WETLAND DETERMINATION DATA FORM Great Plains Region

Drojoot/Sito:		LOD								Date:	00/10/14	
Project/Site: Applicant:	•									County:	08/19/14 Marshall	
Investigators				Subregion (MLRA or LRR): MLRA 56						State:	MN	
Soil Unit: I16F				NWI Classification:								
Landform:	Side slope Local Relief: CV									Sample Point:	w-157n47w16-c1	
Slope (%):	8 - 15%	114	Latitude: 48.4		Longitude:			Datum:				
		nditions on the site			ar? (If no, exp				□ No	Section:		
Are Vegetation		□, or Hydrology	•	-		Are	normal circum	•	esent?	Township:	D:	
Are Vegetation	•	☑, or Hydrology	Liaturally pi	obiematic?				□ No		Range:	Dir:	
Hydrophytic \			Yes					Hydric Soil	s Present?	Ves		
			Yes								etland? Yes	
Wetland Hydrology Present? Yes Is This Sampling Point Within A Wetland? Yes Remarks: The wetland is associated with the Tamarac River. The sample point is a sedge meadow on a large slump of ground that has slid downslope close to the												
river. As alluvial soils in a floodplain, the soils are naturally problematic												
HYDROLOGY												
Wetland Hydrology Indicators (Check all that apply; Minimum of one primary or two secondary required): Primary: Secondary:												
<u> </u>	A1 - Surface \	Vater			B11 - Salt	Crust				B6 - Surface S	Soil Cracks	
	□ A2 - High Water Table				B13 - Aqua						Vegetated Concave Surface	
	A3 - Saturatio B1 - Water Ma				C1 - Hydro C2 - Dry So					B10 - Drainage	e Patterns Rhizospheres on Living Roots (tilled)	
	B2 - Sedimen						spheres on Living	Roots (not till		C8 - Crayfish B		
	B3 - Drift Dep				C4 - Prese	nce of Re	duced Iron	•		C9 - Saturation	n Visible on Aerial Imagery	
	B4 - Algal Mat				C7 - Thin N		ace		☑	D2 - Geomorp D5 - FAC-Neu		
	B5 - Iron Depo B7 - Inundatio		nagerv		Other (Exp	iairi)						
□ B7 - Inundation Visible on Aerial Imagery □ B9 - Water-Stained Leaves												
Field Observ	vations:											
Surface Wate		Yes 🗆	Dep	:h:	(in.)			187 (1 1 1 1				
				:h:	(in.)			Wetland H	lydrology	Present?	Y	
Saturation Pr	resent?	Yes □	Dep	:h:	(in.)						_	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:												
Remarks: Indicators of wetland hydrology are present.												
SOILS												
SOILS												
SOILS Profile Descri	iption (Descri	be to the depth ne	eeded to doc	ument the indi	cator or co	onfirm the	e absence of in	dicators.)				
Profile Descri		be to the depth ne										
Profile Descri		etion, RM=Reduced Ma				tion: PL=Po	ore Lining, M=Matr					
Profile Descri (Type: C=Concer		etion, RM=Reduced Matrix	atrix, CS=Cover	ed/Coated Sand (Grains; Loca	Mottle	ore Lining, M=Matr	ix)	T		Develop	
Profile Descri (Type: C=Concer Depth (In.)	ntration, D=Depl	etion, RM=Reduced Matrix Color (Moist)	atrix, CS=Cover	ed/Coated Sand (Grains; Loca	tion: PL=Po	ore Lining, M=Matr		Texture		Remarks	
Profile Descri (Type: C=Concer Depth (In.)	htration, D=Deple	Matrix Color (Moist) 3/2	atrix, CS=Cover	ed/Coated Sand (Color (I	Grains; Locat	Mottle	ore Lining, M=Matr es Type	Location	LFS		Remarks	
Profile Descri (Type: C=Concer Depth (In.)	ntration, D=Depl	Matrix Color (Moist) 3/2	atrix, CS=Cover	Color (ID) Hue_7.5YR	Grains; Locate Moist) 2.5/2	Mottle %	es Type C	Location M	LFS CL			
Profile Descri (Type: C=Concer Depth (In.)	htration, D=Deple	Matrix Color (Moist) 3/2	atrix, CS=Cover	ed/Coated Sand (Color (I	Grains; Locat	Mottle	ore Lining, M=Matr es Type	Location	LFS	In vertical streaks		
Profile Descri (Type: C=Concer Depth (In.)	htration, D=Deple	Matrix Color (Moist) 3/2	atrix, CS=Cover	Color (ID) Hue_7.5YR	Grains; Locate Moist) 2.5/2	Mottle %	es Type C	Location M	LFS CL	In vertical streaks		
Profile Descri (Type: C=Concer Depth (In.)	htration, D=Deple	Matrix Color (Moist) 3/2	atrix, CS=Cover	Color (ID) Hue_7.5YR	Grains; Locate Moist) 2.5/2	Mottle %	es Type C	Location M	LFS CL	In vertical streaks		
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20	Hue_2.5Y Hue_10YR	Matrix Color (Moist) 3/2 2/1	% 10 70	Color (ID) Hue_7.5YR Hue_2.5Y	Moist) 2.5/2 3/2	Mottle % 2 28	ore Lining, M=Matr	Location M	LFS CL	In vertical streaks		
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y Hue_10YR	Matrix Color (Moist) 3/2 2/1	% 10 70	Color (ID) Hue_7.5YR Hue_2.5Y	Moist) 2.5/2 3/2 aot presen	Mottle % 2 28	es Type C	Location M M	LFS CL LFS	for Problemation		
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20	Hue_2.5Y Hue_10YR Tic Soil Field A1- Histosol	Matrix Color (Moist) 3/2 2/1 Indicators (ch	% 10 70	Color (ID) Hue_7.5YR Hue_2.5Y Indicators are r	Moist) 2.5/2 3/2 aot presen edox	Mottle % 2 28	ore Lining, M=Matr	Location M M	LFS CL LFS Indicators 1 A9 - 1 cm M	for Problemation	c Soils ¹	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y Hue_10YR	Matrix Color (Moist) 3/2 2/1 Indicators (chain)	% 10 70	Color (ID) Hue_7.5YR Hue_2.5Y andicators are rounding S5 - Sandy R S6 - Stripped	Moist) 2.5/2 3/2 aot presen edox	Mottle % 2 28 t):	ore Lining, M=Matr	Location M M	LFS CL LFS Indicators 1 A9 - 1 cm M A16 - Coast	for Problemation	c Soils ¹ (LRR F, G, H)	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y Hue_10YR Tic Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger	Matrix Color (Moist) 3/2 2/1 Indicators (chaine)	atrix, CS=Cover	Color (ID) Hue_7.5YR Hue_2.5Y andicators are results of the second of t	Moist) 2.5/2 3/2 aot presen edox Matrix lucky Mineral	Mottle % 2 28 ti):	ore Lining, M=Matr	Location M M ————————————————————————————————	LFS CL LFS Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F	for Problemation for Problemation fuck (LRR I, J) Frairie Redox (furface (LRR G) Plains Depression	c Soils ¹ (LRR F, G, H)	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y Hue_10YR Fic Soil Field A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified	Matrix Color (Moist) 3/2 2/1 Indicators (chaine) ipedon stic n Sulfide Layers (LRR F)	neck here if in	Color (ID) Hue_7.5YR Hue_2.5Y Addicators are results of the second of t	Moist) 2.5/2 3/2 aot presen edox Matrix lucky Mineraleyed Matrix Matrix	Mottle % 2 28 t):	ore Lining, M=Matr	Location M M ————————————————————————————————	LFS CL LFS Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduce	for Problemation Muck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Ced Vertic	c Soils ¹ (LRR F, G, H)	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mue	Matrix Color (Moist) 3/2 2/1 Indicators (chaine) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH)	neck here if in	Color (ID) Hue_7.5YR Hue_2.5Y Hue_2.5Y S5 - Sandy R S6 - Stripped F1 - Loamy M F2 - Loamy G F3 - Depleted F6 - Redox D	Moist) 2.5/2 3/2 aot presen edox Matrix lucky Mineral eleyed Matrix Matrix ark Surface	Mottle % 2 28 ti):	ore Lining, M=Matr	Location M M ————————————————————————————————	Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F18 - Reduct TF2 - Red F	for Problemation Muck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Plains Depression Parent Material	C Soils ¹ (LRR F, G, H) ONS (LRR H, outside MLRA 72, 73)	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Mue	Matrix Color (Moist) 3/2 2/1 Indicators (chaine) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface	atrix, CS=Cover	Color (ID) Hue_7.5YR Hue_2.5Y Hue_2.5Y Adicators are results of the color of the	Moist) 2.5/2 3/2 aot presented with the second se	Mottle % 2 28 t):	Type C C	Location	LFS CL LFS Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	for Problemation Muck (LRR I, J) Prairie Redox (urface (LRR G) Plains Depression Ced Vertic	c Soils ¹ (LRR F, G, H) ons (LRR H, outside MLRA 72, 73) Surface	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y 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	Matrix Color (Moist) 3/2 2/1 Indicators (chaine) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral	atrix, CS=Cover	Color (ID) Hue_7.5YR Hue_2.5Y Hue_2.5Y Adicators are results of the color of the	Moist) 2.5/2 3/2 aot presented with the second se	Mottle % 2 28 t):	ore Lining, M=Matr	Location	LFS CL LFS Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very	for Problemation for Problemation fuck (LRR I, J) Frairie Redox (curface (LRR G) Plains Depression Frairie Material France Material France Shallow Dark S	c Soils ¹ (LRR F, G, H) ons (LRR H, outside MLRA 72, 73) Surface	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y 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	Matrix Color (Moist) 3/2 2/1 Indicators (chaine) ipedon stic n Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral lucky Peat or Peat (L	eRR G, H)	Color (ID) Hue_7.5YR Hue_2.5Y Hue_2.5Y Adicators are results of the color of the	Moist) 2.5/2 3/2 aot presented with the second se	Mottle % 2 28 t):	Type C C	Location	LFS CL LFS Indicators 1 A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduc TF2 - Red F TF12 - Very Other (Expla	for Problemation for Problemation fuck (LRR I, J) Prairie Redox (furface (LRR G) Plains Depression proced Vertic Parent Material Problemation Parent Material Problemation Parent Material Problemation	c Soils ¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y 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	Matrix Color (Moist) 3/2 2/1 Indicators (chaine) ipedon stic in Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral lucky Peat or Peat (LR) cky Peat or Peat (LR)	eRR G, H)	Color (ID) Hue_7.5YR Hue_2.5Y Hue_2.5Y Adicators are results of the color of the	Moist) 2.5/2 3/2 aot presented with the second se	Mottle % 2 28 t):	Type C C	Location	LFS CL LFS Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	for Problemation for Problemation fuck (LRR I, J) Prairie Redox (furface (LRR G) Plains Depression proced Vertic Parent Material Problemation Parent Material Problemation Parent Material Problemation	c Soils ¹ (LRR F, G, H) ons (LRR H, outside MLRA 72, 73) Surface	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y Hue_10YR A1- Histosol A2 - Histic Ep A3 - Black His A4 - Hydroger A5 - Stratified A9 - 1 cm Muc A11 - Deplete A12 - Thick D S1 - Sandy M S2 - 2.5 cm M S3 - 5 cm Muc S4 - Sandy G	Matrix Color (Moist) 3/2 2/1 Indicators (chaine) ipedon stic in Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral lucky Peat or Peat (LR) cky Peat or Peat (LR)	eRR G, H)	Color (ID) Hue_7.5YR Hue_2.5Y Hue_2.5Y Adicators are results of the color of the	Moist) 2.5/2 3/2 aot presented with the second se	Mottle % 2 28 t):	Type C C C RA 72, 73 of LRF	Location	LFS CL LFS Indicators of A9 - 1 cm M A16 - Coast S7 - Dark S F16 - High F F18 - Reduct TF2 - Red F TF12 - Very Other (Explain	for Problemation for Problemation fuck (LRR I, J) Prairie Redox (furface (LRR G) Plains Depression ped Vertic Parent Material	c Soils ¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface	
Profile Descri (Type: C=Concer Depth (In.) 0-15 15-20 NRCS Hydr	Hue_2.5Y 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 S4 - Sandy G Type: The soil pro	Matrix Color (Moist) 3/2 2/1 Indicators (chained in Sulfide Layers (LRR F) ck (LRR FGH) d Below Dark Surface ark Surface ucky Mineral lucky Peat or Peat (LR) cky Peat or Peat (LR) eyed Matrix file shows alluvial	eRR G, H) R F)	Color (ID) Hue_7.5YR Hue_2.5Y Hue_2.5Y Adicators are results of the color of the	Moist) 2.5/2 3/2 aot presented with the second se	Mottle % 2 28 t): al x sice ssions (ML	Type C C C Hydric So oamy soil origin	Location M M H CH CH CH CH CH CH CH CH	Indicators of A9 - 1 cm MA16 - Coast S7 - Dark SF16 - High FF18 - Reduct TF2 - Red FTF12 - Very Other (Explain Indicators of Funless disturbed Yalarge slundary SI and SI	for Problemation for Problemation fluck (LRR I, J) Frairie Redox (Frairie Red	c Soils ¹ (LRR F, G, H) Ons (LRR H, outside MLRA 72, 73) Surface	

WETLAND DETERMINATION DATA FORM Great Plains Region

Project/Site	: L3R				Sample Point: w-157n47w16-c1			
VEGETATIO	、 .	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: 2 (A)			
3.								
4.					Total Number of Dominant Species Across All Strata: 3 (B)			
5.					(
6.					Percent of Deminent Species That Are ORL FACW or FAC: 66.79/ (A/P)			
					Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)			
7.								
8.					Prevalence Index Worksheet			
9.					Total % Cover of: Multiply by:			
10.					OBL spp. 50 x 1 = 50			
	Total Cover =	0	FACW spp. 51 $X 2 = 102$					
	•		_		FAC spp. $0 x 3 = 0$			
Sapling/Shrub	Stratum (Plot size: 15 ft. radius)				FAC spp. $\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
1.		5	Y	FACU	$\begin{array}{cccccccccccccccccccccccccccccccccccc$			
2.	Rhamnus cathartica		'	17.00	7			
					Total 444 (A) 407 (D)			
3.					Total 111 (A) 197 (B)			
4.					_			
5.					Prevalence Index = B/A = 1.775			
6.								
7.								
8.					Hydrophytic Vegetation Indicators:			
9.					Rapid Test for Hydrophytic Vegetation			
10.					X Dominance Test is > 50%			
10.	Total Cover							
	Total Cover =	5	<u>—</u>		X Prevalence Index is ≤ 3.0 *			
					Morphological Adaptations (Explain) *			
Herb Stratum	(Plot size: 5 ft. radius)				Problem Hydrophytic Vegetation (Explain) *			
1.	Carex emoryi	50	Υ	OBL				
2.	Phalaris arundinacea	50	Υ	FACW	* Indicators of hydric soil and wetland hydrology must be			
3.	Bromus inermis	5	N	UPL	present, unless disturbed or problematic.			
4.	Anemone canadensis	1	N	FACW	Definitions of Vegetation Strata:			
5.	Anomorio caracionais	<u>'</u>		171011	Dominiono di Vogotation Girata.			
					T			
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.			
7.					Height (DBH), regardless of fleight.			
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.					1			
				_	1			
14.					Manada Visaa All woody visoo regardless of height			
15.					Woody Vines - All woody vines, regardless of height.			
	Total Cover =	106						
Woody Vine S	tratum (Plot size: 30 ft. radius)							
1.								
2.								
3.					Hydrophytic Vegetation Present?			
5.					Trydrophytic vegetation Frescht:			
4.								
	Total Cover =							
Remarks:	Hydrophytic vegetation is present. The sedg	e meadow	/ communi	ty is locate	ed on a small terrace on a riverbank and dominated by riverbank sedge and reed			
	canary grass.							
\	Domarka							
Additional Remarks:								
1								