WETLAND DETERMINATION DATA FORM Great Plains Region

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Project/Site:		L3R									Date:	06/23/14
Applicant:		Enbridge				0 1	(NAL DA	L DD)	MI DA 50		County:	Marshall
	nvestigators: NTT/KRG			Subregion (MLRA or LRR): MLRA 56							State: Wetland ID:	MN
Soil Unit:					NWI Classification:							450m 40m 22 - 4
Landform:	Depression		Local Relief: CL 18.485535 Longitude: -96.818053					Datum		·	w-158n48w23-a1	
Slope (%):	3 - 7%	nditions on the site	Latitude: 48						Datum:	□ No	Community ID	·:
			7.			u : (if no, exp		•			Section:	
Are Vegetation		□, or Hydrology	•	•			Are i	normal circun	•	esent?	Township:	Div
Are Vegetation		□, or Hydrology	□aturally	proble	ematic?			Yes	□ No		Range:	Dir:
SUMMARY C									l la salai a O a il	- D10	Wa a	
Hydrophytic \			Ye			•			Hydric Soil			the real O
Wetland Hyd			Ye		a datala alt	-l- The:	a la alamato	and and have Town			nt Within A W	
Remarks:	The wetland	d is a shallow mars	sn located i	ın a ro	adside dit	cn. The sit	te is domin	nated by Typr	na angustifoi	ia and Alis	ma gramineu	m.
	-											
HYDROLOG'	Y											
Wetland Hy	drology Ind	icators (Check all	I that apply;	; Minin	num of on	e primary	or two sec	condary requi	red):			
Primary:	•	•				. ,			,	Secondary:	<u>.</u>	
✓	A1 - Surface					B11 - Salt (B6 - Surface S	
	S					B13 - Aqua		0.1				egetated Concave Surface
	A3 - Saturation B1 - Water M						gen Sulfide eason Wate				B10 - Drainage	e Patterns zospheres on Living Roots (tilled)
	B2 - Sedimen							heres on Living	Roots (not tille		C8 - Crayfish E	
_	B3 - Drift Dep	•					nce of Redu		(11010)			Nisible on Aerial Imagery
	B4 - Algal Ma						luck Surface	е		✓	D2 - Geomorp	
	B5 - Iron Dep					Other (Expl	lain)			☑	D5 - FAC-Neu	
		on Visible on Aerial Im tained Leaves	nagery								D7 - Frost-Hea	eved Hummocks (LRR F)
	b9 - water-S	lained Leaves										
Field Observ	votiono.											
Field Observ		V	5		4	/: \						
Surface Wate		Yes ☑		epth:	4	(in.)			Wetland H	ydrology	Present?	Υ
Water Table		Yes		epth:		(in.)				, ,,		
Saturation Pr	resent?	Yes □	De	epth:		(in.)						
Describe Reco	orded Data (s	stream gauge, moni	itoring well,	aerial	photos, pre	evious insp	ections), if	available:				
Describe Reco	<u>`</u>	stream gauge, moni			· · · · · · · · · · · · · · · · · · ·	<u>-</u>						
	<u>`</u>				· · · · · · · · · · · · · · · · · · ·	<u>-</u>						
Remarks:	The wetland	d has standing wat	ter through	out, re	eaching a r	naximum	depth of 4	inches.				
Remarks: SOILS Profile Descri	The wetland	d has standing wat	ter througho	out, re	eaching a r	naximum (depth of 4	inches. absence of ir				
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Remarks: SOILS Profile Descri	The wetland	thas standing wat be to the depth ne etion, RM=Reduced Ma	ter througho	out, re	eaching a r	naximum (depth of 4 onfirm the stion: PL=Pore	inches. absence of ir e Lining, M=Mati				
Remarks: SOILS Profile Descri (Type: C=Concer	The wetland	thas standing wat the to the depth ne etion, RM=Reduced Ma Matrix	ter throughouseeded to do latrix, CS=Cov	out, re	eaching a r	naximum (cator or co Grains; Locat	onfirm the stion: PL=Pore	absence of ir abining, M=Mate	rix)	Toyturo		Domorko
Remarks: SOILS Profile Descri	The wetland	thas standing wat be to the depth ne etion, RM=Reduced Ma	ter throughouseeded to do latrix, CS=Cov	out, re	eaching a r	naximum (cator or co Grains; Locat	depth of 4 onfirm the stion: PL=Pore	inches. absence of ir e Lining, M=Mati		Texture		Remarks
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Remarks: SOILS Profile Descri (Type: C=Concer	The wetland	thas standing wat the to the depth ne etion, RM=Reduced Ma Matrix	ter throughouseeded to do latrix, CS=Cov	out, re	eaching a r	naximum (cator or co Grains; Locat	onfirm the stion: PL=Pore	absence of ir abining, M=Mate	rix)	Texture		Remarks
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Remarks: SOILS Profile Descri (Type: C=Concer	The wetland	has standing wat be to the depth ne etion, RM=Reduced Ma Matrix Color (Moist)	ter throughouseeded to do latrix, CS=Cov	out, re	nt the indicated Sand C	cator or co	onfirm the stion: PL=Pore	absence of ir e Lining, M=Mati	rix)	Texture		Remarks
Remarks: SOILS Profile Descri (Type: C=Concer	The wetland	has standing wat be to the depth ne etion, RM=Reduced Ma Matrix Color (Moist)	eeded to do	out, re	nt the indicated Sand C	cator or co	onfirm the stion: PL=Pore	absence of ir e Lining, M=Mati	rix)		for Problematic	
Remarks: SOILS Profile Descri (Type: C=Concer	The wetland	has standing wat be to the depth ne etion, RM=Reduced Ma Matrix Color (Moist)	eeded to do	out, re	nt the indicated Sand C	cator or co Grains; Locat Moist)	onfirm the stion: PL=Pore	absence of ir e Lining, M=Mati	Location	Indicators f	for Problemation	
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	The wetland iption (Description, D=Depl ric Soil Field A1- Histosol A2 - Histic Ep	has standing wat the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chain)	eeded to do	out, re	nt the indicated Sand Color (I	cator or co Grains; Locat Moist)	monfirm the stion: PL=Pore Mottles %	absence of ir e Lining, M=Mati	Location	Indicators 1 A9 - 1cm M A16 - Cost F	uck (LRR I, J) Prairie Redox (L	: Soils ¹
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) NRCS Hydr	The wetland iption (Description, D=Depl ric Soil Field A1- Histosol A2 - Histic Ep A3 - Black His	has standing wat be to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chapted on stice)	eeded to do	out, re ocumer vered/Co	nt the indicated Sand Color (I	cator or co Grains; Locat Moist) oot present	monfirm the stion: PL=Pore	absence of ir e Lining, M=Mati	Location	Indicators f A9 - 1cm M A16 - Cost f S7 - Dark S	uck (LRR I, J) Prairie Redox (L urface (LRR G)	Soils ¹ RR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	The wetland iption (Description, Depoint Intration,	has standing wat be to the depth neetion, RM=Reduced Matrix Color (Moist) Indicators (chain in Sulfide)	eeded to do	out, re cumer vered/Co % f indica St F1	nt the indicated Sand Color (Inc.) Color (Inc.) Color (Inc.) Sandy Recompled to Sandy Recompled Sandy Recompled Sandy Recompled to Sandy Recompled to Loamy Market Sandy Recompled to Loamy	cator or co Grains; Locat Moist) ot present	monfirm the stion: PL=Pore	absence of ir e Lining, M=Mati	Location	Indicators 1 A9 - 1cm M A16 - Cost I S7 - Dark S F16 - High I	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depressio	: Soils ¹
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	The wetland iption (Description, Depoint Intration,	has standing water the depth new etion, RM=Reduced Matrix Color (Moist) Indicators (chapted on Sulfide Layers (LRR F)	eeded to do	out, re cumer vered/Co % f indica Findica Findica	nt the indicated Sand Color (Inc.) Color (Inc.) Color (Inc.) South of the indicated Sand Color (Inc.) Color (Inc.) Color (Inc.)	cator or co Grains; Locat Moist) oot present edox Matrix luck Mineral eleyed Matrix Matrix	monfirm the stion: PL=Pore Mottles %	absence of ir e Lining, M=Mati	Location	Indicators 1 A9 - 1cm Me A16 - Cost R S7 - Dark S F16 - High R F18 - Reduce	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depressio ced Vertic	Soils ¹ RR F, G, H)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) NRCS Hydr	The wetland iption (Description, D=Depl ric Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	has standing water the depth need to the depth n	eeded to do latrix, CS=Cov	out, re cumer vered/Co % f indica St St F1 F2 F3	ators are not be a color (In the indicated Sand Sand Sand Sand Sand Sand Sand San	cator or co Grains; Locat Moist) Moist) edox Matrix luck Mineral leyed Matrix Matrix Matrix ark Surface	depth of 4 onfirm the stion: PL=Pore Mottles t):	absence of ir e Lining, M=Mati	Location	Indicators f A9 - 1cm Ma A16 - Cost F S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depression Parent Material	Soils ¹ RR F, G, H) ONS (LRR H, outisde MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	The wetland iption (Description, D=Depl ric Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu	has standing water the depth need to the depth n	eeded to do latrix, CS=Cov	out, re cumer vered/Co % f indica F1 F2 F3 F6 F7	ators are not be a color (football) Color (football) Color (football) Color (football) Solve a color (football)	cator or co Grains; Locat Moist) ot present edox Matrix luck Mineral eleyed Matrix Matrix ark Surface Dark Surface	depth of 4 onfirm the stion: PL=Pore Mottles t):	absence of ir e Lining, M=Mati	Location	Indicators 1 A9 - 1cm Me A16 - Cost F S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depressio ced Vertic	Soils ¹ RR F, G, H) ONS (LRR H, outisde MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) NRCS Hydr	The wetland iption (Description, D=Depl ric Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D S1 - Sandy M	has standing water the depth need to the depth n	eeded to do latrix, CS=Cov	out, re cumer vered/Co % f indica	ators are not be a color (In the indicated Sand Sand Sand Sand Sand Sand Sand San	cator or co Grains; Locat Moist) oot present edox Matrix luck Mineral eleyed Matrix Matrix ark Surface Dark Surfa epressions	montine the stion: PL=Pore Mottles %	absence of ir e Lining, M=Mati	Location	Indicators 1 A9 - 1cm Me A16 - Cost F S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depression Plains Material Shallow Dark S	Soils ¹ RR F, G, H) ONS (LRR H, outisde MLRA 72, 73)
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) NRCS Hydr	The wetland iption (Description, D=Depl ic Soil Field 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 N	has standing water the depth need to the depth n	eeded to do latrix, CS=Cov	out, re cumer vered/Co % f indica	ators are not be a color (In the indicated Sand Sand Sand Sand Sand Sand Sand San	cator or co Grains; Locat Moist) oot present edox Matrix luck Mineral eleyed Matrix Matrix ark Surface Dark Surfa epressions	montine the stion: PL=Pore Mottles %	absence of ir e Lining, M=Matu	Location	Indicators 1 A9 - 1cm M A16 - Cost I S7 - Dark S F16 - High I F18 - Reduc TF2 - Red I TF12 - Very Other (Expla	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depression ced Vertic Parent Material The Shallow Dark Sein in Remarks)	ESoils ¹ RR F, G, H) Ons (LRR H, outisde MLRA 72, 73) Surface
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Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.) NRCS Hydr	The wetland iption (Description, D=Depl ic Soil Field 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 N	Indicators (characters) Indicators (character	eeded to do latrix, CS=Cov	out, re cumer vered/Co % f indica	ators are not be a color (In the indicated Sand Sand Sand Sand Sand Sand Sand San	cator or co Grains; Locat Moist) oot present edox Matrix luck Mineral eleyed Matrix Matrix ark Surface Dark Surfa epressions	montine the stion: PL=Pore Mottles %	absence of ir e Lining, M=Matu	Location	Indicators of Page 14 And	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depression ced Vertic Parent Material The Shallow Dark Sein in Remarks)	ESoils ¹ RR F, G, H) Ons (LRR H, outisde MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	The wetland iption (Description, 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 S3 - 5 cm Mu	Indicators (characters) Indicators (character	eeded to do latrix, CS=Cov	out, re cumer vered/Co % f indica	ators are not be a color (In the indicated Sand Sand Sand Sand Sand Sand Sand San	cator or co Grains; Locat Moist) oot present edox Matrix luck Mineral eleyed Matrix Matrix ark Surface Dark Surfa epressions	montine the stion: PL=Pore Mottles %	absence of ir e Lining, M=Matu	Location	Indicators of Page 14 And	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depression Ped Vertic Parent Material	ESoils ¹ RR F, G, H) Ons (LRR H, outisde MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	The wetland iption (Description, 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 S3 - 5 cm Mu S4 - Sandy G	has standing water the depth need to the depth n	eeded to do latrix, CS=Cov	out, re cumer vered/Co % f indica	ators are not be a color (In the indicated Sand Sand Sand Sand Sand Sand Sand San	cator or co Grains; Locat Moist) oot present edox Matrix luck Mineral leyed Matrix Matrix ark Surface Dark Surfa epressions ains Depres	montine the stion: PL=Pore Mottles %	absence of ir e Lining, M=Mati	Location	Indicators of A9 - 1cm Mathematical Mathemat	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depression Ped Vertic Parent Material	ESoils ¹ RR F, G, H) Ons (LRR H, outisde MLRA 72, 73) Surface
Remarks: SOILS Profile Descri (Type: C=Concer Depth (In.)	The wetland Iption (Description, 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 S3 - 5 cm Mu S4 - Sandy G Type:	has standing water the depth need to the depth n	eeded to do latrix, CS=Cov	out, re ocumei vered/Co % f indica F1 F2 F3 F6 F7	ators are not be compared at the indicated Sand Color (Incompared Sand Sand Sand Sand Sand Sand Sand San	cator or co Grains; Locat Moist) Moist) edox Matrix luck Mineral eleyed Matrix Matrix ark Surface Dark Surfa epressions ains Depres	monfirm the stion: PL=Pore Mottles % t):	absence of ire Lining, M=Mates Type A 72, 73 of LRF	Location	Indicators of A9 - 1 cm May A16 - Cost Find a Reduction of Findicators of Findica	uck (LRR I, J) Prairie Redox (L urface (LRR G) Plains Depression ced Vertic Parent Material The Shallow Dark Stain in Remarks) The Shallow Park Stain in Remarks (Parent Material Parent Mater	ESoils ¹ RR F, G, H) Ons (LRR H, outisde MLRA 72, 73) Surface

WETLAND DETERMINATION DATA FORM

Great Plains Region

Project/Site:	L3R				Sample Point: w-158n48w23-a1
					•
VEGETATIO	N (Species identified in all uppercase are	e non-native	e species.)		
Tree Stratum ((Plot size: 30 ft. radius)				
	Species Name	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC: 3 (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.					(742)
8.					Prevalence Index Worksheet
9.					Total 9/ Cover of Multiply by 1
10.					Total % Cover of: Multiply by:
10.	Total Cover	0			$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	Total Cover = _	0	<u> </u>		FACW spp. $0 \times 2 = 0$
0 11 /01 1					FAC spp. $\frac{0}{1}$ \times $\frac{3}{1}$ \times $\frac{0}{1}$
	Stratum (Plot size: 15 ft. radius)				FACU spp. 0 X 4 = 0
1.					Multiply by: OBL spp. 70 x 1 = 70 FACW spp. 0 x 2 = 0 FAC spp. 0 x 3 = 0 FACU spp. 0 x 4 = 0 UPL spp. 0 x 5 = 0
2.					
3.					Total 70 (A) 70 (B)
4.					
5.					Prevalence Index = B/A =
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Rapid Test for Hydrophytic Vegetation
10.					X Dominance Test is > 50%
10.	 Total Cover =	0			X Prevalence Index is ≤ 3.0 *
	10tai 00vei = _				
111. 041	District of State Park				Morphological Adaptations (Explain) *
	Plot size: 5 ft. radius)	40	V	ODI	Problem Hydrophytic Vegetation (Explain) *
1.	Typha latifolia	40	<u>'</u>	OBL	* In Product of Later and the Later and the Later and the Later and the Later and Late
2.	Alisma gramineum	15	Y	OBL	* Indicators of hydric soil and wetland hydrology must be
3.	Eleocharis palustris	15	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.					1
					Woody Vines - All woody vines, regardless of height.
15.	T + 10	70			Woody Vines - All Woody Vines, regardless of fleight.
	Total Cover = _	70			
Woody Vine St	ratum (Plot size: 30 ft. radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present?Y
5.					
4.					
	Total Cover =	0			
Remarks:		na angusti	folia and A	lisma gra	mineum. Some areas are unvegetated due to the presence of standing water.
	The first and the general section and all the sections are the section and the section and the section and the section are the section and the section are the section and the section are the				
<u> </u>					
A al al!4! a ! =	Damaulaa.				
Additional F	kemarks:				