAND DETERMINATION DATA FORMS (WITH PHOTOGRAPHS)

Line 6B 2012 Maintenance and Rehabilitation Program and Line 6B Phase 2 Replacement Project

Cardno JFNew

WETLAND DETERMINATION DATA FORM -- Northcentral and Northeast Region

Project/Site: Reynolds Creek Mitigation Area City/County: Porter County Sampling Date: 6/4/2012

Applicant/Owner: Enbridge Energy Limited Partnership/Indiana Department of Natural Resources State: IN Sampling Point: dp01-wet

Investigator(s): L VanAndel, A Reinhart Section, Township, Range: Section 13 T37N R5W

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 0% Lat: 41'39"29.66 Long: 86'56"16.65 Datum: UTM 16N

Soil Map Unit Name: Milford Silty Clay Loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation N, Soil Y, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Point in a farm field in recently tilled/planted soil. Photo 1814 facing North.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- X Presence of Reduced Iron (C4)
- X Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopograpic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	0"
Water Table Present?	Yes X	No ___	Depth (inches):	32"
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	6"

Wetland Hydrology Present? **Yes X** **No** ___

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: dp01-wet

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft.)			
1. *Zea mays*	1	No	UPL
2. *Cyperus strigosus*	10	Yes	FACW
3. *Ambrosia artemisiifolia*	5	Yes	FACU
4. *Festuca arundinacea*	1	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	17	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft.)			
1. *None*			
2.			
3.			
	0	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	6	x 4 =	24
UPL species	1	x 5 =	5
Column Totals:	17 (A)		49 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

- ____ Rapid Test for Hydrophytic Vegetation
- ____ Dominance Test is >50%
- X Prevalence Index is ≤ 3.0[1]
- ____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present ? **Yes** X **No** ____

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

Wetland vegetation outside of the immediate sampling area includes: Phalaris arundinacea, Typha glauca, Phragmites australis, and Lemna minor.

SOIL

Sampling Point: dp01-wet

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100%	-	-	-	-	Clay loam	
10-13	10YR 2/1	80%	10YR 5/6	10%	C	M	Clay	
			10YR 5/1	10%	D	M		
13-18+	10YR 6/1	95%	10YR 4/6	5%	C	M	Clay	

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

Hydric Soil Indicators:

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Stratified Layers (A5)
- ____ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Dark Surface (S7) **(LRR R, LRR M, MLRA 149B)**
- ____ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ____ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ____ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ____ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ____ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ____ Dark Surface (S7) **(LRR K, L, M)**
- ____ Polyvalue Below Surface (S8) **(LRR K, L)**
- ____ Thin Dark Surface (S9) **(LRR K, L)**
- ____ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ____ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ____ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ____ Red Parent Material (F21)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

WETLAND DETERMINATION DATA FORM -- Northcentral and Northeast Region

Project/Site: Reynolds Creek Mitigation Area City/County: Porter County Sampling Date: 6/4/2012

Applicant/Owner: Enbridge Energy Limited Partnership/Indiana Department of Natural Resources State: IN Sampling Point: dp02-up

Investigator(s): L VanAndel, A Reinhart Section, Township, Range: Section 13 T37N R5W

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex

Slope (%): 0% Lat: 41'39"29.33 Long: 86'56"16.70 Datum: UTM 16N

Soil Map Unit Name: Milford Silty Clay Loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation N, Soil Y, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: (Explain alternative procedures here or in a separate report.)
Point in a farm field in recently tilled/planted soil. Photo 1815 facing South.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopograpic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	0"
Water Table Present?	Yes ___	No X	Depth (inches):	>18"
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches):	>18"

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

VEGETATION - Use scientific names of plants.

Sampling Point: dp02-up

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. *None*			
2.			
3.			
4.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft.)			
1. *Zea mays*	15	Yes	UPL
2. *Glycine max*	1	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	16	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft.)			
1. *None*			
2.			
3.			
	0	= Total Cover	

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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	16	x 5 =	80
Column Totals:	16 (A)		80 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

_____ Rapid Test for Hydrophytic Vegetation

_____ Dominance Test is >50%

_____ Prevalence Index is ≤ 3.0[1]

_____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

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Hydrophytic Vegetation Present ? **Yes** _____ **No** X

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