WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R									Date:	07/30/14
Applicant:		Enbridge									County:	Marshall
Investigators) :	KRG/NTT				Subregion	•	or LRR):	MLRA 56		State:	MN
Soil Unit:	123A						NWI	Classification:				
Landform:	Talf					al Relief: (Sample Point:	u-157n47w16-b1
Slope (%):	0 - 2%		Latitude: 48			Longitude: -			Datum:			
		nditions on the site				? (If no, expla				□ No	Section:	
Are Vegetation		□, or Hydrology	•	•			Are	normal circum	-	esent?	Township:	
Are Vegetation		, ,	□aturally	problem	natic?			Yes	□ No		Range:	Dir:
SUMMARY C												
Hydrophytic '	_		No							s Present?		eller 10 No
Wetland Hyd			No				D:				t Within A We	
Remarks:	i ne upiana	point is located in	an open m	eadow	between t	ne ramar	ac Rive	er and an agricu	liturai field.	vegetation	is dominated	by big bluestem and wild rye.
HVDDOL GO	V											
HYDROLOG												
_	• • •	icators (Check all	that apply;	Minimu	ım of one	primary o	r two se	econdary requir	ed):			
<u>Primary</u>										Secondary:	50 0 1 0	
	A1 - Surface \					811 - Salt C					B6 - Surface S	
	A2 - High Wa A3 - Saturatio					313 - Aquati 31 - Hydrog		e Odor			B10 - Drainage	Vegetated Concave Surface
	B1 - Water Ma					22 - Dry Sea						Rhizospheres on Living Roots (tilled)
	B2 - Sedimen	•				3 - Oxidize	d Rhizos	pheres on Living	Roots (not tille	• 🗆	C8 - Crayfish E	Burrows
	B3 - Drift Dep					24 - Presend						Note:
	B4 - Algal Ma B5 - Iron Dep					7 - Thin Mu		ice			D2 - Geomorpl D5 - FAC-Neut	
	•	อรแร on Visible on Aerial Im	nagery			Other (Expla	aii i <i>)</i>					ived Hummocks (LRR F)
	B9 - Water-St									_		(,
Field Observ	vations:											
Surface Wat	er Present?	Yes □	De	epth:		(in.)			Watland U]raaan42	NI
Water Table	Present?	Yes □	De	pth:		(in.)			wetiand n	lydrology l	resent?	N
Saturation P	resent?	Yes □	De	pth:		(in.)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
Describe Rec	orded Data (s	stream gauge monit	itoring well	aerial pł	notos prev		ections)	l if available:				
	•						ections),	if available:				
Describe Rec Remarks:	•	stream gauge, monitors of wetland hydro					ections),	if available:				
Remarks:	•						ections),	if available:				
Remarks:	No indicator		ology were	observe	ed.	rious inspe	·		dicators.)			
Remarks: SOILS Profile Descri	No indicator	rs of wetland hydro	ology were	observe cument	ed.	rious inspe	nfirm the	e absence of in				
Remarks: SOILS Profile Descri	No indicator	be to the depth ne	ology were	observe cument	ed.	rious inspe	nfirm the	e absence of incore Lining, M=Matri				
Remarks: SOILS Profile Descri (Type: C=Concer	No indicator	be to the depth ne etion, RM=Reduced Ma	eeded to do	cument ered/Coa	the indicated Sand Gr	ator or cor	nfirm the	e absence of in ore Lining, M=Matri	x)			
Remarks: SOILS Profile Descri (Type: C=Concer	No indicator	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist)	eeded to do atrix, CS=Cov	cument ered/Coa	ed.	ator or cor	nfirm the	e absence of incore Lining, M=Matri		Texture		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer	No indicator	be to the depth ne etion, RM=Reduced Ma Matrix Color (Moist)	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or cor	nfirm the	e absence of in ore Lining, M=Matri	x)	FSL		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer	No indicator	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist)	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or cor	nfirm the	e absence of in ore Lining, M=Matri	x)			Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5	No indicator iption (Descri	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist)	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or cor	nfirm the	e absence of in ore Lining, M=Matri	x)	FSL		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5	No indicator iption (Descri	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist)	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or cor	nfirm the	e absence of in ore Lining, M=Matri	x)	FSL		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5	No indicator iption (Descri	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist)	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or cor	nfirm the	e absence of in ore Lining, M=Matri	x)	FSL		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5	No indicator iption (Descri	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist)	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or cor	nfirm the	e absence of in ore Lining, M=Matri	x)	FSL		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18	No indicator iption (Descri	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist) 2/1 2/1	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or corains; Locatio	Mottle	e absence of in ore Lining, M=Matri	x)	FSL		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18	No indicator iption (Descri	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist) 2/1 2/1	eeded to do atrix, CS=Cov	cument ered/Coa	the indicated Sand Gr	ator or corains; Locatio	Mottle	e absence of incore Lining, M=Matri	x)	FSL CL	or Problematic	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18	No indicator iption (Descriptration, D=Deplementation, D=Deplementation) Hue_10YR Hue_10YR Hue_10YR A1- Histosol	be to the depth ne etion, RM=Reduced Ma Matrix Color (Moist) 2/1 2/1 Indicators (ch	eeded to do atrix, CS=Cov	cument ered/Coa 00 00 indicate	the indicated Sand Green Color (Management) Color (Management) ors are not sandy Records	oist) t present)	Mottle	e absence of incore Lining, M=Matri	Location	FSL CL Indicators f A9 - 1 cm M	uck (LRR I, J)	: Soils ¹
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	No indicator iption (Descriptration, D=Deplete Intration, D=Deplete Intra	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist) 2/1 2/1 Indicators (ch	eeded to do atrix, CS=Cov	cument ered/Coa 00 00 indicate	the indicated Sand Gr Color (M Ors are no	rious insperious inspe	Mottle	e absence of incore Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast	uck (LRR I, J) Prairie Redox (: Soils ¹
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His	be to the depth neetion, RM=Reduced Marix Color (Moist) 2/1 2/1 Indicators (chaine)	eeded to do atrix, CS=Cov	cument ered/Coa 00 00 indicate	the indicated Sand Green Color (Management of Sandy Records of Stripped Management of Sandy Management of Sandy Records of Stripped Management of Sandy Management of	oist) t present) dox latrix cky Mineral	Mottle	e absence of incore Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St	uck (LRR I, J) Prairie Redox (urface (LRR G)	: Soils ¹ LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydrogei	be to the depth neetion, RM=Reduced Marix Color (Moist) 2/1 2/1 Indicators (chair)	eeded to do atrix, CS=Cov	cument ered/Coar	the indicated Sand Green Color (Management of Sandy Records Stripped Management of Sandy Gleen Coamy Multiple Coamy Gleen Coam	cious inspendent or corains; Location oist) t present) dox latrix cky Mineral eyed Matrix	Mottle	e absence of incore Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F	uck (LRR I, J) Prairie Redox (urface (LRR G) Pains Depressio	: Soils ¹
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified	be to the depth neetion, RM=Reduced Ma Matrix Color (Moist) 2/1 2/1 Indicators (chair) ipedonestic in Sulfide Layers (LRR F)	eeded to do atrix, CS=Cov	cument ered/Coar	the indicated Sand Green Color (Management of Sandy Records Stripped Management of Sandy Gleen Sandy G	cious inspendent or cordins; Location oist) dox latrix cky Mineral eyed Matrix Matrix	Mottle	e absence of incore Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduce	uck (LRR I, J) Prairie Redox (urface (LRR G) Pains Depressio	: Soils ¹ LRR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mu A11 - Deplete	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 2/1 ipedon stic in Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface	eeded to do atrix, CS=Cov	cument ered/Coa	Color (M Color	dox datrix cky Mineral eyed Matrix ck Surface Dark Surface	Mottle	e absence of incore Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduct TF2 - Red P TF12 - Very	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressic ed Vertic arent Material Shallow Dark S	Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 Indicators (chaine) ipedon stic in Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface	eeded to do atrix, CS=Cov	cument ered/Coa	color (M Color	cious inspending in the control of t	Mottle	e absence of incre Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduct TF2 - Red P TF12 - Very	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressic ed Vertic arent Material	Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mur A11 - Deplete A12 - Thick D S1 - Sandy M	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 2/1 Indicators (chair) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral	eeded to do atrix, CS=Cov	cument ered/Coa	color (M Color	cious inspending in the control of t	Mottle	e absence of incore Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduct TF2 - Red P TF12 - Very	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depressic ed Vertic arent Material Shallow Dark S	Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 2/1 ipedon stic in Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral flucky Peat or Peat (LI	eeded to do atrix, CS=Cov	cument ered/Coa	color (M Color	cious inspending in the control of t	Mottle	e absence of incre Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduc TF2 - Red P TF12 - Very Other (Expla	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression ed Vertic arent Material Shallow Dark S in in Remarks)	ESoils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) Gurface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 2/1 Indicators (chaise) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral flucky Peat or Peat (LRF) cky Peat or Peat (LRF)	eeded to do atrix, CS=Cov	cument ered/Coa	color (M Color	cious inspending in the control of t	Mottle	e absence of incre Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduct TF2 - Red P TF12 - Very Other (Explain	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression ed Vertic arent Material Shallow Dark S in in Remarks)	Soils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 2/1 Indicators (chaise) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral flucky Peat or Peat (LRF) cky Peat or Peat (LRF)	eeded to do atrix, CS=Cov	cument ered/Coa	color (M Color	cious inspending in the control of t	Mottle	e absence of incre Lining, M=Matri	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduct TF2 - Red P TF12 - Very Other (Explain	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression ed Vertic arent Material Shallow Dark S uin in Remarks)	ESoils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) Gurface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mur A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mur S4 - Sandy G	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 2/1 Indicators (chaise) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral flucky Peat or Peat (LRF) cky Peat or Peat (LRF)	eeded to do atrix, CS=Cov	cument ered/Coa	color (Marca Sand Grand	cious inspending in the control of t	Mottle	e absence of incre Lining, M=Matrices Type	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduct TF2 - Red P TF12 - Very Other (Explain	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression ed Vertic arent Material Shallow Dark S uin in Remarks)	ESoils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) Gurface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) 0-5 5-18	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mur A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mur S4 - Sandy G	be to the depth neetion, RM=Reduced Marix Matrix Color (Moist) 2/1 2/1 2/1 Indicators (chaise) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral flucky Peat or Peat (LRF) cky Peat or Peat (LRF)	eeded to do atrix, CS=Cov	cument ered/Coa	color (M Color	cious inspending in the control of t	Mottle	e absence of incre Lining, M=Matrices Type	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark St F16 - High F F18 - Reduct TF2 - Red P TF12 - Very Other (Explain	uck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression ed Vertic arent Material Shallow Dark S uin in Remarks)	ESoils ¹ LRR F, G, H) ONS (LRR H, outside MLRA 72, 73) Gurface

WETLAND DETERMINATION DATA FORM

Great Plains Region

Project/Site:	: L3R				Sample Point: u-157n47w16-b1
VEGETATIO	N (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: 0 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					Total Number of Borninant Opecies Across All Strata.
					D
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.	<u></u>				
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. $ 5 $
	Total Cover =	0			OBL spp. 5
	-				FAC spp. $\frac{15}{5}$ $\times 3 = \frac{15}{15}$
Sanling/Shruh	Stratum (Plot size: 15 ft. radius)				FACUspp 85
1.	Otratum (1 lot 3/26. 10 it. radius)				FACU spp. $\begin{array}{c ccccccccccccccccccccccccccccccccccc$
2.					σε ε spp
					T
3.					Total 100 (A) 370 (B)
4.					
5.					Prevalence Index = B/A = 3.700
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Rapid Test for Hydrophytic Vegetation
10.					Dominance Test is > 50%
10.		0			Prevalence Index is ≤ 3.0 *
	Total Cover =	<u> </u>			
					Morphological Adaptations (Explain) *
Herb Stratum ((Plot size: 5 ft. radius)				Problem Hydrophytic Vegetation (Explain) *
1.	Andropogon gerardii	40	Y	FACU	
2.	Elymus repens	30	Υ	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Cirsium arvense	15	N	FACU	present, unless disturbed or problematic.
4.	Solidago gigantea	5	N	FAC	Definitions of Vegetation Strata:
5.	Eutrochium maculatum	5	N	OBL	
6			N	FACW	Trop - Westernlands Oir (7 Open) and appear in discrete at housest
	Phalaris arundinacea	5		FACVV	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
7.	Asclepias syriaca	5	N		neight (BBH), regardess 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.
13.	T / 10	405			WOOdy Villes - All Woody Villes, Togardiess of Height.
	Total Cover = _	105	<u></u>		
Woody Vine St	tratum (Plot size: 30 ft. radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present? N
5.					
4.					
	Total Cover =	0			
Damarka		0			
Remarks:	Vegetation is dominated by big bluestem and	i wild rye.			
Additional F	Remarks:				