WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site:		L3R								Date: <u>09/15/14</u>
Applicant:		Enbridge								County: Pennington
Investigators		RAJ/BEH/MRK			_Subregio	•	or LRR):	MLRA 56		State: MN
Soil Unit:	<u>IGp</u>						I Classification:			454.44 04.14
Landform:	Depression		1 10 1		ocal Relief:		707.4	5		Sample Point: w-154n44w31-h1
Slope (%):	3 - 7%		atitude: 48.			-96.357		Datum:		-
		onditions on the site			ar? (If no, ex				□ No	Section:
Are Vegetation			•	ly disturbed?		Are	e normal circun	-	esent?	Township:
Are Vegetation		□, or Hydrology □	⊥aturaliy pi	robiematic?			Yes	□ No		Range: Dir:
SUMMARY C			\ /					I la colori o Coci	la Duananto) Van
Hydrophytic \	~		Yes		_				Is Present?	
Wetland Hyd			Yes	The compute nain	t was taken	ot the bea	undam, haturaan al			nt Within A Wetland? Yes
Remarks:		ikely altered in the area								adow. The wetland soils and vegetation are disturbed. Id conditions are met.
HYDROLOG			g. a.	9			,			
		icators (Check all th	hat annly: N	Minimum of or	ne nrimary	or two s	econdary requi	red).		
Primary:		icators (Crieck all ti	riat apply, i	viii iii ii di di	ie primary	OI TWO S	econdary requi	eu).	Secondary	•
<u>- 1 1111 c y .</u>	<u>.</u> A1 - Surface '	Water			B11 - Salt	Crust				∸ B6 - Surface Soil Cracks
✓	A2 - High Wa	ter Table			B13 - Aqua	atic Fauna	l			B8 - Sparsely Vegetated Concave Surface
✓	A3 - Saturation				C1 - Hydro					B10 - Drainage Patterns
	B1 - Water M				C2 - Dry S			Dooto (not till		C3 - Oxidized Rhizospheres on Living Roots (tilled)
	B2 - Sedimen B3 - Drift Dep	•					spheres on Living duced Iron	Roots (not till		C8 - Crayfish Burrows C9 - Saturation Visible on Aerial Imagery
	B4 - Algal Ma				C7 - Thin I					D2 - Geomorphic Position
	B5 - Iron Dep				Other (Exp	olain)			✓	D5 - FAC-Neutral Test
		on Visible on Aerial Imag	gery							D7 - Frost-Heaved Hummocks (LRR F)
	B9 - Water-S	tained Leaves								
	- 4 *									
Field Observ			_		(!.a. \					
Surface Water		Yes	Dep		_ (in.)			Wetland F	Hydrology	Present? Y
Water Table		Yes ☑	Dep		_ (in.)				, 0,	
Saturation Pr	resent?	Yes ☑	Dep	th: <u>5</u>	_ (in.)					
Describe Reco	orded Data (s	stream gauge, monito	oring well, a	erial photos, pr	revious insp	pections),	if available:			
Remarks:	The water to	able in the soil pit is	at 8 inches	and there is	Cinchaa	tt			1 1 2	Indicators of watered by dralagy are present
		abio iii tilo ooli pit lo	at o mones	s and there is	o inches o	or surrace	e water 5 feet fr	om the sam	iple point.	Indicators of wetland hydrology are present.
			at o monet	s and there is	6 inches 0	or surrace	e water 5 feet fr	om the sam	iple point.	indicators of wetland hydrology are present.
SOILS	/5	·							iple point.	indicators of wetland hydrology are present.
Profile Descri		ibe to the depth nee	ded to doc	ument the ind	icator or co	onfirm th	e absence of in	dicators.)	iple point.	indicators of wetland hydrology are present.
Profile Descri		·	ded to doc	ument the ind	icator or co	onfirm th	e absence of in	dicators.)	iple point.	indicators of wetland hydrology are present.
Profile Descri		ibe to the depth needetion, RM=Reduced Matr	ded to doc	ument the ind	icator or co	onfirm th	e absence of in ore Lining, M=Matr	dicators.)	nple point.	Indicators of wetland hydrology are present.
Profile Descri (Type: C=Concer		ibe to the depth nee etion, RM=Reduced Matr Matrix	ded to doc rix, CS=Cover	ument the ind red/Coated Sand	icator or co Grains; Loca	onfirm th	e absence of in ore Lining, M=Matr es	idicators.)		
Profile Descri (Type: C=Concer Depth (In.)	ntration, D=Depl	ibe to the depth nee etion, RM=Reduced Matr Matrix Color (Moist)	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (icator or co Grains; Loca (Moist)	onfirm thation: PL=P	e absence of in ore Lining, M=Matr es Type	dicators.) ix) Location	Texture	Remarks
Profile Descri (Type: C=Concer Depth (In.)	Hue_10YR	ibe to the depth needetion, RM=Reduced Matrix Color (Moist) 4/2	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (Hue_10YR	icator or co Grains; Loca (Moist)	onfirm thation: PL=P	e absence of in ore Lining, M=Matr es Type C	Location	Texture	
Profile Descri (Type: C=Concer Depth (In.)	ntration, D=Depl	ibe to the depth needetion, RM=Reduced Matrix Color (Moist) 4/2	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (Hue_10YR	icator or co Grains; Loca (Moist) R 3/4 R 5/8	onfirm thation: PL=P Mottle % 2 20	e absence of in ore Lining, M=Matr es Type C C	Location M M		Remarks
Profile Descri (Type: C=Concer Depth (In.)	Hue_10YR	ibe to the depth needetion, RM=Reduced Matrix Color (Moist) 4/2	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (Hue_10YR	icator or co Grains; Loca (Moist) R 3/4 R 5/8	onfirm thation: PL=P	e absence of in ore Lining, M=Matr es Type C	Location	Texture	
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Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18	Hue_10YR Hue_10YR	Matrix Color (Moist) 4/2 6/2	ded to doc rix, CS=Cover	color (B) Hue_10YR Hue_5YR	icator or co Grains; Loca (Moist) R 3/4 R 5/8 3/4	Mottle 2 20 10	e absence of in ore Lining, M=Matrees Type C C C	Location M M	Texture	Remarks
Profile Descri (Type: C=Concer Depth (In.)	Hue_10YR Hue_10YR	Matrix Color (Moist) 4/2 6/2	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (Hue_10YR	icator or co Grains; Loca (Moist) R 3/4 R 5/8 3/4	Mottle 2 20 10	e absence of in ore Lining, M=Matr es Type C C	Location M M	Texture S S	Remarks redox as vertical streaks
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18	Hue_10YR Hue_10YR ic Soil Field	Matrix Color (Moist) 4/2 6/2	ded to doc rix, CS=Cover	color (B) Hue_10YR Hue_5YR Hue_strace	icator or co Grains; Loca (Moist) R 3/4 R 5/8 3/4 not presen	Mottle 2 20 10	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Texture S S S	Remarks redox as vertical streaks for Problematic Soils ¹
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18 NRCS Hydr	Hue_10YR Hue_10YR Gric Soil Field A1- Histosol	Matrix Color (Moist) 4/2 6/2 Indicators (che	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (Hue_10YR Hue_5YR Indicators are	icator or congrains; Local (Moist) 3/4 5/8 3/4 not present	Mottle 2 20 10	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Texture S S S A9 - 1 cm N	Remarks redox as vertical streaks for Problematic Soils Muck (LRR I, J)
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep	Matrix Color (Moist) 4/2 6/2 Indicators (che	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (Hue_10YR Hue_5YR Addicators are S5 - Sandy F S6 - Stripped	icator or configurations; Local (Moist) 3/4 5/8 3/4 not present	Mottle 2 20 10	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Texture S S S Indicators A9 - 1 cm N A16 - Coas	Remarks redox as vertical streaks for Problematic Soils¹ Muck (LRR I, J) t Prairie Redox (LRR F, G, H)
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His	Matrix Color (Moist) 4/2 6/2 Indicators (che	ded to doc rix, CS=Cover	ument the ind red/Coated Sand Color (Hue_10YR Hue_5YR Hue_5YR S5 - Sandy R S6 - Stripped F1 - Loamy R	icator or congrains; Local (Moist) 3/4 5/8 3/4 not present	Mottle 2 20 10	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Indicators A9 - 1 cm N A16 - Coas	Remarks redox as vertical streaks for Problematic Soils¹ Muck (LRR I, J) t Prairie Redox (LRR F, G, H) Surface (LRR G)
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge	Matrix Color (Moist) 4/2 6/2 Indicators (che	% 98 70 ck here if in	ument the ind red/Coated Sand Color (Hue_10YR Hue_5YR Addicators are S5 - Sandy F S6 - Stripped	icator or congrains; Local (Moist) 3/4 5/8 3/4 not present Redox d Matrix Mucky Miner Gleyed Matrix	Mottle 2 20 10	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Indicators A9 - 1 cm N A16 - Coasi S7 - Dark S F16 - High I	Remarks redox as vertical streaks for Problematic Soils¹ Muck (LRR I, J) t Prairie Redox (LRR F, G, H) Surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73)
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified	Matrix Color (Moist) 4/2 6/2 Indicators (che	% 98 70 ck here if in	ument the ind red/Coated Sand Color (Hue_10YR Hue_5YR Addicators are S5 - Sandy F S6 - Stripped F1 - Loamy F F2 - Loamy F	icator or congrains; Local (Moist) 3/4 5/8 3/4 not present Redox d Matrix Mucky Miner Gleyed Matrix d Matrix	Mottle 2 20 10	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Indicators A9 - 1 cm N A16 - Coasi S7 - Dark S F16 - High I	Remarks redox as vertical streaks for Problematic Soils¹ Muck (LRR I, J) t Prairie Redox (LRR F, G, H) Surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73)
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete	Matrix Color (Moist) 4/2 6/2 Indicators (che	% 98 70 ck here if in	ument the ind red/Coated Sand Color (Hue_10YR Hue_5YR Mue_5YR S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy R F3 - Deplete F6 - Redox R F7 - Deplete	icator or congrains; Local (Moist) R 3/4 S 5/8 3/4 not present Redox d Matrix Mucky Miner Gleyed Matrix Dark Surface d Dark Surface	Mottle % 2 20 10 10 ix	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Indicators A9 - 1 cm N A16 - Coasi S7 - Dark S F16 - High I F18 - Reduct TF2 - Red F TF12 - Very	Remarks redox as vertical streaks for Problematic Soils¹ Muck (LRR I, J) t Prairie Redox (LRR F, G, H) Surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic Parent Material y Shallow Dark Surface
Profile Descri (Type: C=Concer Depth (In.) 0-3 3-18 NRCS Hydr	Hue_10YR Hue_10YR Hue_10YR Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroge A5 - Stratified A9 - 1 cm Mu A11 - Deplete A12 - Thick D	Matrix Color (Moist) 4/2 6/2 Indicators (che sipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) ed Below Dark Surface park Surface	% 98 70 ck here if in	ument the ind red/Coated Sand Color (Hue_10YR Hue_5YR Hue_5YR S5 - Sandy R S6 - Stripped F1 - Loamy R F2 - Loamy R F3 - Deplete F6 - Redox R F7 - Deplete F8 - Redox R	icator or congrains; Local (Moist) 3/4 5/8 3/4 10 not present Redox Mucky Miner Gleyed Matrix Dark Surface Depressions	Mottle % 2 20 10 ation: PL=P	e absence of in ore Lining, M=Matrees Type C C C	Location M M M	Indicators A9 - 1 cm N A16 - Coasi S7 - Dark S F16 - High I F18 - Reduct TF2 - Red F TF12 - Very	Remarks redox as vertical streaks for Problematic Soils¹ Muck (LRR I, J) t Prairie Redox (LRR F, G, H) Surface (LRR G) Plains Depressions (LRR H, outside MLRA 72, 73) ced Vertic Parent Material
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WETLAND DETERMINATION DATA FORM

Great Plains Region

	: L3R				Sample Point: w-154n44w31-h1
EGETATION	N (Species identified in all uppersons are	non notivo	anasias)		
	```	non-native	species.)		
ree Stratum (	(Plot size: 30 ft. radius)				Daminanaa Taat Warkabaat
	<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: 4 (A)
3.					
4.	<u></u>				Total Number of Dominant Species Across All Strata: 4 (B)
					Total Name of Bollinian Openies / to coo / til Citata.
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 spp. 31
	Total Cover =	0			FACW spp. 17 × 2 - 24
	Total Cover =				ΓΛΟ απο
					FAC spp. $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{3}{2}$
apling/Shrub S	Stratum (Plot size: 15 ft. radius)				FACU spp. $\underline{\qquad 1 \qquad \qquad X \ 4 = \qquad \underline{\qquad \qquad 4 \qquad \qquad }$
1.	Salix eriocephala	5	Y	FACW	FACW spp. 17
2.					
3.					Total <u>50</u> (A) <u>72</u> (B)
4.					(=)
<u> </u>					Provolence Index = P/A = 4.440
					Prevalence Index = B/A = 1.440
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Rapid Test for Hydrophytic Vegetation
10.					X Dominance Test is > 50%
	Total Cover =	5			X Prevalence Index is ≤ 3.0 *
	Total Cover =				
					Morphological Adaptations (Explain) *
<u>erb Stratum (</u> I	Plot size: 5 ft. radius)				Problem Hydrophytic Vegetation (Explain) *
1.	Typha X glauca	20	Y	OBL	
2.	Juncus alpinoarticulatus	8	Υ	OBL	* Indicators of hydric soil and wetland hydrology must be
3.	Juncus torreyi	8	Y	FACW	present, unless disturbed or problematic.
			N	FACW	·
4.	Agrostis gigantea	3			Definitions of Vegetation Strata:
5.	Lycopus americanus	1	N	OBL	
6	Veronica peregrina	1	N	FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Epilobium coloratum	1	N	OBL	height (DBH), regardless of height.
8.	Schoenoplectus tabernaemontani	1	N	OBL	
9.	Dichanthelium acuminatum	1	N	FAC	Sapling/Shrub - Woody plants less than 3 in. DBH, regardless of height.
10.		1	N	FACU	Supming/om ab
	Ambrosia artemisiifolia	1	IN	FACU	
11.					
12.					<b>Herb</b> - All herbaceous (non-woody) plants, regardless of size.
13.					
14.					
15.					Woody Vines - All woody vines, regardless of height.
10.	T-1-1-0	4.5			TTOOGY VIIIGS - 1 223) T 25, 123 S 25 OF Holgini
	Total Cover =	45	_		
oody Vine St	ratum (Plot size: 30 ft. radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present?
					Trydrophytic vegetation Fresent?
5.					
4.	Total Cover =	0			
		oundary betw	een a shallo	w marsh and	a wet meadow. Hydrophytic vegetation is present. The plant community has recently developed; a
4.		, , ,			
4.	A hybrid cattail- and rush-dominated community at the bo	•		nating veget	tation. In addition to the listed species, there is a dense mat of Chara algae in the shallow marsh.
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	A hybrid cattail- and rush-dominated community at the bo	•		nating veget	tation. In addition to the listed species, there is a dense mat of Chara algae in the shallow marsh.
4. Remarks:	A hybrid cattail- and rush-dominated community at the bound plants present are this year's growth from seed, and there	•		inating veget	tation. In addition to the listed species, there is a dense mat of Chara algae in the shallow marsh.
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