WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R								Date:	09/30/14
Applicant:		Enbridge			0.1	/N.41. D.				County:	Pennington
Investigators		RAJ/BJC			Subregio		A or LRR):	MLRA 56		State:	MN
Soil Unit:	I55A				Land Dalla		/I Classification:	PEM/SS1E	3g		450m 44444
Landform:	Depression 0 - 2%		1 04:41.140. 10	000011	Local Relief		71.40	Detum		Sample Point	w-153n44w11-e1
Slope (%):		onditions on the site	Latitude: 48.			e: -96.267		Datum:	□ No	Section:	
Are Vegetation			significan □				e normal circun			Township:	
Are Vegetation			□aturally p	•			✓ Yes		CSCIII:	Range:	Dir:
SUMMARY C			platarally p	robicinat			E 163	= 110		rtange.	DII.
Hydrophytic '			Yes					Hydric Soil	ls Present?	⁹ Yes	
Wetland Hyd	•		Yes							nt Within A W	etland? Yes
Remarks:					dominated by	lake sed	ge with scattere				all parameters of wetland
	conditions a	•		,	,		9				panamatan
HYDROLOG											
		icators (Chack all	that apply:	Minimum	of one primary	or two c	rocondory roqui	rod):			
Primary		icators (Check all	шасарріу,	iviii iii ii ui ii	or one primary	y OI tWO S	secondary requi	ieu).	Secondary		
<u>- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</u>	A1 - Surface	Water			□ B11 - Salt	t Crust				<u>.</u> B6 - Surface S	Soil Cracks
	A2 - High Wa				•	uatic Fauna					Vegetated Concave Surface
☑	A3 - Saturation					ogen Sulfic				B10 - Drainage	
	B1 - Water M B2 - Sedimer					Season Wa	ater Table espheres on Living	Poots (not till		C3 - Oxidized C8 - Crayfish I	Rhizospheres on Living Roots (tille
	B3 - Drift Dep	•					educed Iron	NOOLS (HOL LIII	, –		n Visible on Aerial Imagery
	B4 - Algal Ma					Muck Surf			✓	D2 - Geomorp	
	B5 - Iron Dep				□ Other (Ex	plain)			✓	D5 - FAC-Neu	
		on Visible on Aerial Ima tained Leaves	agery							D7 - Frost-Hea	aved Hummocks (LRR F)
	by - water-s	lailleu Leaves									
Field Obser	vations:										
Surface Wat		Yes □	Dep	nth:	(in.)						
Water Table		Yes ☑	Dep					Wetland F	lydrology	Present?	Υ
Saturation P		Yes 🗹	Dep								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:											
Docaribo Boo	orded Data (stroom gougo monit	toring well o	orial phot	` ′	enactions)	if available:				
					os, previous ins			urfood India	ootoro of w	otland hydrole	agy are present
Describe Rec Remarks:		stream gauge, monit vater table at 16 inc			os, previous ins			urface. Indid	cators of w	etland hydrolo	ogy are present.
Remarks:					os, previous ins			urface. Indid	cators of w	etland hydrold	ogy are present.
Remarks:	There is a	vater table at 16 inc	ches and th	e muck s	os, previous ins	within 6	inches of the su		cators of w	etland hydrolo	ogy are present.
Remarks: SOILS Profile Descri	There is a viii		ches and th	e muck s	os, previous insoil is saturated	within 6	inches of the su	ndicators.)	cators of w	etland hydrolo	ogy are present.
Remarks: SOILS Profile Descri	There is a viii	vater table at 16 inc ibe to the depth nee etion, RM=Reduced Ma	ches and th	e muck s	os, previous insoil is saturated	within 6	inches of the sune absence of in Pore Lining, M=Matr	ndicators.)	cators of w	etland hydrolo	ogy are present.
Remarks: SOILS Profile Descri (Type: C=Concer	There is a viii	vater table at 16 inc ibe to the depth need etion, RM=Reduced Ma Matrix	eded to doc	e muck s cument the cred/Coated	os, previous insoil is saturated e indicator or of Sand Grains; Loc	confirm thation: PL=F	inches of the sume absence of inches of inches of the sum of the s	ndicators.)		etland hydrolo	
Remarks: SOILS Profile Descri (Type: C=Concer	There is a viption (Description, D=Dep	water table at 16 inc ibe to the depth nee etion, RM=Reduced Ma Matrix Color (Moist)	eded to doc atrix, CS=Cove	e muck scument the red/Coated	os, previous insoil is saturated	within 6	inches of the sune absence of in Pore Lining, M=Matr	ndicators.)	cators of w	etland hydrolo	ogy are present. Remarks
Remarks: SOILS Profile Descri (Type: C=Concer	There is a viii	water table at 16 inc ibe to the depth nee etion, RM=Reduced Ma Matrix Color (Moist)	eded to doc	e muck scument the red/Coated	os, previous insoil is saturated e indicator or of Sand Grains; Loc	confirm thation: PL=F	inches of the sume absence of inches of inches of the sum of the s	ndicators.)		etland hydrolo	
Remarks: SOILS Profile Descri (Type: C=Concer	There is a viption (Description, D=Dep	water table at 16 inc ibe to the depth nee etion, RM=Reduced Ma Matrix Color (Moist)	eded to doc atrix, CS=Cove	e muck scument the red/Coated	os, previous insoil is saturated e indicator or of Sand Grains; Loc	confirm thation: PL=F	inches of the sume absence of inches of inches of the sum of the s	ndicators.)			
Remarks: SOILS Profile Descri (Type: C=Concer	There is a viption (Description, D=Dep	water table at 16 inc ibe to the depth nee etion, RM=Reduced Ma Matrix Color (Moist)	eded to doc atrix, CS=Cove	e muck scument the red/Coated	os, previous insoil is saturated e indicator or of Sand Grains; Loc	confirm thation: PL=F	inches of the sume absence of inches of inches of the sum of the s	ndicators.)			
Remarks: SOILS Profile Descri (Type: C=Concer	There is a viption (Description, D=Dep	water table at 16 inc ibe to the depth nee etion, RM=Reduced Ma Matrix Color (Moist)	eded to doc atrix, CS=Cove	e muck scument the red/Coated	os, previous insoil is saturated e indicator or of Sand Grains; Loc	confirm thation: PL=F	inches of the sume absence of inches of inches of the sum of the s	ndicators.)			
Remarks: SOILS Profile Descri (Type: C=Concer	There is a viption (Description, D=Dep	water table at 16 inc ibe to the depth nee etion, RM=Reduced Ma Matrix Color (Moist)	eded to doc atrix, CS=Cove	e muck scument the red/Coated	os, previous insoil is saturated e indicator or of Sand Grains; Loc	confirm thation: PL=F	inches of the sume absence of inches of inches of the sum of the s	ndicators.)			
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23	There is a viption (Description, D=Dep	ibe to the depth need to the d	eded to doc atrix, CS=Cove	e muck s cument the red/Coated	e indicator or of Sand Grains; Loc	confirm thation: PL=F	ne absence of in Pore Lining, M=Matr	ndicators.)			
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23	There is a viption (Description, D=Dep	ibe to the depth need to the d	eded to doc atrix, CS=Cove	e muck s cument the red/Coated	os, previous insoil is saturated e indicator or of Sand Grains; Loc	confirm thation: PL=F	inches of the sume absence of inches of inches of the sum of the s	ndicators.)	Texture M	very black	Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23	iption (Description, D=Dep	ibe to the depth need to the d	eded to doc atrix, CS=Cove	e muck s cument the red/Coated	e indicator or of Sand Grains; Loc	confirm thation: PL=F	ne absence of in Pore Lining, M=Matr	Location	Texture	very black	Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	iption (Description, Depontration, Depontration, Depontration) Hue_10YR ric Soil Field A1- Histosol	water table at 16 incomplete to the depth need to the depth need to the depth need to the detion, RM=Reduced Maximus Matrix Color (Moist) 2/1 Indicators (cheed to the depth need to the dept	eded to doc atrix, CS=Cove	e muck s cument the red/Coated Coated Coated Indicators	e indicator or of Sand Grains; Loc olor (Moist) are not presented andy Redox	confirm thation: PL=F	ne absence of in Pore Lining, M=Matr	Location	Texture M Indicators A9 - 1 cm N	very black for Problemation	Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	iption (Description, Depontration, Depontrat	water table at 16 incomplete to the depth need etion, RM=Reduced Marxix Color (Moist) 2/1 Indicators (checking the color)	eded to doc atrix, CS=Cove	e muck s cument the red/Coated Coated Indicators Solution Solut	e indicator or of Sand Grains; Loc olor (Moist) are not presented andy Redox ripped Matrix	within 6 confirm thation: PL=F Mottl % nt):	ne absence of in Pore Lining, M=Matr	Location	Indicators A9 - 1 cm N A16 - Coas	very black for Problemation fuck (LRR I, J) t Prairie Redox	Remarks c Soils ¹ (LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	There is a viption (Description (Description, D=Deportration,	water table at 16 incomplete to the depth need to the depth need to the depth need to the detion, RM=Reduced Markix Color (Moist) 2/1 Indicators (check to the depth need t	eded to doc atrix, CS=Cove	e muck s cument the red/Coated Cool Indicators Society Services Society Services From S	e indicator or of Sand Grains; Loc olor (Moist) are not presented Matrix amy Mucky Mine	within 6 confirm the ation: PL=F Mottle % nt):	ne absence of in Pore Lining, M=Matr	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S	very black for Problemation Muck (LRR I, J) t Prairie Redox Surface (LRR G)	Remarks c Soils ¹ (LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	iption (Description, Depontration, Depontrat	water table at 16 incomplete to the depth need to the depth need to the depth need to the detion, RM=Reduced Markix Color (Moist) 2/1 Indicators (check to the depth need t	eded to doc etrix, CS=Cove	e muck s cument the red/Coated coated	e indicator or of Sand Grains; Loc olor (Moist) are not presented andy Redox ripped Matrix	within 6 confirm the ation: PL=F Mottle % nt):	ne absence of in Pore Lining, M=Matr	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S	very black for Problemation Muck (LRR I, J) t Prairie Redox (Surface (LRR G)) Plains Depression	Remarks c Soils ¹ (LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	iption (Description, D=Deportration, D=Deportr	water table at 16 incomplete to the depth need to the depth need to the depth need to the detion, RM=Reduced Marxix Color (Moist) 2/1 Indicators (check in Sulfide	eded to docutrix, CS=Cove	e muck s cument the red/Coated Coated Coated	e indicator or of Sand Grains; Loc olor (Moist) are not present andy Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surfacedox Dark Surfacedo	mithin 6 confirm the ation: PL=F Mottl % nt): eral rix ee	ne absence of in Pore Lining, M=Matr	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu	very black for Problemation Muck (LRR I, J) t Prairie Redox Surface (LRR G) Plains Depression ced Vertic Parent Material	Remarks c Soils ¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	iption (Description, D=Depointration, D=	water table at 16 ince ibe to the depth need etion, RM=Reduced Ma Matrix Color (Moist) 2/1 Indicators (check in Sulfide I Layers (LRR F) ick (LRR FGH) ick (LRR FGH) ick (Below Dark Surface)	eded to docutrix, CS=Cove	e muck s cument the red/Coated Coated Coated	e indicator or of Sand Grains; Loc Olor (Moist) are not present and Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surface pleted Dark Surface pleted Dark Surface of the same of the	mithin 6 confirm the ation: PL=F Mottl % nt): eral rix eral rix eral rix	ne absence of in Pore Lining, M=Matr	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu TF2 - Red F TF12 - Very	very black for Problemation Muck (LRR I, J) t Prairie Redox (Burface (LRR G)) Plains Depression ced Vertic Parent Material y Shallow Dark S	Remarks c Soils¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	iption (Description, D=Depointration, D=	water table at 16 ince ibe to the depth need etion, RM=Reduced Ma Matrix Color (Moist) 2/1 Indicators (check to be a Layers (LRR F) ick (LRR FGH) ed Below Dark Surface park Surface	eded to docutrix, CS=Cove	e muck s cument the red/Coated COO S5 - Sa S6 - St S6 - St F1 - Lo F2 - Lo F3 - De F6 - Re F7 - De F8 - Re	e indicator or of Sand Grains; Loc Sand Grains; Loc Olor (Moist) are not present andy Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surface pleted D	Mottl Mo	ne absence of incore Lining, M=Matrolles Type	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu TF2 - Red F TF12 - Very	very black for Problemation Muck (LRR I, J) t Prairie Redox Surface (LRR G) Plains Depression ced Vertic Parent Material	Remarks c Soils¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	iption (Description, D=Depointration, D=	water table at 16 incomplete to the depth need to the depth need to the depth need to the detection, RM=Reduced Maximus Matrix Color (Moist) 2/1 Indicators (check in Sulfide at Layers (LRR F) to the depth need to the depth n	eded to docutrix, CS=Cove	e muck s cument the red/Coated COO S5 - Sa S6 - St S6 - St F1 - Lo F2 - Lo F3 - De F6 - Re F7 - De F8 - Re	e indicator or of Sand Grains; Loc Sand Grains; Loc Olor (Moist) are not present andy Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surface pleted D	Mottl Mo	ne absence of in Pore Lining, M=Matr	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu TF2 - Red F TF12 - Very	very black for Problemation Muck (LRR I, J) t Prairie Redox (Burface (LRR G)) Plains Depression ced Vertic Parent Material y Shallow Dark S	Remarks c Soils¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	There is a variety intration, Dependent of the Land of	ibe to the depth need to the detion, RM=Reduced Ma Matrix Color (Moist) 2/1 Indicators (check) Sipedon Stic (Check) A Layers (LRR F) Cock (LRR FGH) Co	eded to doc etrix, CS=Cove // 10 eck here if i	e muck s cument the red/Coated COO S5 - Sa S6 - St S6 - St F1 - Lo F2 - Lo F3 - De F6 - Re F7 - De F8 - Re	e indicator or of Sand Grains; Loc Sand Grains; Loc Olor (Moist) are not present andy Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surface pleted D	Mottl Mo	ne absence of incore Lining, M=Matrolles Type	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu TF2 - Red F TF12 - Very Other (Expl	very black for Problemation Muck (LRR I, J) t Prairie Redox Surface (LRR G) Plains Depression ced Vertic Parent Material y Shallow Dark S ain in Remarks)	Remarks c Soils¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	There is a variety intration, Dependent of the Intration of	ibe to the depth need to the detion, RM=Reduced Ma Matrix Color (Moist) 2/1 Indicators (check) Sipedon Stic (Check) A Layers (LRR F) Cock (LRR FGH) Co	eded to doc etrix, CS=Cove // 10 eck here if i	e muck s cument the red/Coated COO S5 - Sa S6 - St S6 - St F1 - Lo F2 - Lo F3 - De F6 - Re F7 - De F8 - Re	e indicator or of Sand Grains; Loc Sand Grains; Loc Olor (Moist) are not present andy Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surface pleted D	Mottl Mo	ne absence of incore Lining, M=Matrolles Type	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu TF2 - Red F TF12 - Very Other (Expl	very black for Problemation Muck (LRR I, J) t Prairie Redox (Curface (LRR G) Plains Depression ced Vertic Parent Material y Shallow Dark Sain in Remarks)	Remarks c Soils¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	There is a variety intration, Dependent of the Land of	ibe to the depth need to the detion, RM=Reduced Ma Matrix Color (Moist) 2/1 Indicators (check) Sipedon Stic (Check) A Layers (LRR F) Cock (LRR FGH) Co	eded to doc etrix, CS=Cove // 10 eck here if i	e muck s cument the red/Coated COO S5 - Sa S6 - St S6 - St F1 - Lo F2 - Lo F3 - De F6 - Re F7 - De F8 - Re	e indicator or of Sand Grains; Loc Sand Grains; Loc Olor (Moist) are not present andy Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surface pleted D	Mottl Mo	ne absence of incore Lining, M=Matrolles Type	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu TF2 - Red F TF12 - Very Other (Expl	very black for Problemation Muck (LRR I, J) t Prairie Redox Surface (LRR G) Plains Depression ced Vertic Parent Material y Shallow Dark S ain in Remarks)	Remarks c Soils¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-23 NRCS Hydr	There is a variety intration, Dependent of the Land of	ibe to the depth need to the detion, RM=Reduced Matrix Color (Moist) 2/1 Indicators (check to be provided by the color of the color	eded to doc etrix, CS=Cove // 10 eck here if i	e muck s cument the red/Coated Co COO Indicators S5 - Sa S6 - St F1 - Lo F2 - Lo F3 - De F6 - Re F7 - De F8 - Re F16 - F	e indicator or of Sand Grains; Loc Sand Grains; Loc Olor (Moist) are not present andy Redox ripped Matrix amy Mucky Mine amy Gleyed Matrix edox Dark Surface pleted D	Mottl Mo	ne absence of inches inches of the sum of th	Location	Indicators A9 - 1 cm N A16 - Coas S7 - Dark S F16 - High F18 - Redu TF2 - Red F TF12 - Very Other (Expl	very black for Problemation Muck (LRR I, J) t Prairie Redox Surface (LRR G) Plains Depression ced Vertic Parent Material y Shallow Dark S ain in Remarks)	Remarks c Soils¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface

WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	: L3R				Sample Point: w-153n44w11-e1
/EGETATIO	、 .	e non-native	species.)		
Tree Stratum	(Plot size: 30 ft. radius)				
	Species Name	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.	Salix discolor	15	Υ	FACW	
2.					Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
3.					
4.					Total Number of Deminant Species Agrees All Strate:
					Total Number of Dominant Species Across All Strata:4(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.					OBL spp. 85 $\times 1 = 85$
10.	 Total Cover =	15			EACW cpp 35 × 2 = 50
	Total Cover =	10			FAC on 25
<u> </u>					OBL spp. 85
	Stratum (Plot size: 15 ft. radius)				FACU spp. $0 X 4 = 0$
1.	Cornus alba	10	Υ	FACW	UPL spp. $0 X 5 = 0$
2.	Populus tremuloides	5	Υ	FAC	
3.					Total 125 (A) 180 (B)
4.					· · · · · · · · · · · · · · · · · · ·
5.					Prevalence Index = $B/A = 1.440$
6.					1 TOVAIGHOO HIGEX - D/A - 1.770
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Rapid Test for Hydrophytic Vegetation
10.					X Dominance Test is > 50%
	Total Cover =	15			X Prevalence Index is ≤ 3.0 *
			_		Morphological Adaptations (Explain) *
Llanda Otrastavas d	(Distriction 5 th resting)				
	(Plot size: 5 ft. radius)		V	001	Problem Hydrophytic Vegetation (Explain) *
1.	Carex lacustris	80	I	OBL	
2.	Petasites frigidus	10	N	FAC	* Indicators of hydric soil and wetland hydrology must be
3.	Persicaria amphibia	5	N	OBL	present, unless disturbed or problematic.
4.					Definitions of Vegetation Strata:
5.					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
 7.					height (DBH), regardless of height.
8.					• Westernland less than O'r DDU reconsules of height
9.					Sapling/Shrub - Woody plants less than 3 in. DBH, regardless of height.
10.					
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size.
13.					
14.					
					Mondy Vince All woody vince regardless of beight
15.					Woody Vines - All woody vines, regardless of height.
	Total Cover =	95			
Woody Vine St	tratum (Plot size: 30 ft. radius)				
1.					
2.					
					Hydrophytic Variation Bracenta V
3.					Hydrophytic Vegetation Present?Y
5.					
4.					
	Total Cover =	0			
Remarks:	The sample point is at the edge of a shallow	marsh cor	nmunity ne	ear the W	llow-Carr fringe; toward the center of the marsh, cattail becomes abundant and
			•		dge with scattered willows and red osier dogwood. Hydrophytic vegetation is
	miowo dicappedi. The shallow maish comi	Tarinty 13 dt	ommutou t	by land 30	ago man ocationoa minomo ana roa oción acgivicoa. Tryaropriyilo vegetation is
Additional F	Remarks:				