WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R								Date: <u>07/31/14</u>
Applicant:		Enbridge								County: <u>Marshall</u>
Investigators		NTT/KRG			_Subregio	`	or LRR):	MLRA 56		State: MN
Soil Unit:	I20A			<u> </u>			I Classification:			
Landform:	Depression				cal Relief:					Sample Point: w-157n47w22-b1
Slope (%):	8 - 15%		_atitude: 48.3		Longitude:			Datum:		
Are climatic/h	<u> </u>	nditions on the site	typical for th	is time of yea	ar? (If no, exp	olain in rema	arks)	Yes	□ No	Section:
Are Vegetation	on 🛭 Soi	l □, or Hydrology □	⊏significantly	/ disturbed?		Are	e normal circum	istances pre	esent?	Township:
Are Vegetation	on 🛭 Soi	□, or Hydrology □	□aturally pro	oblematic?			Yes	□ No		Range: Dir:
SUMMARY C	OF FINDING:	S								
Hydrophytic \	Vegetation P	resent?	Yes		_			Hydric Soil	s Present?	Yes
Wetland Hyd	Irology Prese	ent?	Yes					Is This Sar	npling Poir	nt Within A Wetland? Yes
Remarks:	The wetland	d is a small wet mea	adow that lie	s within a roa	dside ditcl	h that ha	s recently been	mowed. Ph	nalaris arun	dinacea covers the majority of the wetland.
HYDROLOG	Υ									
		icators (Chock all t	hat apply: M	inimum of on	o primary	or two c	ocondory roquir	od).		
Primary:		icators (Check all t	nat apply, w	inimum of or	ie primary	or two se	econdary requir	ea):	Secondary	
<u>Filinary.</u> ☑	<u>.</u> A1 - Surface	Mater		П	B11 - Salt	Crust			Secondary:	B6 - Surface Soil Cracks
	A2 - High Wa				B13 - Aqua					B8 - Sparsely Vegetated Concave Surface
	A3 - Saturation				C1 - Hydro					B10 - Drainage Patterns
	B1 - Water M	arks			C2 - Dry S	eason Wa	iter Table			C3 - Oxidized Rhizospheres on Living Roots (tilled)
	B2 - Sedimer	•					spheres on Living	Roots (not tille		C8 - Crayfish Burrows
	B3 - Drift Dep						duced Iron			C9 - Saturation Visible on Aerial Imagery
	B4 - Algal Ma				C7 - Thin N		ace		☑	D2 - Geomorphic Position D5 - FAC-Neutral Test
	B5 - Iron Dep	osits on Visible on Aerial Ima	gery/	П	Other (Exp	iain)				D7 - Frost-Heaved Hummocks (LRR F)
		tained Leaves	gery							Dr - 1 Tost-Heaved Huminocks (LIXIX I)
	20	tamou 200700								
Field Observ	vations:									
		Voc 🗔	Donth	2	(in)					
Surface Water		Yes ☑	Depth		- (in.) - (in.)			Wetland H	ydrology	Present? Y
Water Table		Yes \square	Depth		(in.)					
Saturation Pr	resent?	Yes	Depth	1:	_ (in.)					
Describe Reco	orded Data (stream gauge, monito	oring well, ae	rial photos, pr	evious insp	ections),	if available:			
Remarks:	The majorit	y of the wetland is c	overed with	roughly three	e inches of	standing	g water.			
	•									
SOILS										
		ibe to the depth nee				onfirm th				
(Type: C=Concer	ntration, D=Dep		. 00 0							
		etion, RM=Reduced Mat	rix, CS=Covere	d/Coated Sand	Grains; Loca					
		etion, RM=Reduced Mat	rix, CS=Covere	d/Coated Sand	Grains; Loca					
		etion, RM=Reduced Mat Matrix	rix, CS=Covere	d/Coated Sand	Grains; Loca		ore Lining, M=Matri			
Depth (In.)			rix, CS=Covere	d/Coated Sand Color (tion: PL=P	ore Lining, M=Matri		Texture	Remarks
Depth (In.)		Matrix				tion: PL=P	ore Lining, M=Matri	x)	Texture	Remarks
Depth (In.)		Matrix				tion: PL=P	ore Lining, M=Matri	x)	Texture	Remarks
Depth (In.)		Matrix				tion: PL=P	ore Lining, M=Matri	x)	Texture	Remarks
Depth (In.)		Matrix				tion: PL=P	ore Lining, M=Matri	x)	Texture	Remarks
Depth (In.)		Matrix				tion: PL=P	ore Lining, M=Matri	x)	Texture	Remarks
Depth (In.)		Matrix				tion: PL=P	ore Lining, M=Matri	x)	Texture	Remarks
		Matrix Color (Moist)	%	Color (Moist)	Mottle %	es Type	x)	Texture	Remarks
Depth (In.) NRCS Hydr	ic Soil Field	Matrix Color (Moist)	%		Moist)	Mottle %	ore Lining, M=Matri	x)		
		Matrix Color (Moist)	%	Color (Moist)	Mottle %	es Type	Location	Indicators	for Problematic Soils ¹
NRCS Hydr	A1- Histosol	Matrix Color (Moist) Indicators (che	%	Color (dicators are i	Moist) not presen	Mottle %	es Type	Location	Indicators 1 A9 - 1 cm M	for Problematic Soils ¹ luck (LRR I, J)
NRCS Hydr	A1- Histosol A2 - Histic Ep	Matrix Color (Moist) Indicators (che	%	Color (dicators are I S5 - Sandy R S6 - Stripped	Moist) not presentedox Matrix	Mottle % t):	es Type	Location	Indicators 1 A9 - 1 cm M A16 - Coast	for Problematic Soils ¹ luck (LRR I, J) Prairie Redox (LRR F, G, H)
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black Hi	Matrix Color (Moist) Indicators (che	%	Color (Color (dicators are I S5 - Sandy R S6 - Stripped F1 - Loamy N	Moist) not presentedox Matrix Mucky Miner	Mottle % tion: PL=P	es Type	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S	for Problematic Soils ¹ fluck (LRR I, J) Prairie Redox (LRR F, G, H) urface (LRR G)
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge	Matrix Color (Moist) Indicators (che	eck here if in	Color (dicators are I S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy O	Moist) not presented with the second	Mottle % tion: PL=P	es Type	Location	Indicators f A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F	for Problematic Soils ¹ Pluck (LRR I, J) Prairie Redox (LRR F, G, H) Prairie (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73)
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified	Matrix Color (Moist) Indicators (che	%	Color (Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted	Moist) not presen ledox Matrix Mucky Miner Gleyed Matrix Matrix	Mottle % t):	es Type	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc	For Problematic Soils ¹ Muck (LRR I, J) Prairie Redox (LRR F, G, H) urface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	Matrix Color (Moist) Indicators (che	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted F6 - Redox D	Moist) not presented Matrix Mucky Miner Gleyed Matrix Dark Surface	Mottle % tion: PL=P	es Type	Location	Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F	for Problematic Soils ¹ Pluck (LRR I, J) Prairie Redox (LRR F, G, H) Fourface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) Foed Vertic Parent Material
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	Matrix Color (Moist) Indicators (che sipedon stic n Sulfide I Layers (LRR F) ck (LRR FGH) ed Below Dark Surface	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted F6 - Redox E F7 - Depleted	Moist) not presen ledox Matrix Mucky Miner Gleyed Matri d Matrix Dark Surface	Mottle % tion: PL=P	es Type	Location	Indicators 1 A9 - 1 cm W A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	for Problematic Soils ¹ Pluck (LRR I, J) Prairie Redox (LRR F, G, H) Furface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) Foed Vertic Parent Material For Shallow Dark Surface
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete	Matrix Color (Moist) Indicators (che sipedon stic n Sulfide I Layers (LRR F) ck (LRR FGH) ed Below Dark Surface park Surface	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy O F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	Moist) Moist) The present of the pressions of the pression of	Mottle % t):	es Type	Location	Indicators 1 A9 - 1 cm W A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	for Problematic Soils ¹ Pluck (LRR I, J) Prairie Redox (LRR F, G, H) Fourface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) Foed Vertic Parent Material
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M	Matrix Color (Moist) Indicators (che sipedon stic n Sulfide I Layers (LRR F) ck (LRR FGH) ed Below Dark Surface park Surface	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy N F2 - Loamy O F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	Moist) Moist) The present of the pressions of the pression of	Mottle % t):	es Type	Location	Indicators 1 A9 - 1 cm W A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	for Problematic Soils ¹ Pluck (LRR I, J) Prairie Redox (LRR F, G, H) Furface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) Foed Vertic Parent Material For Shallow Dark Surface
NRCS Hydr	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	Matrix Color (Moist) Indicators (che sipedon stic n Sulfide I Layers (LRR F) ck (LRR FGH) ed Below Dark Surface Park Surface lucky Mineral Mucky Peat or Peat (LR cky Peat or Peat (LR R)	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	Moist) Moist) The present of the pressions of the pression of	Mottle % t):	es Type	Location	Indicators of A9 - 1 cm MA16 - Coast S7 - Dark SF16 - High FF18 - Reduct TF2 - Red FTF12 - Very Other (Explain Indicators of American Ind	for Problematic Soils¹ fluck (LRR I, J) Prairie Redox (LRR F, G, H) urface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic Parent Material Shallow Dark Surface ain in Remarks) hydrophytic vegetation and wetland hydrology must be present,
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M S2 - 2.5 cm M	Matrix Color (Moist) Indicators (che sipedon stic n Sulfide I Layers (LRR F) ck (LRR FGH) ed Below Dark Surface Park Surface lucky Mineral Mucky Peat or Peat (LR cky Peat or Peat (LR R)	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	Moist) Moist) The present of the pressions of the pression of	Mottle % t):	es Type	Location	Indicators of A9 - 1 cm MA16 - Coast S7 - Dark SF16 - High FF18 - Reduct TF2 - Red FTF12 - Very Other (Explain Indicators of American Ind	for Problematic Soils¹ fluck (LRR I, J) Prairie Redox (LRR F, G, H) urface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic Parent Material Shallow Dark Surface ain in Remarks)
NRCS Hydr	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	Matrix Color (Moist) Indicators (che sipedon stic n Sulfide I Layers (LRR F) ck (LRR FGH) ed Below Dark Surface Park Surface lucky Mineral Mucky Peat or Peat (LR cky Peat or Peat (LR R)	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	Moist) Moist) The present of the pressions of the pression of	Mottle % t):	es Type	Location	Indicators of A9 - 1 cm MA16 - Coast S7 - Dark SF16 - High FF18 - Reduct TF2 - Red FTF12 - Very Other (Explain Indicators of American Ind	for Problematic Soils¹ fluck (LRR I, J) Prairie Redox (LRR F, G, H) urface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic Parent Material Shallow Dark Surface ain in Remarks) hydrophytic vegetation and wetland hydrology must be present,
NRCS Hydr	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 S4 - Sandy G	Matrix Color (Moist) Indicators (chemicators) Indicators (chemicator) Indicator	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D	Moist) Moist) not present dedox Mucky Miner Gleyed Matrix Matrix Dark Surface Dark Surface Depressions Depressions	Mottle % t):	es Type	Location	Indicators of A9 - 1 cm MA16 - Coast S7 - Dark SF16 - High FF18 - Reduct TF2 - Red FTF12 - Very Other (Explain Indicators of Funless disturbed)	for Problematic Soils¹ fluck (LRR I, J) Prairie Redox (LRR F, G, H) urface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic Parent Material Shallow Dark Surface ain in Remarks) hydrophytic vegetation and wetland hydrology must be present,
NRCS Hydr	A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick E S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Mu S4 - Sandy G	Matrix Color (Moist) Indicators (chemicators) Indicators (chemicator) Indicator (chemicator) Indica	eck here if in	Color (S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy C F3 - Depleted F6 - Redox D F7 - Depleted F8 - Redox D F16 - High P	Moist) not present dedox Mucky Miner deleged Matrix Dark Surface depressions ains Depressions	Mottle % tion: PL=P	es Type RA 72, 73 of LRR	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	for Problematic Soils¹ fluck (LRR I, J) Prairie Redox (LRR F, G, H) urface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic Parent Material Shallow Dark Surface ain in Remarks) hydrophytic vegetation and wetland hydrology must be present,

WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:	: L3R				Sample Point: w-157n47w22-b1
VEGETATIO	、 .	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:1 (A)
3.					
4.					Total Number of Dominant Species Across All Strata:1 (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 spp15
	Total Cover = _	0			FACW spp. $_{-75}$ $\times 2 = _{-150}$
					OBL spp. 15
Sapling/Shrub	Stratum (Plot size: 15 ft. radius)				FACU spp. $0 x 4 = 0$
1.					UPL spp. $\underline{\qquad}$ $X \ 5 = \underline{\qquad}$ $\underline{\qquad}$
2.					
3.					Total 90 (A) 165 (B)
4.					
5.					Prevalence Index = B/A = 1.833
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.	Phalaris arundinacea	75	Υ	FACW	
2.	Typha angustifolia	15	N	OBL	* Indicators of hydric soil and wetland hydrology must be
3.	Typina engaemena				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.					Sapinig/Sin ub - Weedy plante less than 8 in 2211, Teganaless of height
11.					
					Herb - All herbaceous (non-woody) plants, regardless of size.
12.					Tel D - All Horodocous (Hori-woody) plants, regardless of size.
13.					
14.					Manada Vinas All woody vinos regardless of beight
15.	T : : : :				Woody Vines - All woody vines, regardless of height.
	Total Cover = _	90	_		
	tratum (Plot size: 30 ft. radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present?Y
5.					
4.					
	Total Cover =	0			
Remarks:	The wetland has recently been mowed. Vege	tation pres	sent includ	les Phalar	ris arundinacea and Typha angustifolia.
Additional F	Remarks:				