## WETLAND DETERMINATION DATA FORM Great Plains Region

		1.00									00/10/11	
Project/Site:		L3R Enbridge								Date:	09/13/14	
Applicant:									County:	Pennington		
Investigators			Subregion (MLRA or LRR): MLRA 56						State:	MN		
Soil Unit:	175A						I Classification:			1		
Landform:	Depression				cal Relief:					Sample Point	w-154n44w31-g1	
Slope (%):	0 - 2%		atitude: <mark>48.1</mark> 2		Longitude:			Datum:		1		
Are climatic/h	nydrologic co	nditions on the site t	typical for th	is time of yea	ar? (If no, expl	lain in rema	arks)	☑ Yes	□ No	Section:		
Are Vegetation	on 🛛 Soil	. In the second se	significantly	disturbed?		Are	e normal circun	nstances pre	esent?	Township:		
Are Vegetation	on 🗆 Soil	□, or Hydrology	aturally pro	blematic?			Ves	□ No		Range:	Dir:	
SUMMARY OF FINDINGS												
Hydrophytic V			Yes					Hydric Soil	ls Present?	' Yes		
Wetland Hyd	•			Yes			Is This Sampling Poin				/etland? Yes	
Remarks:				ecently scraped for gravel. No vegetation sl			hows more than a					
		ificantly impacted the hy										
HYDROLOG	_											
-	•••	icators (Check all th	nat apply; Mi	nimum of on	e primary o	or two se	econdary requi	red):	- ·			
Primary:		A		_					Secondary:			
<ul> <li>A1 - Surface Water</li> <li>A2 - High Water Table</li> </ul>					B11 - Salt C					B6 - Surface S		
য য	A3 - Saturatio			B13 - Aquatic Fauna C1 Hydrogon Sulfide Odd							B8 - Sparsely Vegetated Concave Surface B10 - Drainage Patterns	
	B1 - Water M			<ul> <li>□ C1 - Hydrogen Sulfide Odor</li> <li>□ C2 - Dry Season Water Table</li> <li>□ □</li> </ul>							Rhizospheres on Living Roots (tilled)	
	B2 - Sedimen						spheres on Living	Roots (not till	€ □	C8 - Crayfish		
	B3 - Drift Dep	•			C4 - Preser			,		•	n Visible on Aerial Imagery	
	B4 - Algal Ma			□ C7 - Thin Muck Surface							phic Position	
	B5 - Iron Dep				Other (Expla	ain)				D5 - FAC-Neu		
		on Visible on Aerial Imag	gery							D7 - Frost-He	aved Hummocks (LRR F)	
	B9 - Water-S	tained Leaves										
Field Observ					<i></i> .							
Surface Wate		Yes 🗹	Depth		(in.)			Wetland H	lydrology	Present?	Y	
Water Table		Yes 🛛	Depth		(in.)			rotiana n	iyarology			
Saturation Pr	resent?	Yes 🛛	Depth	0	(in.)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
Describe Rec		stream daude, monito	nno weii. aer	ial photos, pre	evious inspe	ections).	if available:					
	•		•		•			sions There	are iron strea	aks associated	with drainage patterns. In the soil pit	
Remarks:	The soil is sa	turated to the surface th	roughout and	there is surface	e water and s	small flow	s in microdepres				with drainage patterns. In the soil pit,	
Remarks:	The soil is sa		roughout and	there is surface	e water and s	small flow	s in microdepres				with drainage patterns. In the soil pit,	
Remarks: SOILS	The soil is sat the live roots	turated to the surface th have strongly oxidized r	roughout and hizospheres.	there is surface There is a stro	e water and s ng groundwa	small flow ater influe	vs in microdepress nce in this wetlan	d. Wetland hy			with drainage patterns. In the soil pit,	
Remarks: SOILS Profile Descri	The soil is sa the live roots ption (Descr	turated to the surface th have strongly oxidized r ibe to the depth need	hizospheres.	there is surface There is a stro nent the indio	e water and s ng groundwa cator or co	small flow ater influe nfirm the	is in microdepress ince in this wetlan e absence of in	d. Wetland hy			with drainage patterns. In the soil pit,	
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Remarks: SOILS Profile Descri (Type: C=Concer	The soil is sa the live roots ption (Descr	turated to the surface th have strongly oxidized r ibe to the depth need etion, RM=Reduced Matr Matrix	iroughout and hizospheres. ded to docur ix, CS=Covered	there is surface There is a stro nent the indio d/Coated Sand (	e water and s ng groundwa cator or co Grains; Locati	small flow ater influe nfirm the ion: PL=Pe Mottle	vs in microdepress ince in this wetlan e absence of in ore Lining, M=Matr	d. Wetland hy idicators.) <sup>ix)</sup>	ydrology is pr			
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-18	The soil is sat the live roots ption (Descr htration, D=Depl Gley1	turated to the surface th have strongly oxidized r ibe to the depth need etion, RM=Reduced Matr Matrix Color (Moist) 5/10GY	inclughout and this ospheres.	there is surface There is a stro ment the indic /Coated Sand ( Color (I Hue_10YR	water and song groundwater and	small flow ater influe nfirm the ion: PL=Pe Mottle % 10	vs in microdepress ince in this wetlan e absence of in ore Lining, M=Matr es Type C	d. Wetland hy dicators.) <sup>ix)</sup>	Texture FS	resent.	Remarks re mostly around roots.	
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-18 NRCS Hydr	The soil is sat the live roots ption (Descr ntration, D=Depl Gley1 ic Soil Field A1- Histosol A2 - Histic Ep	ibe to the depth need etion, RM=Reduced Matrix Color (Moist) 5/10GY	inclughout and this ospheres.	there is surface There is a stro nent the indio //Coated Sand ( Color (I Hue_10YR licators are r S5 - Sandy R S6 - Stripped	e water and s ng groundwa cator or co Grains; Locati Vloist) 5/8 001 present edox Matrix	small flow ater influe nfirm the ion: PL=Pe Mottle % 10	vs in microdepress ince in this wetlan e absence of in ore Lining, M=Matr es Type C	d. Wetland hy idicators.) ix) Location PL	Vdrology is provide the second	for Problemati Muck (LRR I, J)	Remarks re mostly around roots.	
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-18 NRCS Hydr NRCS Hydr	The soil is sat the live roots ption (Descr itration, D=Depl Gley1 Gley1 ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A5 - Stratified A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm Mu	ibe to the depth need etion, RM=Reduced Matrix Matrix Color (Moist) 5/10GY Indicators (cheo stic n Sulfide Layers (LRR F) ck (LRR FGH) ed Below Dark Surface wark Surface ucky Mineral Mucky Peat or Peat (LRR	roughout and thizospheres.	there is surface There is a stro ment the indid /Coated Sand C Color (I Hue_10YR Hue_10YR Hue_10YR S5 - Sandy R S5 - Sandy R S5 - Sandy R S6 - Stripped F1 - Loamy M F2 - Loamy G F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	e water and s ng groundwa Cator or co Grains; Locati Voist) 5/8 5/8 000 present edox Matrix fucky Minera bleyed Matrix lucky Minera bleyed Matrix ark Surface Dark Surface pressions	mail flow ater influe ion: PL=Po Mottle % 10 ):	<i>I</i> s in microdepress Ince in this wetlan e absence of in ore Lining, M=Matr es Type C □	d. Wetland hy	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla	for Problemati Index (LRR I, J) Prairie Redox urface (LRR G) Plains Depressi ced Vertic Parent Material Shallow Dark S ain in Remarks)	Remarks         re mostly around roots.         ac Soils <sup>1</sup> (LRR F, G, H)         ONS (LRR H, outside MLRA 72, 73)         Surface         (tion and wetland hydrology must be present,	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-18 NRCS Hydr	The soil is sat the live roots ption (Descr ntration, D=Depl Gley1 Gley1 ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratifiec A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm N	ibe to the depth need etion, RM=Reduced Matrix Matrix Color (Moist) 5/10GY Indicators (cheo stic n Sulfide Layers (LRR F) ck (LRR FGH) ed Below Dark Surface wark Surface ucky Mineral Mucky Peat or Peat (LRR	roughout and thizospheres.	there is surface There is a stro ment the indid /Coated Sand C Color (I Hue_10YR Hue_10YR Hue_10YR S5 - Sandy R S5 - Sandy R S5 - Sandy R S6 - Stripped F1 - Loamy M F2 - Loamy G F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	e water and s ng groundwa Cator or co Grains; Locati Voist) 5/8 5/8 000 present edox Matrix fucky Minera bleyed Matrix lucky Minera bleyed Matrix ark Surface Dark Surface pressions	mail flow ater influe ion: PL=Po Mottle % 10 ):	<i>I</i> s in microdepress Ince in this wetlan e absence of in ore Lining, M=Matr es Type C □	d. Wetland hy	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla	for Problemati Index (LRR I, J) Prairie Redox urface (LRR G) Plains Depressi ced Vertic Parent Material Shallow Dark S ain in Remarks)	Remarks         re mostly around roots.         ac Soils <sup>1</sup> (LRR F, G, H)         ONS (LRR H, outside MLRA 72, 73)         Surface         (tion and wetland hydrology must be present,	
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-18 NRCS Hydr NRCS Hydr	The soil is sat the live roots ption (Descr ntration, D=Depl Gley1 Gley1 ic Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu S4 - Sandy G	ibe to the depth need etion, RM=Reduced Matrix Matrix Color (Moist) 5/10GY Indicators (cheo sipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) ed Below Dark Surface park Surface ucky Mineral Mucky Peat or Peat (LRR leyed Matrix	roughout and thizospheres.	there is surface There is a stro ment the indid /Coated Sand C Color (I Hue_10YR Hue_10YR Hue_10YR S5 - Sandy R S5 - Sandy R S5 - Sandy R S6 - Stripped F1 - Loamy M F2 - Loamy G F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	e water and s ng groundwa Cator or co Grains; Locati Voist) 5/8 001 present edox Matrix lucky Minera leyed Matrix lucky Minera cleyed Matrix ark Surface Dark Surface pressions ains Depress	mail flow ater influe ion: PL=Po Mottle % 10 ):	<pre>/s in microdepress ince in this wetlan e absence of in ore Lining, M=Matr es Type C C RA 72, 73 of LRF</pre>	d. Wetland hy	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla	for Problemati Index (LRR I, J) Prairie Redox urface (LRR G) Plains Depressi ced Vertic Parent Material Shallow Dark S ain in Remarks)	Remarks         re mostly around roots.         ac Soils <sup>1</sup> (LRR F, G, H)         ONS (LRR H, outside MLRA 72, 73)         Surface         (tion and wetland hydrology must be present,	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-18 NRCS Hydr NRCS Hydr Restrictive Layer	The soil is sat the live roots ption (Descr ntration, D=Depl Gley1 Gley1 ic Soil Field 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	turated to the surface the have strongly oxidized relation, RM=Reduced Matrix Matrix Color (Moist) 5/10GY Indicators (cheen bipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) ed Below Dark Surface bark Surface ucky Mineral Aucky Peat or Peat (LRR leyed Matrix	roughout and thizospheres.	there is surface There is a stro nent the india //Coated Sand ( Color (I Hue_10YR Hue_10YR Hue_10YR S5 - Sandy R S5 - Sandy R S5 - Sandy R S5 - Sandy R S5 - Sandy R S6 - Stripped F1 - Loamy M F2 - Loamy M F2 - Loamy M F2 - Loamy G F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D F16 - High Pla	e water and s ng groundwa Cator or co Grains; Locati Voist) 5/8 5/8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	mail flow ater influe ion: PL=Po Mottle % 10 ): ):	As in microdepress ince in this wetlan e absence of in ore Lining, M=Matr es Type C C	d. Wetland hy	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla <sup>1</sup> Indicators of F unless disturbe	for Problemati for Problemati fuck (LRR I, J) t Prairie Redox urface (LRR G) Plains Depressi ced Vertic Parent Material r Shallow Dark S ain in Remarks)	Remarks         re mostly around roots.         in a construction in the second	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-18 NRCS Hydr NRCS Hydr	The soil is sat the live roots ption (Descr ntration, D=Depl Gley1 Gley1 ic Soil Field 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	ibe to the depth need etion, RM=Reduced Matrix Matrix Color (Moist) 5/10GY Indicators (cheo sipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) ed Below Dark Surface park Surface ucky Mineral Mucky Peat or Peat (LRR leyed Matrix	roughout and thizospheres.	there is surface There is a stro nent the india //Coated Sand ( Color (I Hue_10YR Hue_10YR Hue_10YR S5 - Sandy R S5 - Sandy R S5 - Sandy R S5 - Sandy R S5 - Sandy R S6 - Stripped F1 - Loamy M F2 - Loamy M F2 - Loamy M F2 - Loamy G F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D F16 - High Pla	e water and s ng groundwa Cator or co Grains; Locati Voist) 5/8 5/8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	mail flow ater influe ion: PL=Po Mottle % 10 ): ):	As in microdepress ince in this wetlan e absence of in ore Lining, M=Matr es Type C C	d. Wetland hy	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla <sup>1</sup> Indicators of F unless disturbe	for Problemati for Problemati fuck (LRR I, J) t Prairie Redox urface (LRR G) Plains Depressi ced Vertic Parent Material r Shallow Dark S ain in Remarks)	Remarks         re mostly around roots.         in a construction in the second	

## WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site	: L3R				Sample Point: w-154n44w31-g1			
VEGETATIO		e non-native	species.)					
Tree Stratum	(Plot size: 30 ft. radius)				Deminonee Test Werksheet			
1	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet			
<u> </u>					Number of Deminent Species that are ODL $FACIAL ar FAC:$ (A)			
					Number of Dominant Species that are OBL, FACW, or FAC: $4$ (A)			
3.					$T_{a}$ (A) $T_{a}$ (B)			
4.					Total Number of Dominant Species Across All Strata: $4$ (B)			
5.								
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)			
7.					Drevelence Index Merkeheet			
8.					Prevalence Index Worksheet			
9.					Total % Cover of: Multiply by:			
10.		0			OBL spp. $16$ X 1 = $16$			
	Total Cover =	0	FACW spp. 10 $X Z = 20$					
O a ra liva ar (Ola ra ala	O(a + b) = O(a + b)				FACW spp.       10       x       2 =       20         FAC spp.       0       x       3 =       0         FACU spp.       0       x       4 =       0			
Sapling/Shrub	Stratum (Plot size: 15 ft. radius)				FACU spp. 0 $X 4 = 0$			
1. 2					UPL spp. 0 $x 5 = 0$			
2.								
3.	-				Total <u>26</u> (A) <u>36</u> (B)			
4.					Drovelence Index P/A 1 295			
5.					Prevalence Index = B/A = <u>1.385</u>			
6.	-							
7.					Hydrophytic Vegetation Indicators			
8.					Hydrophytic Vegetation Indicators:			
<u>9.</u> 10.	-				Rapid Test for Hydrophytic Vegetation			
10.	 Total Cover =	0			X Dominance Test is > 50%			
		0			$X  Prevalence Index is \leq 3.0 *$			
					Morphological Adaptations (Explain) *			
	(Plot size: 5 ft. radius)		V		Problem Hydrophytic Vegetation (Explain) *			
1.	Juncus torreyi	8	Y	FACW	* Indianters of budging spilloged wetlend budgelogy revet bo			
2.	Juncus alpinoarticulatus	5	Y V	OBL	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
3.	Juncus nodosus	5		OBL				
4.	Typha X glauca	5	Y	OBL	Definitions of Vegetation Strata:			
5.	Juncus dudleyi	2	<u>N</u>	FACW	<b>-</b>			
6	Epilobium coloratum	1	N	OBL	<b>Tree -</b> Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.			
7.					neight (DBH), regardless of height.			
8.					<b>O</b> and the Weather plants less than 2 in DDU recordless of height			
9.					<b>Sapling/Shrub -</b> Woody plants less than 3 in. DBH, regardless of height.			
10.								
11.								
12.					Herb - All herbaceous (non-woody) plants, regardless of size.			
13.								
14.					Net a la Marca Allucado vince, recordiação et beight			
15.					Woody Vines - All woody vines, regardless of height.			
	Total Cover =	26	_					
Woody Vine S	tratum (Plot size: 30 ft. radius)							
1.								
2.					Undreaded to Manager the Preserve O			
3.					Hydrophytic Vegetation Present? Y			
5.								
4.	Total Opura	0						
Demerles	Total Cover =		· الدائير مار دما		actation propertie in its first year of security from a solutions is used it as a first			
Remarks: A shallow marsh community dominated by rushes and hybrid cattail. All vegetation present is in its first year of growth from seed; there is no evidence of any								
	perennating plants from last year. Hydrophy	uc vegetat	ion is pres	ખાત.				
Additional I	Remarks:							
1								