WETLAND DETERMINATION DATA FORM Great Plains Region

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Project/Site:		L3R									Date:	07/31/14	
Applicant:		Enbridge NTT/KRG			c	Lubragiar	n/MIDA orl	DD\.	MIDAEG		County:	Marshall MN	
Investigators Soil Unit:	I23A	NT I/KKG				ubregioi	n (MLRA or l	_KK). Issification	MLRA 56		State:	IVIIN	
Landform:	Depression				Loca	al Relief:		issiiicaliori	-		Sample Point:	w-157n47w22-a1	
Slope (%):	3 - 7%		Latitude: 48	409093			-96.714672		Datum:			W-13/114/W22 a1	
		onditions on the site								□ No	Section:		
Are Vegetation		l □, or Hydrology				- (π πο, σπρ	Ī	mal circur	nstances pre		Township:		
Are Vegetation		l □, or Hydrology	•	•			7 (10 110)	✓ Yes		330111:	Range:	Dir:	
SUMMARY C			-latarany	problema	10.			_ 100	- 110		rango.	5	
Hydrophytic \			Yes	es.					Hydric Soil	ls Present?	Yes		
Wetland Hyd	•		Ye								nt Within A We	etland? Yes	
Remarks:		d is a fresh wet me			a roads	ide ditch	and domina	ted by Pos					
rtomarto.	THE Welland	a lo a moon wot me	sadow local	od Widilli	a roado	ido ditori	and domina	tod by 1 oc	a paraotrio Wi	iar a milgo	or i riaidilo di	arianiaeca.	
HYDROLOG	V												
						•							
		icators (Check all	I that apply;	Minimum	of one	primary of	or two secon	idary requi	red):	0			
<u>Primary:</u> ☑	<u>:</u>	Mator				11 - Salt (Cruct			Secondary:	<u>:</u> B6 - Surface S	oil Cracks	
	A1 - Sunace A2 - High Wa					13 - Aqua						/egetated Concave Surface	
	A3 - Saturation					•	gen Sulfide Od	lor			B10 - Drainage		
	B1 - Water M	arks					eason Water T				•	Rhizospheres on Living Roots (t	tilled)
	B2 - Sedimer	•					ed Rhizospher		Roots (not till	€ □	C8 - Crayfish E		
	B3 - Drift Dep						nce of Reduce	d Iron				Visible on Aerial Imagery	
	B4 - Algal Ma B5 - Iron Dep						Nuck Surface			⊻	D2 - Geomorpl D5 - FAC-Neut		
		on Visible on Aerial Im	nagery		Ц	ther (Expl	iaii)					ved Hummocks (LRR F)	
		tained Leaves	agery							_	<i>B1</i> 1103(1100	ved Hammooks (ERRY)	
Field Observ	vations:												
Surface Water		Yes ☑	De	epth:	3	(in.)							
Water Table		Yes		epth:		(in.)			Wetland H	lydrology	Present?	Υ	
Saturation P		Yes ☑		epth: ()	(in.)							
Cataration	i Cociii :	103	DC	γριτι		\''' <i>'</i>							
													
	<u>`</u>	stream gauge, moni											
Describe Rec	<u>`</u>	stream gauge, moni aturated at the surf											
Remarks:	<u>`</u>												
Remarks:	Soils are sa	aturated at the surf	face with are	eas of sta	nding w	ater thro	oughout the w	vetland.	odiootoro)				
Remarks: SOILS Profile Descri	Soils are sa	aturated at the surf	face with are	eas of sta	nding w	ater thro	oughout the vo	vetland. sence of ir					
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Remarks: SOILS Profile Descri	Soils are sa	ibe to the depth ne	face with are	eas of sta	nding w	ater thro	oughout the vonfirm the ab	vetland. sence of ir					
Remarks: SOILS Profile Descri (Type: C=Concer	Soils are sa	ibe to the depth ne etion, RM=Reduced Matrix	eeded to do	eas of sta	nding w e indica Sand Gr	ater thro	onfirm the ab	vetland. sence of in	rix)	Teyture		Remarks	
Remarks: SOILS Profile Descri	Soils are sa	ibe to the depth ne	eeded to do	eas of sta	nding w	ater thro	oughout the vonfirm the ab	vetland. sence of ir		Texture		Remarks	
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Remarks: SOILS Profile Descri (Type: C=Concer	Soils are sa	ibe to the depth ne etion, RM=Reduced Matrix Color (Moist)	eeded to do	eas of sta	e indica	ater thro	oughout the vonfirm the abotion: PL=Pore Li	vetland. sence of in	rix)	Texture		Remarks	
Remarks: SOILS Profile Descri (Type: C=Concer	Soils are sa	ibe to the depth ne etion, RM=Reduced Matrix Color (Moist)	eeded to do	eas of sta	e indica	ater thro	oughout the vonfirm the abotion: PL=Pore Li	vetland. sence of in	rix)		for Problematic		
Remarks: SOILS Profile Descri (Type: C=Concer	Soils are sa iption (Description, D=Depl	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (ch	eeded to do	eas of sta	e indicate Sand Grand Gr	ater thro ator or co ains; Locat oist) t present	oughout the vonfirm the abotion: PL=Pore Li	vetland. sence of in	Location	Indicators 1 A9 - 1 cm M	luck (LRR I, J)	: Soils ¹	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Soils are sa iption (Description, D=Depl ric Soil Field A1- Histosol A2 - Histic Ep	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chapipedon	eeded to do	eas of sta	e indicated and Grand Gr	ater thro ator or coains; Locat oist) t present	montion: PL=Pore Li Mottles % t):	vetland. sence of in	Location	Indicators 1 A9 - 1 cm M A16 - Coast	luck (LRR I, J) : Prairie Redox (: Soils ¹	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Soils are sa iption (Description, D=Depl ric Soil Field A1- Histosol A2 - Histic Ep A3 - Black History	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chappedonestic	eeded to do	eas of sta cument the rered/Coated	e indicate Sand Grand Grand Recards Recards Recards Recards Recards Multiple Multipl	ater thro ator or co ains; Locat oist) t present dox latrix cky Minera	montion: PL=Pore Li Mottles % ti):	vetland. sence of in	Location	Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S	luck (LRR I, J) : Prairie Redox (urface (LRR G)	: Soils¹ LRR F, G, H)	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	iption (Description, Depoint attains, De	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chapted on Stice in Sulfide	eeded to do	eas of sta cument the ered/Coated cument the ered/Coated so C	e indicated and Grand Gr	ater thro ator or coains; Locat oist) t present lox latrix cky Minera yed Matrix	montion: PL=Pore Li Mottles % ti):	vetland. sence of in	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F	luck (LRR I, J) : Prairie Redox (urface (LRR G) Plains Depressio	: Soils ¹	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	iption (Description, Depoint attion, Depoint a	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chapted on Sulfide I Layers (LRR F)	eeded to do	cument the red/Coated indicators S5 - S6 -	e indicated and Grand Gr	ater thro ator or coains; Locat oist) t present dox latrix cky Minera yed Matrix Matrix	monfirm the about the work on firm the about the work on the second seco	vetland. sence of in	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc	fluck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressioned Vertic	: Soils¹ LRR F, G, H)	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	iption (Description, D=Deplementation, D=Depleme	ibe to the depth negletion, RM=Reduced Matrix Color (Moist) Indicators (chappedon stic in Sulfide is Layers (LRR F) ick (LRR FGH)	eeded to dogatrix, CS=Cove	indicators S5 - S6 S6 - S1 F1 - L0 F2 - L0 F3 - D6 F6 - R6	e indicated and Grandy Record and Record and Muchamy Muchamy Gleen and Grandy Record and	ater thro ator or coains; Locat oist) t present dox latrix cky Minera yed Matrix Matrix k Surface	montion: PL=Pore Li Mottles % t):	vetland. sence of in	Location	Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F	fluck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Ced Vertic Parent Material	ESoils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	iption (Description, D=Deplementation, D=Depleme	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chapted on Stice on Sulfide on Sulfide on Sulfide on Stice on Sulfide o	eeded to dogatrix, CS=Cove	eas of sta cument the ered/Coated % C indicators S5 - Sa S6 - Si F1 - La F2 - La F3 - Da F6 - Ra F7 - Da	e indicated and Grand Gr	ater thro ator or coains; Locat oist) t present dox latrix cky Minera yed Matrix Matrix	montion: PL=Pore Li Mottles % t):	vetland. sence of in	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	fluck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressioned Vertic	ESoils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) NRCS Hydr	iption (Description, D=Deplementation, D=Depleme	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chapted on Stice on Sulfide of Layers (LRR F) ock (LRR FGH) ock (LRR FGH) och Below Dark Surface oucky Mineral	eeded to dogatrix, CS=Covernment of the covernment of the covernme	indicators S5 - S6 S6 - S1 F1 - L0 F2 - L0 F3 - D0 F6 - R0 F7 - D0	e indicated and Grand Gr	ater thro ator or co ains; Locat oist) t present dox latrix cky Minera yed Matrix latrix k Surface oressions	montion: PL=Pore Li Mottles % t):	sence of ir	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	fluck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Ced Vertic Parent Material Shallow Dark S	ESoils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Soils are sa iption (Description, D=Depl intration, D=Depl 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	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chapted on Stice on Sulfide on Sulfide on Sulfide on Stice on Sulfide o	eeded to doo latrix, CS=Cove	indicators S5 - S6 S6 - S1 F1 - L0 F2 - L0 F3 - D0 F6 - R0 F7 - D0	e indicated and Grand Gr	ater thro ator or co ains; Locat oist) t present dox latrix cky Minera yed Matrix latrix k Surface oressions	montion: PL=Pore Li Mottles % ti):	sence of ir	Location	Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Explain	fluck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Ced Vertic Parent Material Shallow Dark S ain in Remarks)	E Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) urface	
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Soils are said iption (Description, Dependent of the property	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (characters) Sipedon Stic (Characters) All Layers (LRR F) Color (LRR FGH) Color (LRR	eeded to doo latrix, CS=Cove	indicators S5 - S6 S6 - S1 F1 - L0 F2 - L0 F3 - D0 F6 - R0 F7 - D0	e indicated and Grand Gr	ater thro ator or co ains; Locat oist) t present dox latrix cky Minera yed Matrix latrix k Surface oressions	montion: PL=Pore Li Mottles % ti):	sence of ir	Location	Indicators of Page 14 Agriculture Agricult	Muck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Ced Vertic Parent Material Shallow Dark S Ain in Remarks)	E Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) urface	esent,
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Soils are said iption (Description (Description), D=Deptember of the second sec	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (characters) Indicators	eeded to doo latrix, CS=Cove	indicators S5 - Si S6 - Si F1 - Lo F2 - Lo F6 - Ri F7 - Do	e indicated and Grand Gr	ater thro ator or co ains; Locat oist) t present dox latrix cky Minera yed Matrix latrix k Surface oressions	monfirm the abotion: PL=Pore Li Mottles % t): al x ace ssions (MLRA 7	sence of ir ining, M=Mati	Location	Indicators of A9 - 1 cm MA16 - Coast S7 - Dark SF16 - High FF18 - Reduct TF2 - Red FTF12 - Very Other (Explain Indicators of Funless disturbed)	Muck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Ced Vertic Parent Material Shallow Dark S Ain in Remarks)	E Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) urface	esent,
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Soils are said iption (Description (Description), D=Deptember of the said of t	ibe to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (characters) Indicators	eeded to doo latrix, CS=Cove	cument the red/Coated showing the red/Coated	e indicated and Grand Gr	ater thro ator or co ains; Locat oist) t present dox latrix cky Minera yed Matrix Matrix k Surface park Surface pressions as Depress	monfirm the abotion: PL=Pore Li Mottles % t): al x sice ssions (MLRA 7	sence of ining, M=Mate	Location	Indicators of A9 - 1 cm MA16 - Coast S7 - Dark SF16 - High FF18 - Reduct TF2 - Red FTF12 - Very Other (Explain Indicators of Funless disturbed Y	fluck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Parent Material Shallow Dark S ain in Remarks) hydrophytic vegetat ed or problematic.	E Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) urface	

WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	L3R				Sample Point: w-157n47w22-a1
VEGETATIO	(Species identified in all uppercase are	e non-native	species.)		
Tree Stratum (Plot size: 30 ft. radius)				
	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:(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.					Total % Cover of: Multiply by: OBL spp. 10 X 1 = 10 FACW spp. 90 X 2 = 180 FAC spp. 0 X 3 = 0 FACU spp. 0 X 4 = 0 UPL spp. 0 X 5 = 0
	Total Cover =	0			FACW spp90
					FAC spp. $\underline{\qquad}$ $X 3 = \underline{\qquad}$
Sapling/Shrub S	Stratum (Plot size: 15 ft. radius)				FACU spp 0
1.					UPL spp. $\underline{\qquad}$ $x = \underline{\qquad}$
2.					
3.					Total 100 (A) 190 (B)
4.					
5.					Prevalence Index = B/A = 1.900
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Rapid Test for Hydrophytic Vegetation
10.					X Dominance Test is > 50%
	Total Cover =	0			X Prevalence Index is ≤ 3.0 *
			_		Morphological Adaptations (Explain) *
Herb Stratum (Plot size: 5 ft. radius)				Problem Hydrophytic Vegetation (Explain) *
1.	Poa palustris	60	Υ	FACW	
2.	Phalaris arundinacea	20	Υ	FACW	* Indicators of hydric soil and wetland hydrology must be
3.	Juncus torreyi	10	 N	FACW	present, unless disturbed or problematic.
4.	Typha angustifolia	5	N	OBL	Definitions of Vegetation Strata:
5.	Beckmannia syzigachne	5	N	OBL	
6	Decimalina dy Ligacinie				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.					Capining/Official
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size.
13.					FIGID - via monacous (mon mose)// Pramis, regimences of ones.
14.				-	
15.					Woody Vines - All woody vines, regardless of height.
15.	Total Caver	400			Woody Villes - All Woody Villes, Togardioss of Height.
	Total Cover =	100	_		
11/2 1 1/2 0	- (D)				
Woody Vine St	ratum (Plot size: 30 ft. radius)				
1.					
2.				_	II. Local da Variatada Barra 10 V
3.					Hydrophytic Vegetation Present?Y
5.					
4.	7.110				
	Total Cover =		141 6.1	(5)	
Remarks:	The wetland vegetation is dominated by Poa	palustris v	vith a fring	e of Phala	aris arundinacea surrounding it.
Additional R	lemarks:				
Ī					