WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R									Date:	06/30/14
Applicant: Investigators	Enbridge EAB/RAJ			Subregion (MLRA or LRF				or LPP)	MLRA 56		County: State:	Kittson MN
Soil Unit:					NWI Classification:							TVII V
Landform:	Depression	Local Relief: CL							Sample Point	w-159n49w23-b1		
Slope (%):	0 - 2%		Latitude:			Longitude:			Datum:			
		nditions on the site				ar? (If no, exp		arks) e normal circum	□Yes	☑ No	Section:	
Are Vegetati Are Vegetati		☐ or Hydrology☐ or Hydrology			disturbed? olematic?		Are	normal circum	Istances pre □No	esent?	Township: Range:	Dir:
SUMMARY C			Littural	ny prot	nemauc:			1 103			Range.	DII.
Hydrophytic '				Yes					Hydric Soil	ls Present?	Yes	
Wetland Hyd			Yes				Is This Sampling Point Within A Wetland? Yes			/etland? Yes		
Remarks:	The wetland	d is a small, excava							survey corri	idor in a fer	nced-in utility	station. Vegetation is sparse e rainfall in recent weeks.
HYDROLOG		on or the dred. The	o wodan	a noo je	act north an	a woot or t	a large a	anty otation. Th	o aroa nao	rocorvou ac	ovo avolage	Tamai ii Toodii Wooke.
		icators (Chook all	that ann	alve Mir	nimum of on	o primary	or two co	ocondory roqui	rod):			
Primary		icators (Check all	that app	Jiy, IVIII	iiiiiuiii oi oii	e primary	OI IWO S	econdary requi	eu).	Secondary:		
A1 - Surface Water												Soil Cracks
A2 - High Water Table			☐ B13 - Aquatic Fauna							B8 - Sparsely B10 - Drainag	Vegetated Concave Surface	
□ □	A3 - Saturation B1 - Water M				☐ C2 - Dry Season Water Table ☐ C3 - Oxidized Rhizospheres on Living Roots (not tills ☐							Rhizospheres on Living Roots (tilled)
	B2 - Sedimen	t Deposits										Burrows
	B3 - Drift Dep					C4 - Prese					C9 - Saturatio D2 - Geomorp	n Visible on Aerial Imagery
	B4 - Algal Ma B5 - Iron Dep					C7 - Thin N Other (Exp		ace			D5 - Geomorp	
	B7 - Inundatio	n Visible on Aerial Im	nagery		_		,					aved Hummocks (LRR F)
	B9 - Water-Si	ained Leaves										
Field Obser												
Field Obser	er Present?	V		D4b.	6	(in)						
Water Table		Yes ☑ Yes ☑		Depth:	6 0	(in.) (in.)			Wetland H	lydrology l	Present?	Υ
Saturation P		Yes 🖸		Depth:	0	(in.)						_
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
	ordod Data (c	troam gaugo moni	itorina wa	all aori	al photos pr	wioue incr	octions)	if available:				
						evious insp	ections),	if available:				
Remarks:		stream gauge, moni er is present throu				evious insp	ections),	if available:				
						evious insp	ections),	if available:				
Remarks: SOILS Profile Descri	Surface wat	ter is present throu	ughout th	docum	and.	cator or co	onfirm th	e absence of in				
Remarks: SOILS Profile Descri	Surface wat	ter is present throu	ughout th	docum	and.	cator or co	onfirm th	e absence of in				
Remarks: SOILS Profile Descri	Surface wat	be to the depth ne	ughout th	docum	and.	cator or co	onfirm the	e absence of in ore Lining, M=Matr				
Remarks: SOILS Profile Descri	Surface wat	be to the depth ne etion, RM=Reduced Ma	ughout th	docum	and. nent the indi Coated Sand (cator or co Grains; Loca	onfirm the	e absence of in ore Lining, M=Matr es	ix)	Texture		Remarks
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Surface wat	be to the depth ne etion, RM=Reduced M: Matrix Color (Moist)	eded to atrix, CS=(docum Covered	and. nent the indi Coated Sand (cator or co Grains; Loca Moist)	onfirm thition: PL=Pc Mottle %	e absence of in ore Lining, M=Matr es	ix)	Texture		Remarks
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	iption (Descrintration, D=Depl	be to the depth ne etion, RM=Reduced Mi Matrix Color (Moist) Indicators (ch	eded to atrix, CS=(docum Covered	ent the indi Coated Sand (Color (I	cator or co Grains; Local Moist)	onfirm thition: PL=Pc Mottle %	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M	luck (LRR I, J)	ic Soils ¹
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	Surface wat	be to the depth neetion, RM=Reduced Mi Matrix Color (Moist) Indicators (chippedon	eded to atrix, CS=(docum Covered % e if indi	ent the indi Coated Sand (Color (I	cator or co Grains; Locar Moist) Moist) not presen	Mottle %	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F		ic Soils ¹ LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	iption (Descrintration, D=Depl	be to the depth ne etion, RM=Reduced Matrix Color (Moist) Indicators (chipedon stic in Sulfide	eded to atrix, CS=(docum Covered % e if indi	color (I	cator or co Grains; Locar Moist) Moist) oot presen edox Matrix lucky Miner;	onfirm thion: PL=Pi Mottle % ti):	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F S7 - Dark St F16 - High F	luck (LRR I, J) Prairie Redox (I urface (LRR G) Plains Depressi	ic Soils ¹ LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	ric Soil Field A1- Histosol A2 - Histic History A3 - Black His A4 - Hydroge A5 - Stratified	be to the depth ne etion, RM=Reduced Mi Matrix Color (Moist) Indicators (ch ipedon stic n Sulfide Layers (LRR F)	eded to atrix, CS=(docum Covered. % e if indi	color (I	Moist) ot presen edox Matrix leyed Matri: Matrix Matrix	onfirm the	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F S7 - Dark Si F16 - High F F18 - Reduc	luck (LRR I, J) Prairie Redox (I urface (LRR G) Plains Depressi ced Vertic	i <u>c Soils¹</u> LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	ric Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	be to the depth ne etion, RM=Reduced Matrix Color (Moist) Indicators (chipedon stic in Sulfide	eeded to atrix, CS=0	docum Covered. % e if indi	color (I	cator or co Grains; Locar Moist) Moist) oot presen edox Matrix lucky Minera leyed Matrix Matrix Matrix	Mottle %	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F S7 - Dark Sr F16 - High F F18 - Reduc TF2 - Red P	luck (LRR I, J) Prairie Redox (I urface (LRR G) Plains Depressi	IC Soils ¹ LRR F, G, H) ONS (LRR H, outisde MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	surface waiting intration, D=Deplication, D=Deplica	be to the depth ne etion, RM=Reduced Ma Matrix Color (Moist) Indicators (ch ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface	eeded to atrix, CS=0	docum Covered % e if indi	color (I Color	Moist) Moist) Mot presented with the presented wi	Mottle % Mottle tion: PL=Pe Mottle % tt):	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F S7 - Dark Si F16 - High F F18 - Reduc TF2 - Red P TF12 - Very	luck (LRR I, J) Prairie Redox (I urface (LRR G) Plains Depressi ced Vertic Parent Material	IC Soils ¹ LRR F, G, H) ONS (LRR H, outisde MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	ric Soil Field A1- Histosol A2 - Histic Epi A3 - Black His A4 - Hydrogei A5 - Stratified A9 - 1 cm Plut A11 - Deplete A12 - Thick D S1 - Sandy M	be to the depth neetion, RM=Reduced Minetal Matrix Color (Moist) Indicators (chairpedon Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral	eeded to atrix, CS=0	docum Covered. % e if indi	color (I Color	Moist) Moist) Mot presented with the presented wi	Mottle % Mottle tion: PL=Pe Mottle % tt):	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F S7 - Dark Si F16 - High F F18 - Reduc TF2 - Red P TF12 - Very	luck (LRR I, J) Prairie Redox (I urface (LRR G) Plains Depressi ced Vertic Parent Material Shallow Dark (1	IC Soils ¹ LRR F, G, H) ONS (LRR H, outisde MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	surface waiting intration, D=Deplintration, D=Deplintrati	be to the depth ne etion, RM=Reduced Ma Matrix Color (Moist) Indicators (ch ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface	eeded to atrix, CS=C	docum Covered. % e if indi	color (I Color	Moist) Moist) Mot presented with the presented wi	Mottle % Mottle tion: PL=Pe Mottle % tt):	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F S7 - Dark Sg F16 - High F F18 - Reduc TF2 - Red P TF12 - Very Other (Expla	luck (LRR I, J) Prairie Redox (I urface (LRR G) Plains Depressi ced Vertic Parent Material Shallow Dark S ain in Remarks	ic Soils ¹ LRR F, G, H) ONS (LRR H, outlide MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	surface waiting intration, D=Deplintration, D=Deplintrati	be to the depth ne etion, RM=Reduced Mineral Lucky Peat or Peat (Lcky	eeded to atrix, CS=C	docum Covered. % e if indi	color (I Color	Moist) Moist) Mot presented with the presented wi	Mottle % Mottle tion: PL=Pe Mottle % tt):	e absence of in ore Lining, M=Matr es Type	Location	Indicators f A9 - 1 cm M A16 - Cost F S7 - Dark Sr F16 - High F F18 - Reduc TF2 - Red P TF12 - Very Other (Expla	luck (LRR I, J) Prairie Redox (I urface (LRR G) Plains Depressi ced Vertic Parent Material Shallow Dark S ain in Remarks	IC Soils ¹ LRR F, G, H) ONS (LRR H, outisde MLRA 72, 73) Surface
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WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	L3R				Sample Point: w-159n49w23-b1
VEGETATIO	N (Species identified in all uppercase are	e non-native	species.)		
	(Plot size: 30 ft. radius)				
	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
					(A)
3.					
4.					Total Number of Dominant Species Across All Strata: 3 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					
10.					OBL spp. 15 x 1 = 15
	Total Cover =	0	_		FACW spp. 35 x 2 = 70
					FAC spp. 0 x 3 = 0
Sapling/Shrub	Stratum (Plot size: 15 ft. radius)				FACU spp. $10 x 4 = 40$
1.					UPL spp. 0 x 5 = 0
2.					··
3.					Total 60 (A) 125 (B)
					Total 60 (A) 125 (B)
4.					5
5.					Prevalence Index = B/A = 2.083
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Rapid Test for Hydrophytic Vegetation
10.					X Dominance Test is > 50%
10.	Total Cayer -	0			
	Total Cover =	0	_		X Prevalence Index is ≤ 3.0 *
					Morphological Adaptations (Explain) *
Herb Stratum (Plot size: 5 ft. radius)				Problem Hydrophytic Vegetation (Explain) *
1.	Schoenoplectus maritimus	15	Υ	OBL	
2.	Echinochloa muricata	15	Υ	FACW	* Indicators of hydric soil and wetland hydrology must be
3.	Spartina pectinata	15	Υ	FACW	present, unless disturbed or problematic.
4.	Elymus repens	5	N	FACU	Definitions of Vegetation Strata:
5.	Ambrosia artemisiifolia	5	N	FACU	Definitions of Vegetation offata.
6	Symphyotrichum lanceolatum	5	N	FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
7.					neignt (DBH), regardless of neight.
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.
					TIGID
13.					
14.					
15.					Woody Vines - All woody vines, regardless of height.
	Total Cover =	60			
			_		
Woody Vine St	ratum (Plot size: 30 ft. radius)				
1.	indiani (i lot sizo. oo it. iadida)				
2.					
3.					Hydrophytic Vegetation Present?Y
5.					
4.				_	
	Total Cover =	0			
Remarks:	The wetland is dominated by alkali bulrush, b		race and	nrairie cor	rdarass
remarks.	The welland is dominated by airan bullusti, t	Jannyana y	iuss, and	prairie Wi	agrado.
Additional F	Remarks:				
İ					