WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R									Date:	09/18/14	
Applicant:		Enbridge				.	(1.41 D.4				County:	Pennington	
Investigators		MRK/OTG				_Subregio	`	A or LRR):	MLRA 56		State:	MN	
Soil Unit:	162A				1 -	l D . l' . (I Classification	า:			454-244-22	
Landform:	Talf 0 - 2%		Latitude: 48	0 111		cal Relief:		29085000	Datum		Sample Point: 	u-154n44w33-p1	
Slope (%):		nditions on the sit							Datum: ☑ Yes	□ No	Section:		
Are Vegetati		✓, or Hydrology				ar: (II 110, ex		e normal circu			Township:		
Are Vegetation		□, or Hydrology	•	-				e normal circu ☑ Yes	-	330111:	Range:	Dir:	
SUMMARY (Hatarany	ргор	icinatio:			E 163	110		Range.	DII.	
Hydrophytic			No	n					Hydric Soil	ls Present?	No		
	drology Prese		No.			_					nt Within A W	etland? No	
Remarks:		sample point is lo			ntly tilled fie	eld upslope	e from a	hardwood swa		npinig i on			
					,								
HYDROLOG	Υ												
<u>Primary</u>	<u>":</u>	icators (Check all	I that apply:	; Min	imum of or			econdary requ	uired):	Secondary:	•	tail Ora alsa	
	A1 - Surface A2 - High Wa					B11 - Salt B13 - Aqua		•			B6 - Surface S	Vegetated Concave Surface	
	A3 - Saturation					C1 - Hydro					B10 - Drainage		
	B1 - Water M					C2 - Dry S	eason Wa	ater Table				Rhizospheres on Living Roots (til	lled)
	B2 - Sedimen	•						spheres on Living	g Roots (not tille	• 🗖	C8 - Crayfish E		
	B3 - Drift Dep B4 - Algal Ma					C4 - Prese		educed Iron			C9 - Saturation D2 - Geomorp	n Visible on Aerial Imagery	
	B5 - Iron Dep					Other (Exp		ace			D5 - FAC-Neu		
		on Visible on Aerial Im	nagery		_	-						aved Hummocks (LRR F)	
	B9 - Water-S	tained Leaves											
	-41												
Field Obser		V	D .	41		/: \							
	ter Present?			epth: _		_ (in.)			Wetland H	lydrology	Present?	N	
Water Table		Yes \square		epth: _		_ (in.) _ (in.)						_	
Saturation Present? Yes Depth: (in.)													
				<u> </u>									
	<u>`</u>	stream gauge, mon				evious insp	pections),	, if available:					
Describe Rec Remarks:	<u>`</u>	stream gauge, mon or secondary hydr				evious insp	pections),	if available:					
Remarks:	<u>`</u>					evious insp	pections),	if available:					
Remarks:	No primary	or secondary hydr	rological ind	dicato	ors were ob	revious insposerved.	•		indicators)				
Remarks: SOILS Profile Descr	No primary		rological inc	dicato ocum	ors were of	revious insposerved.	onfirm th	e absence of i					
Remarks: SOILS Profile Descr	No primary	or secondary hydr	rological inc	dicato ocum	ors were of	revious insposerved.	onfirm th	e absence of i					
Remarks: SOILS Profile Descr	No primary	or secondary hydr	rological inc	dicato ocum	ors were of	revious insposerved.	onfirm th	e absence of i					
Remarks: SOILS Profile Descr	No primary	or secondary hydr be to the depth ne etion, RM=Reduced M	rological independent of the control	dicato ocum	ors were of	revious insposerved. icator or congrains; Loca	onfirm th	e absence of i		Texture		Remarks	
Remarks: SOILS Profile Descr (Type: C=Concer	No primary	or secondary hydrobe to the depth neetion, RM=Reduced M Matrix Color (Moist)	rological independent of the record of the r	ocum vered/	ent the ind	revious insposerved. icator or congrains; Loca	onfirm th tion: PL=P Mottl	e absence of i	trix)	Texture FSL		Remarks	
Remarks: SOILS Profile Descr (Type: C=Conce	No primary iption (Descr	or secondary hydrological be to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1	eeded to do	ocum vered/6	ent the ind	revious insposerved. icator or congrains; Loca	onfirm th tion: PL=P Mottl	e absence of i	trix)			Remarks	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12	No primary iption (Descr	or secondary hydrobe to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3	rological independent of the control	ocum vered/0	ent the ind	revious insposerved. icator or congrains; Loca	onfirm th tion: PL=P Mottl	e absence of i	trix)	FSL	gravel	Remarks	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16	No primary iption (Descr ntration, D=Depl Hue_10YR Hue_10YR	or secondary hydrobe to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3	rological independent of the control	ocum vered/0	ent the ind	revious insposerved. icator or congrains; Loca	onfirm th tion: PL=P Mottl	e absence of i	trix)	FSL SL	gravel	Remarks	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16	No primary iption (Descr ntration, D=Depl Hue_10YR Hue_10YR	or secondary hydrobe to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3	rological independent of the control	ocum vered/0	ent the ind	revious insposerved. icator or congrains; Loca	onfirm th tion: PL=P Mottl	e absence of i	trix)	FSL SL	gravel	Remarks	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16	No primary iption (Descr ntration, D=Depl Hue_10YR Hue_10YR	or secondary hydrobe to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3	rological independent of the control	ocum vered/0	ent the ind	revious insposerved. icator or congrains; Loca	onfirm th tion: PL=P Mottl	e absence of i	trix)	FSL SL	gravel	Remarks	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19	No primary iption (Descr ntration, D=Depl Hue_10YR Hue_10YR	or secondary hydrobe to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3 4/3	rological independent of the control	% 100 100	ent the indicoated Sand	revious insposerved. icator or congrains; Locations (Moist)	onfirm th	e absence of i	trix)	FSL SL	gravel	Remarks	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19	No primary iption (Descr ntration, D=Depl Hue_10YR Hue_10YR Hue_10YR	or secondary hydrobe to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3 4/3	rological independent of the control	% 100 100	ent the indicoated Sand	revious insposerved. icator or congrains; Locations (Moist)	onfirm th	e absence of i	Location	FSL SL OT	or Problemation		
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19 NRCS Hydr	No primary iption (Descr ntration, D=Depl Hue_10YR Hue_10YR Hue_10YR A1- Histosol	or secondary hydrological beto the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3 4/3 Indicators (ch	rological independent of the control	ocum- vered/0 100 100	ent the indicoated Sand Color (cators are	revious insposerved. icator or configurations; Local (Moist) not presented.	onfirm th	e absence of i	Location	FSL SL OT Indicators 1 A9 - 1 cm M	or Problemation	c Soils ¹	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19 NRCS Hydr	iption (Descr ntration, D=Depl Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep	or secondary hydrological betto the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3 4/3 Indicators (chain)	rological independent of the control	% 100 100 f indicate	ent the indicoated Sand Coated Sand Color (cators are	revious insposerved. icator or configurations; Local (Moist) not presented and the presented and th	onfirm the tion: PL=P Mottl % at):	e absence of i	Location	FSL SL OT Indicators 1 A9 - 1 cm M A16 - Coast	or Problemation	c Soils ¹	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19 NRCS Hydr	No primary iption (Description, D=Depl Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black History	or secondary hydrological beto the depth neetion, RM=Reduced Matrix Color (Moist) 2/1 3/3 4/3 Indicators (chappedonestic	rological independent of the control	% 100 100 f indic	ent the indicoated Sand Color (cators are S5 - Sandy F S6 - Stripped F1 - Loamy N	revious insposerved. icator or configurations; Locations; Locatio	onfirm thation: PL=P Mottl % at):	e absence of i	Location	FSL SL OT Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S	For Problemation Iuck (LRR I, J) Prairie Redox (urface (LRR G)	c Soils ¹ (LRR F, G, H)	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19 NRCS Hydr	iption (Descr ntration, D=Depl Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge	or secondary hydrological between the depth neetion, RM=Reduced Matrix Color (Moist) 2/1 3/3 4/3 Indicators (chain sulfide	rological independent of the control	% 100 100 f indic	ent the indicoated Sand Color (Cators are S5 - Sandy F S6 - Stripped F1 - Loamy F F2 - Loamy C	cevious insposerved. icator or configurations; Local (Moist) not present and Matrix Mucky Miner Gleyed Matrix	onfirm thation: PL=P Mottl % at):	e absence of i	Location	FSL SL OT Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S	for Problemation Iuck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression	c Soils ¹	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19 NRCS Hydr	iption (Descr ntration, D=Depl Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	or secondary hydrological beto the depth neetion, RM=Reduced Matrix Color (Moist) 2/1 3/3 4/3 Indicators (chapted on stice in Sulfide in Layers (LRR F) ck (LRR FGH)	eeded to do fatrix, CS=Cov	% 100 100 f indicate	ent the indicoated Sand Color (Cators are S5 - Sandy F S6 - Stripped F1 - Loamy F F2 - Loamy C F3 - Depleted F6 - Redox E	cevious insposerved. icator or congrains; Loca (Moist) not present Redox Mucky Miner Gleyed Matrix Mucky Miner Gleyed Matrix Dark Surface	onfirm the tion: PL=P Mottl % at):	e absence of i	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc	For Problemation Juck (LRR I, J) Prairie Redox (Jurface (LRR G) Plains Depression Plains Depression Parent Material	C Soils ¹ (LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)	
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19 NRCS Hydr	iption (Descr ntration, D=Depl 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	or secondary hydrological between the depth neetion, RM=Reduced Matrix Color (Moist) 2/1 3/3 4/3 Indicators (characters) ipedon stic in Sulfide Layers (LRR F) ck (LRR FGH) cd Below Dark Surface	eeded to do fatrix, CS=Cov	% 100 100 f indic	ent the indicoated Sand Coated Sand Color (S5 - Sandy F S6 - Stripped F1 - Loamy N F2 - Loamy N F3 - Depleted F6 - Redox E F7 - Depleted	cevious insposerved. icator or congrains; Local (Moist) not present Redox d Matrix Mucky Miner Gleyed Matrix Dark Surface d Dark Surface d Dark Surface	onfirm the tion: PL=P Mottl % at): ral ix eace	e absence of i	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	For Problemation For Problemation Frairie Redox (ourface (LRR G)) Plains Depression Frairie Redox (ourface (LRR G)) Plains Depression Frairie Redox (ourface (LRR G)) Plains Depression Frairie Redox (Ourface (LRR G))	C Soils ¹ (LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)	
Remarks: SOILS Profile Descr (Type: C=Concel Depth (In.) 0-12 12-16 16-19 NRCS Hydr	Hue_10YR 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	or secondary hydrological between the depth neetion, RM=Reduced Matrix Color (Moist) 2/1 3/3 4/3 Indicators (chapted on Stice on Sulfide o	eeded to do fatrix, CS=Cov	ocum- vered/0 100 100 1 indic	cators are	revious insposerved. icator or configurations; Locations; Locatio	onfirm the tion: PL=P Mottl % at): cal ix	e absence of i	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	For Problemation Juck (LRR I, J) Prairie Redox (Jurface (LRR G) Plains Depression Plains Depression Parent Material	C Soils ¹ (LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)	
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Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-12 12-16 16-19 NRCS Hydr	iption (Descrintration, D=Deplementation, D=Depl	or secondary hydrometric method be to the depth neetion, RM=Reduced Matrix Color (Moist) 2/1 3/3 4/3 Indicators (characteristic method by the color of the c	rological independent of the control	ocum- vered/0 100 100 1 indic	cators are	revious insposerved. icator or configurations; Locations; Locatio	onfirm the tion: PL=P Mottl % at): cal ix	e absence of i	Location	FSL SL OT Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla	For Problemation For Problema	C Soils ¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface	sent,
Remarks: SOILS Profile Descr (Type: C=Concel Depth (In.) 0-12 12-16 16-19 NRCS Hydr	Hue_10YR Hue_10YR 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	or secondary hydrometric method be to the depth neetion, RM=Reduced Matrix Color (Moist) 2/1 3/3 4/3 Indicators (characteristic method by the color of the c	rological independent of the control	ocum- vered/0 100 100 1 indic	cators are	revious insposerved. icator or configurations; Locations; Locatio	onfirm the tion: PL=P Mottl % at): cal ix	e absence of i	Location	FSL SL OT Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla	For Problemation For Problema	C Soils ¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface	sent,
Remarks: SOILS Profile Descr (Type: C=Concel Depth (In.) 0-12 12-16 16-19 NRCS Hydr	iption (Descrintration, D=Deplementation, D=Deplementation) Hue_10YR Hue_1	or secondary hydrological be to the depth neetion, RM=Reduced M Matrix Color (Moist) 2/1 3/3 4/3 Indicators (characters) ipedon stic in Sulfide Layers (LRR F) ck (LRR FGH) id Below Dark Surfacters (LRR FGH) id Below Dark Surfacters (LRR Surface) id Below Dark Surfacters (LRR FGH)	rological independent of the control	ocum- vered/0 100 100 1 indic	cators are	revious insposerved. Control of	onfirm the tion: PL=P Mottl % at): cal ix	e absence of interpretation of the control of the c	Location	FSL SL OT Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	For Problemation For Problema	C Soils ¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface	sent,

WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	L3R				Sample Point: u-154n44w33-p1
VEGETATIO		e non-native	species.)		
Tree Stratum ((Plot size: 30 ft. radius)				Dawinanaa Taat Maylahaat
4	Species Name	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.	Populus tremuloides	10	Υ	FAC	N
2.					Number of Dominant Species that are OBL, FACW, or FAC:1(A)
3.					T () () () () () () () () () (
4.					Total Number of Dominant Species Across All Strata:4(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
7.					Dravalance Index Markels est
8.					Prevalence Index Worksneet
9.					I ofal % Cover of: Multiply by:
10.	Total Cayer	40			Prevalence Index Worksheet Total % Cover of: Multiply by: OBL spp. 0 x 1 = 0 FACW spp. 0 x 2 = 0 FAC spp. 10 x 3 = 30 FACU spp. 10 x 4 = 40 UPL spp. 15 x 5 = 75
	Total Cover =	10	_		FACW spp. $0 \times 2 = 0$
0 - 1 - 10 - 10	Otto (FAC spp. $\frac{10}{30}$ $\times 3 = \frac{30}{30}$
	Stratum (Plot size: 15 ft. radius)				FACU spp. $\frac{10}{\sqrt{5}}$ X 4 = $\frac{40}{\sqrt{5}}$
1.					$UPL spp. \underline{15} \qquad X S = \underline{75}$
2.					
3.					Total 35 (A) 145 (B)
4.					Dravelance Index D/A 4440
5.					Prevalence Index = B/A = 4.143
6.					
7.					Uvdranbytia Varatatian Indicatora
8.					Hydrophytic Vegetation Indicators:
9.					Rapid Test for Hydrophytic Vegetation
10.	Total Cover -				Dominance Test is > 50%
	Total Cover =	0			Prevalence Index is ≤ 3.0 *
					Morphological Adaptations (Explain) *
Herb Stratum (Plot size: 5 ft. radius)			LIDI	Problem Hydrophytic Vegetation (Explain) *
1.	Bromus inermis	15	<u>'</u>	UPL	* le disease est le relais est le relation de la re
2.	Lotus corniculatus	5	Y	FACU	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3.	Trifolium pratense	5	Υ	FACU	·
4.					Definitions of Vegetation Strata:
5.					T
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
7.					neight (DBH), regardless of height.
8.					O - 1 - 101 - 1 Weeds please then 2 in DDH regardless of height
9.					Sapling/Shrub - Woody plants less than 3 in. DBH, regardless of height.
10.					
11.					All hard account (non-unagh) along a recording of sing
12.					Herb - All herbaceous (non-woody) plants, regardless of size.
13.					
14.					All and the second seco
15.					Woody Vines - All woody vines, regardless of height.
	Total Cover =	25			
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 qu	iaking aspe	en, smooth	brome, b	ird's-foot trefoil and red clover.
Additional R	Remarks:				