## WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R							Date: 09/15/14			
Applicant:		Enbridge				County: Pennington						
Investigators	S:	RAJ/EAB/MRK		Subregic	n (MLRA o	,	MLRA 56		State: MN			
Soil Unit:	I41A					lassification	: PEM/PSS	1B				
Landform:	Depression			Local Relief					Sample Point: w-154n44w31-j2			
Slope (%):	0 - 2%		atitude: 48.122		-96.35412		Datum:		]			
Are climatic/l				s time of year? (If no, ex	plain in remarks	)	Yes	□ No	Section:			
Are Vegetation		$\Box$ , or Hydrology $\Box$	•		Are n	ormal circur	mstances pro	esent?	Township:			
Are Vegetation		, ,	naturally prob	olematic?		Yes	□ No		Range: Dir:			
SUMMARY OF FINDINGS												
Hydrophytic '			Yes		Hydric Soils Present? Yes							
Wetland Hydrology Present?			Yes			Is This Sampling Point Within A Wetland? Yes						
Remarks: A sedge meadow dominated by woolly-fruit sedge. All parameters of wetland conditions are met. This is an intact native wetland community. All parameters of wetland conditions are present.												
<b>HYDROLOG</b>	Υ											
Wetland Hy	drology Ind	icators (Check all th	at apply: Min	nimum of one primary	or two seco	ndary requi	ired):					
Primary	• •	icators (Oncor an in	iat apply, iviii i	initially of one primary	01 two 3000	oridary requi	iica).	Secondary				
<u>-                                    </u>	<u> </u>	Water		□ B11 - Salt	Crust				B6 - Surface Soil Cracks			
V	A2 - High Wa	ter Table		☑ B13 - Aqu	atic Fauna				B8 - Sparsely Vegetated Concave Surface			
V	A3 - Saturation				ogen Sulfide (				B10 - Drainage Patterns			
	B1 - Water M				eason Water		Doote (not till		C3 - Oxidized Rhizospheres on Living Roots (tilled)			
	B2 - Sedimen B3 - Drift Dep	•			zea Knizosph ence of Reduc		Roots (not till	lŧ 🗆	C8 - Crayfish Burrows C9 - Saturation Visible on Aerial Imagery			
	B4 - Algal Ma				Muck Surface				D2 - Geomorphic Position			
	B5 - Iron Dep			□ Other (Exp				✓	D5 - FAC-Neutral Test			
		on Visible on Aerial Imag	ery	` .	•				D7 - Frost-Heaved Hummocks (LRR F)			
	B9 - Water-S	ained Leaves										
	_											
Field Obser	vations:											
Surface Wat	er Present?	Yes ☑	Depth: _	6 (in.)			Wetland F	Hydrology	Present? Y			
Water Table	Present?	Yes ☑	Depth:	(in.)			Wetland i	lydrology	——————————————————————————————————————			
Saturation P	resent?	Yes ☑	Depth: _	(in.)								
Describe Rec	orded Data (s	stream gauge, monitor	ring well, aeria	al photos, previous insp	pections), if a	available:						
Remarks:	•			atic snails present. Ir			drology are p	oresent.				
				out of all processing in								
SOILS												
Profile Descri	Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
(Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)												
(Type: C=Concer					tion: PL=Pore		IIX)					
(Type: C=Concer		etion, RM=Reduced Matri					11X)					
		etion, RM=Reduced Matri Matrix	x, CS=Covered/	Coated Sand Grains; Loca	Mottles	Lining, M=Mat						
(Type: C=Concer  Depth (In.)		etion, RM=Reduced Matri					Location	Texture	Remarks			
		etion, RM=Reduced Matri Matrix Color (Moist)	x, CS=Covered/	Coated Sand Grains; Loca	Mottles	Lining, M=Mat		Texture M	Remarks			
Depth (In.)	ntration, D=Depl	Matrix Color (Moist)  2/1	x, CS=Covered/	Coated Sand Grains; Loca	Mottles	Lining, M=Mat		Texture M MMI	Remarks the mineral component is sandy clay loam			
Depth (In.) 0-20	ntration, D=Depl	Matrix Color (Moist)  2/1	x, CS=Covered/ % 100	Coated Sand Grains; Loca	Mottles	Lining, M=Mat		M				
Depth (In.) 0-20	ntration, D=Depl	Matrix Color (Moist)  2/1	x, CS=Covered/ % 100	Coated Sand Grains; Loca	Mottles	Lining, M=Mat		M				
Depth (In.) 0-20	ntration, D=Depl	Matrix Color (Moist)  2/1	x, CS=Covered/ % 100	Coated Sand Grains; Loca	Mottles	Lining, M=Mat		M				
Depth (In.) 0-20	ntration, D=Depl	Matrix Color (Moist)  2/1	x, CS=Covered/ % 100	Coated Sand Grains; Loca	Mottles	Lining, M=Mat		M				
Depth (In.) 0-20 20-28	Hue_10YR Hue_10YR	Matrix Color (Moist)  2/1  2/1	x, CS=Covered/ % 100 100	Coated Sand Grains; Loca  Color (Moist)	Mottles %	Lining, M=Mat		M				
Depth (In.) 0-20 20-28	ntration, D=Depl	Matrix Color (Moist)  2/1  2/1	x, CS=Covered/ % 100 100	Coated Sand Grains; Loca	Mottles %	Lining, M=Mat		MMI	the mineral component is sandy clay loam			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR ric Soil Field	Matrix Color (Moist)  2/1  2/1	% 100 100 ck here if indicates	Color (Moist)  Cators are not preser	Mottles %	Lining, M=Mat	Location	M MMI	the mineral component is sandy clay loam  for Problematic Soils <sup>1</sup>			
Depth (In.) 0-20 20-28	Hue_10YR Hue_10YR ric Soil Field	Matrix Color (Moist) 2/1 2/1 Indicators (check	% 100 100 ck here if indi	Coated Sand Grains; Loca  Color (Moist)  icators are not preser	Mottles %	Lining, M=Mat	Location	MMI Indicators	the mineral component is sandy clay loam  for Problematic Soils <sup>1</sup> Muck (LRR I, J)			
Depth (In.)  0-20  20-28  NRCS Hydr  ☑	Hue_10YR Hue_10YR ric Soil Field	Matrix Color (Moist) 2/1 2/1 Indicators (checking)	% 100 100 ck here if indi	Color (Moist)  Cators are not preser	Mottles %	Lining, M=Mat	Location	MMI  Indicators  A9 - 1 cm N  A16 - Coast	the mineral component is sandy clay loam  for Problematic Soils <sup>1</sup>			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge	Matrix Color (Moist)  2/1  2/1  Indicators (checking Sulfide	% 100 100 ck here if indi	Color (Moist)  Color (Moist)  icators are not preser  S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Minel F2 - Loamy Gleyed Matr	Mottles %	Lining, M=Mat	Location	Indicators: A9 - 1 cm N A16 - Coast S7 - Dark S F16 - High I	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  Furface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified	Matrix Color (Moist)  2/1  2/1  Indicators (checking Sulfide Layers (LRR F)	% 100 100 ck here if indi	Coated Sand Grains; Local Color (Moist)  Cators are not preser S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Miner F2 - Loamy Gleyed Matrix F3 - Depleted Matrix	Mottles %	Lining, M=Mat	Location	Indicators: A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High I F18 - Reduce	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  surface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)  ced Vertic			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	Matrix Color (Moist)  2/1  2/1  2/1  Indicators (checking Sulfide Layers (LRR F) ck (LRR FGH)	x, CS=Covered/  % 100 100 ck here if indi	Coated Sand Grains; Local Color (Moist)  Cators are not preser S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Miner F2 - Loamy Gleyed Matrix F3 - Depleted Matrix F6 - Redox Dark Surface	Mottles %	Lining, M=Mat	Location	Indicators: A9 - 1 cm N A16 - Coast S7 - Dark S F16 - High I F18 - Reduc	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  surface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)  ced Vertic  Parent Material			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete	Matrix Color (Moist)  2/1  2/1  2/1  Indicators (checking Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface	x, CS=Covered/  % 100 100 ck here if indi	Coated Sand Grains; Local Color (Moist)  Cators are not preser  S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Miner F2 - Loamy Gleyed Matrix F3 - Depleted Matrix F6 - Redox Dark Surface F7 - Depleted Dark Surface	Mottles %	Lining, M=Mat	Location	MMI  Indicators  A9 - 1 cm N  A16 - Coast  S7 - Dark S  F16 - High I  F18 - Reduct  TF2 - Red F  TF12 - Very	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  turface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)  ced Vertic  Parent Material  7 Shallow Dark Surface			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D	Matrix Color (Moist)  2/1  2/1  2/1  Indicators (check ipedon stice in Sulfide Layers (LRR F) ck (LRR FGH) ind Below Dark Surface ark Surface ark Surface	% 100 100 ck here if indi	Coated Sand Grains; Local Color (Moist)  Cators are not preser  S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Miner F2 - Loamy Gleyed Matrix F3 - Depleted Matrix F6 - Redox Dark Surface F7 - Depleted Dark Surface F8 - Redox Depressions	Mottles %  at ix	Type	Location	MMI  Indicators  A9 - 1 cm N  A16 - Coast  S7 - Dark S  F16 - High I  F18 - Reduct  TF2 - Red F  TF12 - Very	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  surface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)  ced Vertic  Parent Material			
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Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu	Matrix Color (Moist)  2/1  2/1  2/1  Indicators (check ipedon stice in Sulfide Layers (LRR F) ck (LRR FGH) ind Below Dark Surface in	x, CS=Covered/  % 100 100 ck here if indi	Coated Sand Grains; Local Color (Moist)  Cators are not preser  S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Miner F2 - Loamy Gleyed Matrix F3 - Depleted Matrix F6 - Redox Dark Surface F7 - Depleted Dark Surface F8 - Redox Depressions	Mottles %  at ix	Type	Location	MMI  Indicators: A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High I F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  surface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)  ced Vertic  Parent Material  shallow Dark Surface  ain in Remarks)  hydrophytic vegetation and wetland hydrology must be present,			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu S4 - Sandy G	Matrix Color (Moist)  2/1  2/1  2/1  Indicators (check ipedon stice in Sulfide Layers (LRR F) ck (LRR FGH) ind Below Dark Surface in	x, CS=Covered/  % 100 100 ck here if indi	Coated Sand Grains; Local Color (Moist)  Cators are not preser  S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Miner F2 - Loamy Gleyed Matrix F3 - Depleted Matrix F6 - Redox Dark Surface F7 - Depleted Dark Surface F8 - Redox Depressions	Mottles %  at ix	Type  Type  72, 73 of LRI	Location	MMI  Indicators: A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High I F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  surface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)  ced Vertic  Parent Material  shallow Dark Surface  ain in Remarks)  hydrophytic vegetation and wetland hydrology must be present,			
Depth (In.) 0-20 20-28  NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu S4 - Sandy G	Matrix Color (Moist)  2/1 2/1 2/1  Indicators (check ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral flucky Peat or Peat (LRR F) leyed Matrix	% 100 100 Ck here if indicate and a second s	Coated Sand Grains; Local  Color (Moist)  Cators are not preser  S5 - Sandy Redox S6 - Stripped Matrix F1 - Loamy Mucky Miner F2 - Loamy Gleyed Matrix F3 - Depleted Matrix F6 - Redox Dark Surface F7 - Depleted Dark Surface F7 - Depleted Dark Surface F8 - Redox Depressions F16 - High Plains Depres	Mottles %  at):  ace ssions (MLRA	Type  Type  Type  Type  Hydric Sc	Location	MMI  Indicators: A9 - 1 cm N A16 - Coast S7 - Dark S F16 - High I F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	the mineral component is sandy clay loam  for Problematic Soils¹  Muck (LRR I, J)  t Prairie Redox (LRR F, G, H)  surface (LRR G)  Plains Depressions (LRR H, outside MLRA 72, 73)  ced Vertic  Parent Material  shallow Dark Surface  ain in Remarks)  hydrophytic vegetation and wetland hydrology must be present,			

## WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	L3R				Sample Point: w-154n44w31-j2				
VEGETATION (	(Species identified in all uppercase a Plot size: 30 ft. radius)	re non-native	species.)						
Tree Stratum (	Species Name	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet				
1.	<u></u>	<u>70 0010.</u>	<u> </u>	······································					
2.					Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)				
3.									
4.					Total Number of Dominant Species Across All Strata:1 (B)				
5.									
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)				
7.									
8.					Prevalence Index Worksheet				
9.					Total % Cover of: Multiply by:				
10.	_l Total Cover =	0			OBL spp. 73				
	Total Cover =	- 0	FAC spp. $\frac{0}{0}$ $\times 3 = \frac{0}{0}$						
Sanling/Shrub 9	Stratum (Plot size: 15 ft. radius)				FACUSED $x 4 = 0$				
1.	Stratam (Fiot size: 15 ft. radius)				$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
2.									
3.					Total 73 (A) 73 (B)				
4.					`` <i>`</i>				
5.					Prevalence Index = B/A =				
6.									
7.									
8.					Hydrophytic Vegetation Indicators:				
9.					Rapid Test for Hydrophytic Vegetation				
10.	Total Cayor				X Dominance Test is > 50%				
	Total Cover =	= 0			X Prevalence Index is ≤ 3.0 *X				
Llank Otration /	Dist size. 5 ft. realizes				Morphological Adaptations (Explain) *				
1.	Plot size: 5 ft. radius)  Carex lasiocarpa	50	Υ	OBL	Problem Hydrophytic Vegetation (Explain) *				
2.	Schoenoplectus acutus	10	N	OBL	* Indicators of hydric soil and wetland hydrology must be				
3.	Equisetum fluviatile	5	N	OBL	present, unless disturbed or problematic.				
4.	Persicaria amphibia	5	N	OBL	Definitions of Vegetation Strata:				
5.	Potamogeton gramineus	3	N	OBL					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast				
7.					height (DBH), regardless of height.				
8.									
9.					Sapling/Shrub - Woody plants less than 3 in. DBH, regardless of height.				
10.									
11.									
12.					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size.				
13.									
14. 15.					Woody Vines - All woody vines, regardless of height.				
15.	Total Cayor -	72			Woody Villes - All woody villes, regardless of fleight.				
	Total Cover =	73	_						
Woody Vine St	ratum (Plot size: 30 ft. radius)								
1.	Tatum (Flot Size: 50 ft. radius)								
2.									
3.					Hydrophytic Vegetation Present? Y				
5.									
4.									
	Total Cover =								
Remarks: A sedge meadow community dominated by woolly-fruit sedge. All species present are wetland obligates. Hydrophytic vegetation is present. This is a good quality, intact native plant-dominated wetland.									
Additional Remarks:									
, Additional N									