WETLAND DETERMINATION DATA FORM Great Plains Region

											Datas	00/00/44		
Project/Site:		L3R									Date:	08/22/14		
Applicant:		Enbridge RAJ/BEH				.	<i></i>				County:	Marshall		
Investigators		Subregion (MLRA or LRR): MLRA 56					State:	MN						
Soil Unit:	I57B							I Classification:	PFO1/EME	Bgd				
Landform:	Depression	Depression Lo					ocal Relief: CC				Sample Point:	w-155n45w20-d1		
Slope (%):	16 - 25%		Latitude:	48.234	1393	Longitude:	-96.463	991	Datum:					
	hydrologic co	nditions on the sit	te typical	for this	s time of yea	-			☑ Yes	□ No	Section:			
Are Vegetati		□, or Hydrology					r	e normal circum			Township:			
Are Vegetati		□, or Hydrology	•					⊠ Yes			Range:	Dir:		
SUMMARY (Hatara	ny prob				□ 103			Range.	011.		
										- Due 10	Maa			
Hydrophytic	-		-	Yes		-			Hydric Soil					
	rology Prese			Yes				· ·			t Within A W			
Remarks:		is a deep marsh	with very	/ steep	banks that	abruptly tr	ansitions	s to upland. Th	ere is a nar	row fringe o	of willows on	the bank that overhang the		
HYDROLOG	marsh. V													
-	•••	icators (Check all	ll that app	oly; Min	imum of on	e primary	or two se	econdary requir	ed):	a				
Primary		A			_		•			Secondary:				
	A1 - Surface					B11 - Salt (B6 - Surface S			
	A2 - High Wa A3 - Saturatio					B13 - Aqua						Vegetated Concave Surface		
	B1 - Water M					C1 - Hydrog C2 - Dry Se					B10 - Drainage			
	B2 - Sedimen							spheres on Living	Roots (not till		C3 - Oxidized C8 - Crayfish E	Rhizospheres on Living Roots (tilled)		
	B3 - Drift Dep	•				C3 - Oxidiz C4 - Presei						Nisible on Aerial Imagery		
	B3 - Dhit Dep B4 - Algal Ma					C7 - Thin M					D2 - Geomorp	U		
	B5 - Iron Dep					Other (Expl				⊻	D5 - FAC-Neu			
		n Visible on Aerial In	nagerv				iairij					aved Hummocks (LRR F)		
	B9 - Water-St									_		/		
Field Obser	vations													
		× –			04	(:)								
Surface Wat		Yes 🛛		Depth:	24	_ (in.)			Wetland H	vdroloav	Present?	Υ		
Water Table	Present?	Yes 🛛		Depth:	0	(in.)				.,				
Saturation P	resent?	Yes 🛛		Depth:	0	_ (in.)								
Describe Rec	orded Data (s	stream dauge mon	nitoring we	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
	•		-			· · · ·			a watar tabla	waa at tha au	unfago Turo foo	t from the soil nit the water is two fact		
Remarks:	Wetland hydro	ology is present. The	e soil pit wa	s taken	at the edge of	of the standir	ng water; a	at that location, the	e water table	was at the su	urface. Two fee	t from the soil pit, the water is two feet		
Remarks:	Wetland hydro		e soil pit wa	s taken	at the edge of	of the standir	ng water; a	at that location, the	e water table	was at the su	urface. Two fee	t from the soil pit, the water is two feet		
Remarks: SOILS	Wetland hydro deep. There	blogy is present. The is a thick mat of alga	e soil pit was ae on the wa	s taken ater sur	at the edge of face, and true	of the standir e aquatic ma	ng water; a acrophytes	at that location, the S.		was at the su	urface. Two fee	t from the soil pit, the water is two feet		
Remarks: SOILS Profile Descr	Wetland hydro deep. There iption (Descri	blogy is present. The is a thick mat of alga be to the depth ne	e soil pit was ae on the wa	is taken ater sur docum	at the edge of face, and true ent the indi	of the standir aquatic ma cator or co	ng water; a acrophytes onfirm the	at that location, the s. e absence of in	dicators.)	was at the su	urface. Two fee	t from the soil pit, the water is two feet		
Remarks: SOILS Profile Descr	Wetland hydro deep. There iption (Descri	blogy is present. The is a thick mat of alga	e soil pit was ae on the wa	is taken ater sur docum	at the edge of face, and true ent the indi	of the standir aquatic ma cator or co	ng water; a acrophytes onfirm the	at that location, the s. e absence of in	dicators.)	was at the su	urface. Two fee	t from the soil pit, the water is two feet		
Remarks: SOILS Profile Descr	Wetland hydro deep. There iption (Descri	blogy is present. The is a thick mat of alga be to the depth ne etion, RM=Reduced M	e soil pit was ae on the wa	is taken ater sur docum	at the edge of face, and true ent the indi	of the standir aquatic ma cator or co	ng water; a acrophytes onfirm the tion: PL=Pe	at that location, the s. e absence of in ore Lining, M=Matri	dicators.)	was at the su	urface. Two fee	t from the soil pit, the water is two feet		
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Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-24	Wetland hydro deep. There iption (Descrintration, D=Depl Hue_10YR	blogy is present. The is a thick mat of alga be to the depth ne etion, RM=Reduced M Matrix Color (Moist) 2/1	e soil pit was ae on the wa eeded to o Aatrix, CS=C	s taken ater sur docum Covered/ % 100	at the edge of face, and true ent the indi Coated Sand Color (of the standir e aquatic ma cator or co Grains; Locat Moist)	ng water; a acrophytes onfirm the tion: PL=Pe Mottle	at that location, the s. e absence of in ore Lining, M=Matri es	dicators.) ^{x)}	Texture		Remarks		
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-24	Wetland hydro deep. There iption (Descri ntration, D=Depl	blogy is present. The is a thick mat of alga be to the depth ne etion, RM=Reduced M Matrix Color (Moist) 2/1	e soil pit was ae on the wa eeded to o Aatrix, CS=C	s taken ater sur docum Covered/ % 100	at the edge of face, and true ent the indi Coated Sand	of the standir e aquatic ma cator or co Grains; Locat Moist)	ng water; a acrophytes onfirm the tion: PL=Pe Mottle	at that location, the s. e absence of in ore Lining, M=Matri es Type	dicators.) ^{x)}	Texture MMI	the mineral comp	Remarks onent is coarse sand		
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Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-24 NRCS Hydr	Wetland hydro deep. There iption (Descrintration, D=Depl Hue_10YR	be to the depth ne etion, RM=Reduced M Matrix Color (Moist) 2/1 Indicators (ch ipedon	e soil pit was ae on the wa eeded to o Aatrix, CS=C	s taken ater sur docum Covered/ % 100 100 e if indi	at the edge of face, and true ent the indi Coated Sand Color (Color (Color sand cators are r S5 - Sandy R S6 - Stripped F1 - Loamy N	of the standir e aquatic ma cator or co Grains; Locat Moist) Moist) not present edox Matrix Jucky Minera	ng water; a acrophytes onfirm the tion: PL=Po Mottle %	at that location, the s. e absence of in ore Lining, M=Matri es Type	dicators.) x) Location	Texture MMI Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S	the mineral comp for Problematic luck (LRR I, J) Prairie Redox (urface (LRR G)	Remarks onent is coarse sand <u>c Soils¹</u> (LRR F, G, H)		
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-24 NRCS Hydr	Wetland hydro deep. There iption (Descrintration, D=Depl Hue_10YR Hue_10YR	be to the depth ne be to the depth ne etion, RM=Reduced M Matrix Color (Moist) 2/1 Indicators (ch ipedon stic n Sulfide	e soil pit was ae on the wa eeded to o Aatrix, CS=C	s taken ater sur docum Covered/ % 100 100 e if indi	at the edge of face, and true content the indi Coated Sand Color (Color (Color (S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy C	of the standir e aquatic ma cator or co Grains; Locat Moist) Moist) not present cedox Matrix Mucky Minera Gleyed Matrix	ng water; a acrophytes onfirm the tion: PL=Po Mottle %	at that location, the s. e absence of in ore Lining, M=Matri es Type	dicators.) x) Location	Texture MMI Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F	the mineral comp the mineral comp for Problematic luck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressio	Remarks onent is coarse sand		
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-24 NRCS Hydr	Wetland hydro deep. There iption (Descrintration, D=Depl Hue_10YR Hue_10YR	be to the depth ne etion, RM=Reduced M Matrix Color (Moist) 2/1 Indicators (ch ipedon stic n Sulfide Layers (LRR F)	e soil pit was ae on the wa eeded to o Aatrix, CS=C	s taken ater sur docum Covered/ % 100 100 e if indi	at the edge of face, and true face, and true coated Sand Color (Color (Color (S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy O F3 - Depleted	Andrix Andrewski Andrewski	ng water; a acrophytes onfirm the tion: PL=Po Mottle %	at that location, the s. e absence of in ore Lining, M=Matri es Type	dicators.) x) Location	Texture MMI Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduc	the mineral comp the mineral comp for Problematic luck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressio ced Vertic	Remarks onent is coarse sand <u>c Soils¹</u> (LRR F, G, H)		
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-24 NRCS Hydr	Wetland hydro deep. There iption (Descrintration, D=Deple Hue_10YR Hue_10YR A1- Histosol A1- Histosol A2 - Histic Ep A3 - Black Histosol A3 - Black Histosol A4 - Hydrogen A5 - Stratified A9 - 1 cm Mu	blogy is present. The is a thick mat of alga be to the depth ne etion, RM=Reduced M Matrix Color (Moist) 2/1 Indicators (ch ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH)	e soil pit was ae on the was eeded to of Matrix, CS=C	s taken ater sur docum Covered/ % 100 a b if indi	at the edge of face, and true content the indi Coated Sand Color (Color (Color (S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy O F3 - Depleted F6 - Redox D	Andrix Andressentia Andressenti	ng water; a acrophytes onfirm the tion: PL=Pe Mottle %	at that location, the s. e absence of in ore Lining, M=Matri es Type	dicators.) x) Location	Texture MMI Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduc TF2 - Red F	the mineral comp the mineral comp or Problematic luck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressio ced Vertic Parent Material	Remarks onent is coarse sand c Soils ¹ (LRR F, G, H) DNS (LRR H, outside MLRA 72, 73)		
Remarks: SOILS Profile Descr (Type: C=Concer Depth (In.) 0-24 NRCS Hydr	Wetland hydro deep. There iption (Descrintration, D=Depl Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black Hist A4 - Hydrogel A5 - Stratified A9 - 1 cm Mu A11 - Deplete	blogy is present. The is a thick mat of alga be to the depth ne etion, RM=Reduced M Matrix Color (Moist) 2/1 2/1 Indicators (ch ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surfac	e soil pit was ae on the was eeded to of Matrix, CS=C	e if indi	at the edge of face, and true coated Sand Coated Sand Color (Color (Color (S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy O F3 - Depleted F6 - Redox D F7 - Depleted	Andrew Surface d the standir aquatic ma cator or co Grains; Locat Moist) Moist) Moist) adv Adv Adv Matrix Dark Surface d Dark Surface	ng water; a acrophytes onfirm the tion: PL=Pe Mottle %	at that location, the s. e absence of in ore Lining, M=Matri es Type	dicators.) x) Location	Texture MMI Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	the mineral comp the mineral comp diversion of the mineral comp for Problematic luck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression ced Vertic Parent Material Shallow Dark S	Remarks onent is coarse sand c Soils ¹ (LRR F, G, H) DNS (LRR H, outside MLRA 72, 73)		
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WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	L3R				Sample Point: w-155n45w20-d1			
VEGETATIO	N (Species identified in all uppercase are	e non-native	species.)					
Tree Stratum	(Plot size: 30 ft. radius)							
	Species Name	<u>% Cover</u>	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet			
1.								
2.					Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)			
3.								
4.					Total Number of Dominant Species Across All Strata: 5 (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. 40 x 1 = 40			
	 Total Cover =	0			FACW spp. 45 x 2 = 90			
					FAC spp. 0 $x 3 = 0$			
Sapling/Shrub	Stratum (Plot size: 15 ft. radius)				FACW spp. 45 x $2 =$ 90 FAC spp. 0 x $3 =$ 0 FACU spp. 0 x $4 =$ 0			
1.	Salix amygdaloides	20	Y	FACW	UPL spp. 0 $x 5 = 0$			
2.	Populus balsamifera	5	Y	FACW				
3.		-			Total <mark>85</mark> (A) 130 (B)			
4.								
5.					Prevalence Index = B/A = 1.529			
6.								
7.								
8.					Hydrophytic Vegetation Indicators:			
9.					X Rapid Test for Hydrophytic Vegetation			
10.					X Dominance Test is > 50%			
10.	 Total Cover =	25			$\frac{1}{X} \qquad \text{Dominance rest is > 50\%}$			
		25						
					Morphological Adaptations (Explain) *			
	Plot size: 5 ft. radius)		V		Problem Hydrophytic Vegetation (Explain) *			
1.	Carex lacustris	20	Y	OBL				
2.	Phalaris arundinacea	20	<u> </u>	FACW	* Indicators of hydric soil and wetland hydrology must be			
3.	Utricularia macrorhiza	20	Y	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.								
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.								
15.					Woody Vines - All woody vines, regardless of height.			
	Total Cover =	60						
			_					
Woody Vine St	ratum (Plot size: 30 ft. radius)							
1.								
2.								
3.					Hydrophytic Vegetation Present? Y			
5.	-							
4.								
	Total Cover =	0						
Remarks:			de the san	npling rad	ius there is some Typha latifolia. Hydrophytic vegetation is present.			
		.95. 54.01						
								
Additional Remarks:								