WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R								Date: 09/12/14		
Applicant:	oplicant: Enbridge									County: Pennington		
Investigators: MRK/BEH/RAJ				Subregion (MLRA or LRR): MLRA 56						State: MN		
Soil Unit: I66A						NW	Classification:					
Landform:	Talf				cal Relief:					Sample Point: u-154n45w25-i1		
Slope (%):	0 - 2%		titude: 48.12				5793333	Datum				
	-	onditions on the site ty	-		ar? (If no, exp	ī			□ No	Section:		
Are Vegetation	•		•	disturbed?		Are	e normal circum	-	esent?	Township:		
Are Vegetation		, ,	aturally pro	blematic?			Yes	□ No		Range: Dir:		
SUMMARY OF FINDINGS												
Hydrophytic \			No		•				ils Present?			
Wetland Hyd			No	41 1				Is This Sa	mpling Poir	it Within A Wetland? No		
Remarks:	The upland	is a hay field dominate	ted by smo	oth brome ar	na bira's-to	oot trefoi	l.					
HYDROLOG'	V											
	•	licators (Check all tha	at apply; Mi	nimum of on	e primary	or two se	econdary requir	red):	0			
Primary:	<u>Primary:</u> ☐ A1 - Surface Water ☐ B11 - Salt						Secondary: □ B6 - Surface Soil Cracks					
	A2 - High Wa				B13 - Aqua					B8 - Sparsely Vegetated Concave Surface		
	A3 - Saturation			_	C1 - Hydro					B10 - Drainage Patterns		
	B1 - Water M				C2 - Dry Se					C3 - Oxidized Rhizospheres on Living Roots (tilled)		
	B2 - Sedimer	•					spheres on Living	Roots (not til	le 🗆	C8 - Crayfish Burrows		
	B3 - Drift Dep B4 - Algal Ma				C4 - Prese C7 - Thin M					C9 - Saturation Visible on Aerial Imagery D2 - Geomorphic Position		
	B5 - Iron Dep				Other (Exp				.	D5 - FAC-Neutral Test		
		on Visible on Aerial Image	ery		(,				D7 - Frost-Heaved Hummocks (LRR F)		
	B9 - Water-S	tained Leaves										
Field Observ												
Surface Water		Yes	Depth		(in.)			Wetland I	- Hydrology I	Present? N		
Water Table		Yes			(in.)							
Saturation Present? Yes Depth: (in.)												
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
Remarks:	No primary	or secondary hydrolo	gical indica	tors were ob	served.							
SOILS	intion (December					or Course the		diantama \				
		ibe to the depth need letion, RM=Reduced Matrix										
(Type: 0=concer	itration, b=bep	ietion, mivi=meduced matrix	., 00=00vere	a/Coated Sand (Jiaiiis, Locai	don. i L=i	ore Liming, M-Mati	12)				
Depth (In.)		Matrix				Mottle	 es					
		Matrix Color (Moist)	%	Color (I	Moist)	Mottle		Location	Texture	Remarks		
- , , ,	Hue 10YR	Color (Moist)	% 100	Color (I	Moist)	Mottle %	es Type	Location	Texture	Remarks		
0-12	Hue_10YR	Color (Moist) 2/1	100	Ì	,	%	Type		CL	Remarks		
0-12 12-17	Hue_5Y	Color (Moist) 2/1 7/1	100 73	Color (I	,			Location	CL SICL	Remarks		
0-12 12-17 12-17	Hue_5Y Hue_10YR	Color (Moist) 2/1 7/1 2/1	100 73 25	Hue_2.5Y	6/6	2	Type C	M	CL SICL CL	Remarks		
0-12 12-17 12-17 17-21	Hue_5Y Hue_10YR Hue_5Y	Color (Moist) 2/1 7/1 2/1 6/2	100 73 25 55	Ì	,	%	Type		CL SICL CL SICL	Remarks		
0-12 12-17 12-17 17-21 17-21	Hue_5Y Hue_10YR Hue_5Y Hue_10YR	Color (Moist) 2/1 7/1 2/1 6/2 2/1	100 73 25 55 20	Hue_2.5Y	6/6	2	Type C	M	CL SICL CL SICL CL	Remarks		
0-12 12-17 12-17 17-21 17-21 17-21	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1	100 73 25 55 20 15	Hue_2.5Y Hue_2.5Y	6/6	2 10	Type C C	M	CL SICL CL SICL	Remarks		
0-12 12-17 12-17 17-21 17-21	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1	100 73 25 55 20 15	Hue_2.5Y	6/6	2 10	Type C	M	CL SICL CL SICL CL SICL			
0-12 12-17 12-17 17-21 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y Cic Soil Field	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1	100 73 25 55 20 15	Hue_2.5Y Hue_2.5Y	6/6 6/6 not present	2 10	Type C C	M	CL SICL CL SICL CL SICL Indicators 1	or Problematic Soils ¹		
0-12 12-17 12-17 17-21 17-21 17-21	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check	100 73 25 55 20 15	Hue_2.5Y Hue_2.5Y	6/6 6/6 not presented	2 10	Type C C	M	CL SICL CL SICL SICL Indicators 1 A9 - 1 cm M			
0-12 12-17 12-17 17-21 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y Fic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (checked)	100 73 25 55 20 15	Hue_2.5Y Hue_2.5Y dicators are r S5 - Sandy R S6 - Stripped F1 - Loamy M	6/6 6/6 not presentedox Matrix flucky Minera	% 2 10 t):	Type C C	M	CL SICL CL SICL CL SICL Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S	For Problematic Soils ¹ luck (LRR I, J) Prairie Redox (LRR F, G, H) surface (LRR G)		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (checked) Spipedon stic on Sulfide	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y dicators are r S5 - Sandy R S6 - Stripped F1 - Loamy M F2 - Loamy G	6/6 6/6 not presented with the second	% 2 10 t):	Type C C	M	CL SICL CL SICL CL SICL Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F	For Problematic Soils ¹ Suck (LRR I, J) Prairie Redox (LRR F, G, H) Purface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73)		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y Fic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (checked on Sulfide of Layers (LRR F)	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy G F3 - Depleted	6/6 6/6 oot present edox Matrix flucky Minera sleyed Matrix Matrix	% 2 10 10 t):	Type C C	M	CL SICL CL SICL CL SICL SICL Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduce	For Problematic Soils ¹ Fluck (LRR I, J) Prairie Redox (LRR F, G, H) Flains Depressions (LRR H, outside MLRA 72, 73) Freed Vertic		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check cipedon stic en Sulfide d Layers (LRR F) ack (LRR FGH)	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy G F3 - Depleted F6 - Redox D	6/6 6/6 oot present edox Matrix flucky Minera Bleyed Matrix Matrix Matrix Alway Matrix Alway Minera	% 2 10 10 t):	Type C C	M	CL SICL CL SICL CL SICL Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F	For Problematic Soils ¹ Suck (LRR I, J) Prairie Redox (LRR F, G, H) Furface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) Fixed Vertic Parent Material		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check cipedon stic en Sulfide d Layers (LRR F) lick (LRR FGH) ed Below Dark Surface	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy G F3 - Depleted	6/6 6/6 6/6 not present edox Matrix fleyed Matrix Matrix ark Surface Dark Surfa	% 2 10 10 t):	Type C C	M	CL SICL CL SICL CL SICL SICL Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	For Problematic Soils ¹ Fluck (LRR I, J) Prairie Redox (LRR F, G, H) Flains Depressions (LRR H, outside MLRA 72, 73) Freed Vertic		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check Dipedon stic en Sulfide et Layers (LRR F) ack (LRR FGH) et Below Dark Surface Dark Surface ducky Mineral	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	6/6 6/6 6/6 not present edox Matrix fleyed Matrix Matrix ark Surface Dark Surface epressions	% 2 10 10 t):	Type C C	M	CL SICL CL SICL CL SICL SICL Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	For Problematic Soils ¹ Fluck (LRR I, J) Prairie Redox (LRR F, G, H) Flains Depressions (LRR H, outside MLRA 72, 73) Fixed Vertic Parent Material Shallow Dark Surface		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y Fic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M S2 - 2.5 cm M	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check check Check (check Check Check (check Check	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	6/6 6/6 6/6 not present edox Matrix fleyed Matrix Matrix ark Surface Dark Surface epressions	% 2 10 10 t):	Type C C ✓	M	CL SICL CL SICL CL SICL SICL Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Explain	For Problematic Soils ¹ Sluck (LRR I, J) Prairie Redox (LRR F, G, H) Surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) Seed Vertic Parent Material Shallow Dark Surface Sain in Remarks)		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_5Y Hue_5Y Hue_5Y ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check Dipedon stic en Sulfide en Surface en Surfac	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	6/6 6/6 6/6 not present edox Matrix fleyed Matrix Matrix ark Surface Dark Surface epressions	% 2 10 10 t):	Type C C ✓	M	CL SICL CL SICL CL SICL SICL Indicators of Reduction of Part o	For Problematic Soils¹ Suck (LRR I, J) Prairie Redox (LRR F, G, H) surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) seed Vertic Parent Material Shallow Dark Surface ain in Remarks) sydrophytic vegetation and wetland hydrology must be present,		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y Fic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M S2 - 2.5 cm M	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check Dipedon stic en Sulfide en Surface en Surfac	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	6/6 6/6 6/6 not present edox Matrix fleyed Matrix Matrix ark Surface Dark Surface epressions	% 2 10 10 t):	Type C C ✓	M	CL SICL CL SICL CL SICL SICL Indicators of Reduction of Part o	For Problematic Soils ¹ Sluck (LRR I, J) Prairie Redox (LRR F, G, H) Surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) Seed Vertic Parent Material Shallow Dark Surface Sain in Remarks)		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y Fic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu S4 - Sandy G	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check Dipedon Stic En Sulfide Layers (LRR F) Jick (LRR FGH) Jick (LRR FGH) Jick Surface Jick Surface Jucky Mineral Mucky Peat or Peat (LRR F) Jicky Peat or Peat (LRR F) Jicky Peat or Peat (LRR F) Jicky Peat or Peat (LRR F)	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D F16 - High Pla	6/6 6/6 6/6 not present edox Matrix fleyed Matrix I Matrix ark Surface Dark Surfa epressions ains Depres	% 2 10 10 t):	Type C C ✓	M M	CL SICL CL SICL CL SICL CL SICL Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	For Problematic Soils¹ Suck (LRR I, J) Prairie Redox (LRR F, G, H) surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) seed Vertic Parent Material Shallow Dark Surface ain in Remarks) sydrophytic vegetation and wetland hydrology must be present,		
0-12 12-17 12-17 17-21 17-21 NRCS Hydr	Hue_5Y Hue_10YR Hue_5Y Hue_10YR Hue_5Y Fic Soil Field A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu S4 - Sandy G	Color (Moist) 2/1 7/1 2/1 6/2 2/1 7/1 I Indicators (check Dipedon Stic En Sulfide Layers (LRR F) Jick (LRR FGH) Jick (LRR FGH) Jick Surface Jick Surface Jucky Mineral Mucky Peat or Peat (LRR F) Jicky Peat or Peat (LRR F) Jicky Peat or Peat (LRR F) Jicky Peat or Peat (LRR F)	100 73 25 55 20 15 k here if ind	Hue_2.5Y Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	6/6 6/6 6/6 not present edox Matrix fleyed Matrix I Matrix ark Surface Dark Surfa epressions ains Depres	% 2 10 10 t):	Type C C ✓	M	CL SICL CL SICL CL SICL CL SICL Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	For Problematic Soils¹ Suck (LRR I, J) Prairie Redox (LRR F, G, H) surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) seed Vertic Parent Material Shallow Dark Surface ain in Remarks) sydrophytic vegetation and wetland hydrology must be present,		

WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	L3R				Sample Point: u-154n45w25-i1				
VEGETATIO	· · ·	are non-native	species.)						
Tree Stratum ((Plot size: 30 ft. radius) <u>Species Name</u>	% Cover	Dominant	Ind.Status	Dominance Test Worksheet				
1.	Cpecies Name	<u> </u>	Dominant	<u>ma.otatus</u>	Dominance Test Worksheet				
2.					Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)				
3.		1			(
4.					Total Number of Dominant Species Across All Strata: 2 (B)				
5.					(
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)				
7.	<u>, </u>	1							
8.	<u>'</u>				Prevalence Index Worksheet				
9.	<u></u>				Total % Cover of: Multiply by:				
10.					OBL spp. $0 x 1 = 0$				
Total Cover = 0					FACW spp. $0 x 2 = 0$				
			_		FACW spp. $\begin{array}{cccccccccccccccccccccccccccccccccccc$				
Sapling/Shrub	Stratum (Plot size: 15 ft. radius)				FACU spp. 55 $\times 4 = 220$				
1.					UPL spp. 50 $x 5 = 250$				
2.									
3.					Total 125 (A) 530 (B)				
4.									
5.					Prevalence Index = B/A = 4.240				
6.									
7.									
8.					Hydrophytic Vegetation Indicators:				
9.					Rapid Test for Hydrophytic Vegetation				
10.					Dominance Test is > 50%				
	Total Cover :	= 0	_		Prevalence Index is ≤ 3.0 *				
					Morphological Adaptations (Explain) *				
	Plot size: 5 ft. radius)				Problem Hydrophytic Vegetation (Explain) *				
1.	Bromus inermis	50	<u>Y</u>	UPL					
2.	Lotus corniculatus	25	Y	FACU	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
3.	Sonchus arvensis	20	N	FAC	·				
4.	Solidago altissima	15	N	FACU	Definitions of Vegetation Strata:				
5.	Cirsium arvense	10	N	FACU	Troe				
6	Helianthus maximiliani	5	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.				
7. 8.					Tiolight (BBH), Togardiess of Holght.				
9.					Sapling/Shrub - Woody plants less than 3 in. DBH, regardless of height.				
10.					Sapinig/Sinub - Woody Planto 1000 than 6 in. 2211, Togaraloss of Holgitt.				
11.									
12.	1				Herb - All herbaceous (non-woody) plants, regardless of size.				
13.	J.								
14.	J								
15.					Woody Vines - All woody vines, regardless of height.				
	Total Cover :	= 125							
	Total Govern	120							
Woody Vine St	ratum (Plot size: 30 ft. radius)								
1.									
2.									
3.					Hydrophytic Vegetation Present? N				
5.									
4.									
	Total Cover :								
Remarks: The upland sample point is dominated by smooth brome and bird's-foot trefoil.									
Additional Remarks:									