

2315688-02

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLCP City/County: McMurtrei Sampling Date: 8/4/2010
 Applicant/Owner: McCoin State: ND Sampling Point: 02
 Investigator(s): C. W. / W. P. H. Section, Township, Range: 23-156-88
 Landform (hillslope, terrace, etc.): dip Local relief (concave, convex, none): _____ Slope (%): 1
 Subregion (LRR): F Lat: 48.320246 Long: -101.959084 Datum: NAD 83
 Soil Map Unit Name: Zuhl-Williams-Bowbells loams, 3-9% slopes NWI classification: W

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____
Hydric Soil Present?	Yes ☒ No _____	
Wetland Hydrology Present?	Yes ☒ No _____	
Remarks: <u>large lake - obs. pt. on south lobe</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)				
1. <u>POLARIS</u>	<u>4/10</u>	<u>Y</u>	<u>OBL</u>	
2. <u>SONARV</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>POAPRA</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
4. <u>CTNARV</u>	<u>15</u>		<u>FACU</u>	
5. <u>BROINC</u>	<u>5</u>		<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Catfish along edge</u>				

SOIL

Sampling Point: W-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/2	100					cl	
9-11	10YR 3/2	90	7.5YR 5/6	10	c	u	cl	
11-14	2.5Y 4/2	55	7.5YR 5/6	15	c	u	cl	
	10YR 3/2	30						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Surface depth = 2
no hydrology

0-4 10YR 3/2 - cl
4-7 2.5Y 4/2 - 5.8% - SR
7-12 10YR 3/2 - rocky above
12+ - 10YR 3/2 - intermixed 3/4 Gravelly

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches): 4/8" - Dark

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

NW 1/4 - LRR

WETLAND DETERMINATION DATA FORM – Great Plains Region

23 156 88-01

Project/Site: BLLP City/County: Montreal Sampling Date: 8/4/2010
 Applicant/Owner: MCCain State: ND Sampling Point: Wet 1
 Investigator(s): GMM/NPH Section, Township, Range: 33 156088
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 51
 Subregion (LRR): F Lat: 48.320083 Long: -101.945162 Datum: NAD-83
 Soil Map Unit Name: W Mtu NWI classification: L2 ABG

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: <u>large depression</u> <u>expansive open water</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0' ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>20'</u>)				
1. <u>JUNCAL</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
2. <u>AMBPSI</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>LYCASP</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>SONDRA</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
5. <u>ZUMERI</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>	
6. <u>LECPAL</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
7. <u>NOMMUN ARTABE</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
8. <u>MCLOFF</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
9. <u>SOLCAN</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
10. <u>CALBTR</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
<u>140</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>SCI ACU across Interior</u>				

SOIL

Sampling Point: SW-1

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR2/3	100					SIL	
6-8	2.5Y 4/1	90	7.5YR 5/6	10	C	m	SCE	- Sand layer
8-18"	2.5Y 4/1	90	7.5YR 5/6	10	C	m	SIL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

Large wetland

Veg - PRAPA-45
SOLCUM - 25
water table - 10
MLRA 72 & 7311-03 10YR2/3 - R
3-8 10YR2/3 - slope 2 1/2
no hydrology

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): 36"Water Table Present? Yes _____ No ☒ Depth (inches): _____Saturation Present? Yes ☒ No _____ Depth (inches): 4Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wet - large

24/5688-41

Project/Site: BLLP City/County: Mountain Sampling Date: 8/4/2010
Applicant/Owner: McCain State: ND Sampling Point: Wet 1
Investigator(s): GWM, NP/H Section, Township, Range: 24 156 28
Landform (hillslope, terrace, etc.): Depression along road ditch Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): F Lat: 48.320802 Long: -101.922337 Datum: NAD 83
Soil Map Unit Name: 65 - Southern silty clay loam NWI classification: PEMC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> X </u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> X </u> No <u> </u>
Hydric Soil Present?	Yes <u> X </u> No <u> </u>		
Wetland Hydrology Present?	Yes <u> X </u> No <u> </u>		
Remarks: <u>depression along road ditch</u> <u>water along roadway in winter</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
			= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
			= Total Cover	
Herb Stratum (Plot size: <u>20'</u>)				
1. _____	<u>100</u>		<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
			= Total Cover	
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
			= Total Cover	
% Bare Ground in Herb Stratum <u>2</u>				
Remarks:				

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-):	<u>1</u> (A)
Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B)
Prevalence Index = B/A = _____	
Hydrophytic Vegetation Indicators:	
☒ Dominance Test is >50%	
☐ Prevalence Index is $\leq 3.0^1$	
☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Hydrophytic Vegetation Present?	
Yes <u>X</u>	No _____

SOIL

Sampling Point: 4-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1	100						
7-10	10YR 3/1	95	7.5YR 5/6	5	C	in	sil	
10-18	7.5Y 4/2	95	7.5YR 5/6	5	C	in	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

4p6-1 0-3 10YR 3/1
 3-9 10YR 3/1
 8-12 7.5Y 4/2 80% 7.5YR 5/6 100%
 8.5Y 4/3 100%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 24"Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☒ No ☐ Depth (inches): 8"
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

2415688-02

Project/Site: BLP City/County: Montreal Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 2
 Investigator(s): GWM, NPH Section, Township, Range: 24-156-88
 Landform (hillslope, terrace, etc.): dep Local relief (concave, convex, none): concave Slope (%): 21
 Subregion (LRR): F Lat: 48.320846 Long: -101.922977 Datum: NAD-83
 Soil Map Unit Name: G5 Southern Spity clay loam NWI classification: PERMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: <u>dep depression wetland</u> <u>TYPLAT in Interior</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
<u> </u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> 9. <u> </u> 10. <u> </u> <u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> <u> </u> = Total Cover				
Remarks: <u> </u>				

SOIL

Sampling Point: W-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	100					Sil	
4-10	2.5Y 4/2	70	2.5Y 4/2	10	C	M	Sil	
10	10YR 3/1	20						
10-16	2.5Y 4/2	70	2.5Y 4/2	10	C	M	Sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☐ Loamy Gleyed Matrix (F2)	☐ (LRR H outside of MLRA 72 & 73)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)	☐ Reduced Vertic (F18)
☒ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (TF2)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)	
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	☐ (MLRA 72 & 73 of LRR H)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks: *Tunica*

W-2: 0-4 10YR 3/1, 4-8 2.5Y 4/2, 10YR 3/1-80, 8-10YR 3/1

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

☒ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)
☐ Water Marks (B1)	☐ Dry-Season Water Table (C2)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ (where not tilled)
☐ Algal Mat or Crust (B4)	☐ Presence of Reduced Iron (C4)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)	

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): 18"

Water Table Present? Yes _____ No ☒ Depth (inches): _____

Saturation Present? Yes _____ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *NW-1 - R-1-E*

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Mountain 24, 56 88 ^{W3} Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: UP#3
 Investigator(s): CWM, NPH Section, Township, Range: 24-156-88
 Landform (hillslope, terrace, etc.): small depression Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): F Lat: 48.320144 Long: -101.926224 Datum: NAD 83
 Soil Map Unit Name: 24E Zehl-Williams loams, 9-25% slopes NWI classification: PEMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>Small depression wetland</u> <u>U3- 0-4 10/12/11</u> <u>4-10 10/12/13</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>20'</u>) 1. <u>POLAME</u> <u>35</u> <u>Y</u> <u>OBL</u> 2. <u>SPADOC</u> <u>30</u> <u>Y</u> <u>FACW</u> 3. <u>BRODNE</u> <u>20</u> <u>Y</u> <u>FACU</u> 4. <u>RUNCRI</u> <u>5</u> <u>N</u> <u>FACW</u> 5. <u>CIRARU</u> <u>5</u> <u>N</u> <u>FACU</u> 6. <u>PAPAL</u> <u>5</u> <u>N</u> <u>FACW</u> 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> _____ = Total Cover				
Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: <u>POLAME in center</u>				

SOIL

Sampling Point: 24, 15688 - C03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1						Silt	
7-18"	2.5Y 4/2	95	7.5YR 5/6	5	C	m	Silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐Remarks: Tank

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☒ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 4"Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

2415688-W4

Project/Site: BLLP City/County: Mountain Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 4
 Investigator(s): GWM, NPH Section, Township, Range: 24-156-88
 Landform (hillslope, terrace, etc.): dep. Local relief (concave, convex, none): concave Slope (%): 41
 Subregion (LRR): F Lat: 48.320452 Long: -101.928644 Datum: NAD-83
 Soil Map Unit Name: 25C - Zohl-Williams-Bowbells loams, 3-9% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: <u>Depression wetland with cattails in center</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover				Prevalence Index worksheet: <table style="width:100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>250</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.5</u>	Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>100</u>	(A) <u>250</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>50</u>	x 1 = <u>50</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u> </u>	x 3 = <u> </u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>20</u>	x 5 = <u>100</u>																	
Column Totals: <u>100</u>	(A) <u>250</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u> </u>)																		
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover																		
Herb Stratum (Plot size: <u>20'</u>)																		
1. <u>TOLDME</u>	<u>50</u>	<u>Y</u>	<u>DBL</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>WHEAT</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>															
3. <u>BROTINE</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
4. <u>CIRARV</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
5. <u>BLANCRI</u>	<u>10</u>	<u>N</u>	<u>FACW</u>															
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u> </u>)																		
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>														
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Remarks: <u> </u>																		

243688

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			
0-10	10YR 3/1	100				sil		
10-18	10YR 3/1	90	7.5YR 5/6	5		sil		
18-24	2.5Y 1/1		7.5YR 5/6	5		sil		
24-30		90	7.5YR 5/6	10		sil		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☐ Loamy Gleyed Matrix (F2)	☐ (LRR H outside of MLRA 72 & 73)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)	☐ Reduced Vertic (F18)
☒ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (TF2)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)	
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	☐ (MLRA 72 & 73 of LRR H)	

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
--	--

Remarks: *Tanka* *uph-11-0-4-10YR 3/100* *4-10 10YR 3/100*

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply) ☒ Surface Water (A1) ☐ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☒ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Dry-Season Water Table (C2) ☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled) ☐ Presence of Reduced Iron (C4) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)
Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (inches): <i>12"</i> Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☒ No ☐ Depth (inches): <i>4"</i> (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

WETLAND DETERMINATION DATA FORM – Great Plains Region

29 15688-03

Project/Site: BLLP City/County: Montreal Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 5
 Investigator(s): GWM, NPH Section, Township, Range: 24-156-88
 Landform (hillslope, terrace, etc.): dep. Local relief (concave, convex, none): _____ Slope (%): <1
 Subregion (LRR): F Lat: 48.320339 Long: -101.929398 Datum: NAD-83
 Soil Map Unit Name: 25C Zehl-Williams-Bonbells loams, 3-9% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation X, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: <u>Shallow depression</u> <u>Needing Bureau of regrass due to cultivation</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-):	(A)
2. _____				Total Number of Dominant Species Across All Strata:	(B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	(A/B)
4. _____					
				= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species	x 1 =
3. _____				FACW species	x 2 =
4. _____				FAC species	x 3 =
5. _____				FACU species	x 4 =
				UPL species	x 5 =
				Column Totals:	(A) (B)
				Prevalence Index = B/A =	
Herb Stratum (Plot size: <u>20'</u>)				Hydrophytic Vegetation Indicators:	
1. <u>ABR NED</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	___ Dominance Test is >50%	
2. <u>DIKAKO</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	___ Prevalence Index is ≤3.0 ¹	
3. _____				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____				<u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
				= Total Cover	
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?	
1. _____				Yes <u>X</u>	No _____
2. _____					
				= Total Cover	
% Bare Ground in Herb Stratum <u>90</u>					
Remarks:					

SOIL

Sampling Point: 45

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 2/1	100						
10-18	2.5Y 3/1	95	2.5YR 4/6	5	c	m	slt	
18-24"	2.5Y 4/2	95	2.5YR 3/6	5	c	m	silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☒ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

45 - 024 104R 3/1
9-10 204R 4/3

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☒ Water Marks (B1)
☒ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Mountain Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 6
 Investigator(s): GWM, NPH Section, Township, Range: 24 156 88
 Landform (hillslope, terrace, etc.): dep Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.320424 Long: -101.931699 Datum: NAD 83
 Soil Map Unit Name: 2SC - Zarl-Williams - Zarl-Williams 10ms 2-7% slope NWI classification: PEMF

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present? Yes ☒ No ☐	
Wetland Hydrology Present? Yes ☒ No ☐	
Remarks: <u>SL = 10' depression</u> <u>12-6 0-3 = 10423/-100</u> <u>7-10' = 10424/3 +100</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)				
1. <u>SPARPE</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>TOLAME</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
3. <u>STAPPL</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>LIR ARV</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
5. <u>ISROINE</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>TOLAME in interior</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species _____ x 1 = _____
 FACW species _____ x 2 = _____
 FAC species _____ x 3 = _____
 FACU species _____ x 4 = _____
 UPL species _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
☒ Dominance Test is >50%
☐ Prevalence Index is ≤3.0'
☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: 63-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-8	10YR 3/4	100					Silt	
8-12	2.5Y 4/4	90	7.5YR 5/6	10	c	m	Silt	
12-18	2.5Y 4/4	70	7.5YR 5/6	30	c	m	Silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☒ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

- | | | |
|------------------------|---|-----------------------|
| Surface Water Present? | Yes ☐ No ☒ | Depth (inches): _____ |
| Water Table Present? | Yes ☐ No ☒ | Depth (inches): _____ |
| Saturation Present? | Yes ☐ No ☒ | Depth (inches): _____ |

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

NWD =

24 56 88 - 107

Project/Site: BLLP City/County: Manitowish Sampling Date: 8/31/2008
Applicant/Owner: McCain State: ND Sampling Point: Wet 7
Investigator(s): GWM, NPH Section, Township, Range: 24 156 88
Landform (hillslope, terrace, etc.): Shallow dip Local relief (concave, convex, none): Concave Slope (%): <1
Subregion (LRR): F Lat: 48.320651 Long: -101.934152 Datum: NAD 83
Soil Map Unit Name: 24E Zehl-Williams loamy, 9-25% slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegetation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland?	Yes ☒	No ☐
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			
Remarks: Shallow depression no vegetation due to cultivation					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1.	_____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): _____ (A)	
2.	_____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)	
3.	_____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
4.	_____	_____	_____	_____	_____ = Total Cover	
Sapling/Shrub Stratum (Plot size: _____)					Prevalence Index worksheet:	
1.	_____	_____	_____	_____	Total % Cover of:	Multiply by:
2.	_____	_____	_____	_____	OBL species _____	x 1 = _____
3.	_____	_____	_____	_____	FACW species _____	x 2 = _____
4.	_____	_____	_____	_____	FAC species _____	x 3 = _____
5.	_____	_____	_____	_____	FACU species _____	x 4 = _____
_____ = Total Cover					UPL species _____	x 5 = _____
Herb Stratum (Plot size: _____)					Column Totals: _____	(A) _____ (B)
1.	_____	_____	_____	_____	Prevalence Index = B/A = _____	
2.	_____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
3.	_____	_____	_____	_____	___ Dominance Test is >50%	
4.	_____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹	
5.	_____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6.	_____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)	
7.	_____	_____	_____	_____	___	
8.	_____	_____	_____	_____	___	
9.	_____	_____	_____	_____	___	
10.	_____	_____	_____	_____	___	
_____ = Total Cover					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: _____)					Hydrophytic Vegetation Present? Yes _____ No _____	
1.	_____	_____	_____	_____		
2.	_____	_____	_____	_____		
_____ = Total Cover						
% Bare Ground in Herb Stratum _____						
Remarks: <i>Birch and reg, ARB3E, PBLANC, HORJUG, ... would be present</i>						

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-10	10YR 3/1	100						
10-18	7.5YR 5/2	95	7.5YR 5/2	5	C	M	Silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophylic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

11-7 : 0-3 10YR 3/1 - 100
10-18 : 7.5YR 5/2 - 100

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☒ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☒ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

24-56088-08

Project/Site: BLLP City/County: Mountain Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 8
 Investigator(s): GWM, NPH Section, Township, Range: 24-156-88
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.32115 Long: -101.935683 Datum: NAD-83
 Soil Map Unit Name: 65- Southern silty clay loam NWI classification: L2AB6

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: <u>Obs. pt. along swale that connects 2 large deep, expansive old in large deep wetlands</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
_____ = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
_____ = Total Cover				Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
Herb Stratum (Plot size: <u>20'</u>)																				
1. <u>JUNCA</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>																	
2. <u>POTANS</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>																	
3. <u>CORARV</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>																	
4. <u>AGRCAN</u>	<u>10</u>	<u>N</u>	<u>FAC</u>																	
5. <u>SARARV</u>	<u>5</u>	<u>N</u>	<u>FAC</u>																	
6. <u>GLYCEP</u>	<u>5</u>	<u>N</u>	<u>FACU</u>																	
7. <u>COCAN</u>	<u>5</u>	<u>N</u>	<u>FACU</u>																	
8. _____																				
9. _____																				
10. _____																				
_____ = Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____																				
2. _____																				
_____ = Total Cover																				
% Bare Ground in Herb Stratum <u>0</u>																				
Remarks:																				

Hydrophytic Vegetation Present? Yes ☒ No ☐

2415688-48

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type			
0-8	10YR 3/1	100				S71		
8-18	2.5Y 5/1	95	7.5YR 5/6	5	2	CLL	Gring texture	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☐ (LRR H outside of MLRA 72 & 73)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Reduced Vertic (F18)
☐ Depleted Below Dark Surface (A11)	☐ Red Parent Material (TF2)
☐ Thick Dark Surface (A12)	☐ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: U8 - same hydric soil but alfalfa
No hydrology
AMBPSI 750PRR Dominant 3
54%

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
☒ Surface Water (A1)	☐ Salt Crust (B11)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Sparsely Vegetated Concave Surface (B8)	
☒ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)	
☐ Water Marks (B1)	☐ Dry-Season Water Table (C2)	☐ Oxidized Rhizospheres on Living Roots (C3)	
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ (where tilled)	
☐ Drift Deposits (B3)	☐ (where not tilled)	☐ Crayfish Burrows (C8)	
☐ Algal Mat or Crust (B4)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)	
☒ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)	
☐ Water-Stained Leaves (B9)		☐ Frost-Heave Hummocks (D7) (LRR F)	

Field Observations:			
Surface Water Present?	Yes ☒ No ☐	Depth (inches): 24"	Wetland Hydrology Present? Yes ☒ No ☐
Water Table Present?	Yes ☐ No ☒	Depth (inches): 8"	
Saturation Present? (includes capillary fringe)	Yes ☒ No ☐	Depth (inches): 8"	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM – Great Plains Region

19156087-1

Project/Site: BLLP City/County: Wood Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 1
 Investigator(s): GWM, NPH Section, Township, Range: 14, 15, 087
 Landform (hillslope, terrace, etc.): dgp Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.321826 Long: -101.901637 Datum: NAD 83
 Soil Map Unit Name: MnC A1-x-Williams loams, rolling NWI classification: PEMA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>✓</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>✓</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>✓</u> No <u> </u>	
Remarks: <u>Depression wetland with water in center</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)														
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> </table> Prevalence Index = B/A = <u> </u>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u> </u>	x 1 = <u> </u>																	
FACW species <u> </u>	x 2 = <u> </u>																	
FAC species <u> </u>	x 3 = <u> </u>																	
FACU species <u> </u>	x 4 = <u> </u>																	
UPL species <u> </u>	x 5 = <u> </u>																	
Column Totals: <u> </u> (A)	<u> </u> (B)																	
Sapling/Shrub Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u> </u>																		
2. <u> </u>																		
3. <u> </u>																		
4. <u> </u>																		
5. <u> </u>																		
<u> </u> = Total Cover																		
Herb Stratum (Plot size: <u>20'</u>)																		
1. <u>EC10CRU</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>															
2. <u>PEAC</u>	<u>25</u>	<u>Y</u>	<u>UPL</u>															
3. <u>RUPFRF</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>															
4. <u>SETGLA</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
5. <u>300MAR</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
6. <u> </u>																		
7. <u> </u>																		
8. <u> </u>																		
9. <u> </u>																		
10. <u> </u>																		
<u>40</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>														
1. <u> </u>																		
2. <u> </u>																		
<u> </u> = Total Cover																		
% Bare Ground in Herb Stratum <u>10</u>																		
Remarks: <u>Can't see in center</u>																		

19156087-41

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-8	10YR 3/1	100						
8-	2.5Y 4/2	95	7.5YR 5/6	5	C	m	si	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Twice

1/16-1
0-5-10YR 3/1 - 100
5-11-2.5Y 4/2 100

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) | ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ (where tilled) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) | ☐ Crayfish Burrows (C8) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☒ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ FAC-Neutral Test (D5) |
| ☐ Water-Stained Leaves (B9) | | ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 4"

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☒ No ☐ Depth (inches): 12"

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Det =

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Wash Sampling Date: 8/4/2010
 Applicant/Owner: McCaig State: ND Sampling Point: Wet 2
 Investigator(s): GWM, NPH Section, Township, Range: 17, 15G, 87
 Landform (hillslope, terrace, etc.): dip Local relief (concave, convex, none): _____ Slope (%): 1
 Subregion (LRR): E Lat: 48.371879 Long: -101.90503 Datum: NAD83
 Soil Map Unit Name: MaD Max-Williams loams, strongly sloping NWI classification: PcmC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____
Hydric Soil Present? Yes ☒ No _____	
Wetland Hydrology Present? Yes ☒ No _____	
Remarks: <u>depression wetland with low to no falls in center</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>25</u> x 4 = <u>100</u> UPL species _____ x 5 = _____ Column Totals: <u>105</u> (A) <u>320</u> (B) Prevalence Index = B/A = <u>3.0</u>
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% ☒ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes ☒ No _____
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> _____ = Total Cover				
Remarks: _____				

19 156 087-032

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR2/1	80					sil	
4-10	2.5Y1/1	98	2.5YR3/4	2	4	cm	sil	
10-18"	2.5Y1/1	70	2.5YR3/4	10	4	cm	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Pencil

 4/16/2 - 18-23 No hydrology
 0-4 10YR2/1
 4-2.5Y1/1

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☒ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☐ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 12"Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Pencil

WETLAND DETERMINATION DATA FORM – Great Plains Region

19156087-103

Project/Site: BLCP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 3
 Investigator(s): GWM, NPH Section, Township, Range: 19, 156, 87
 Landform (hillslope, terrace, etc.): dep Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): F Lat: 48.32128 Long: -101.909112 Datum: NAD 83
 Soil Map Unit Name: Pa Barnes silty clay loam NWI classification: PEMCD

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No _____ Hydric Soil Present? Yes ☒ No _____ Wetland Hydrology Present? Yes ☒ No _____	Is the Sampled Area within a Wetland? Yes ☒ No _____
Remarks: <u>depression wetland - drainage in center & surround</u> <u>2.5 ha</u> <u>to flow into along north edge of corridor</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> Prevalence Index = B/A = _____	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____	(A) _____ (B) _____																	
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover																		
Herb Stratum (Plot size: <u>20</u>) 1. <u>Bees</u> <u>25</u> <u>Y</u> <u>UPL</u> 2. <u>Wheat</u> <u>10</u> <u>N</u> <u>UPL</u> 3. <u>Rumex</u> <u>30</u> <u>Y</u> <u>FACW</u> 4. <u>BRASS</u> <u>10</u> <u>N</u> <u>FAC</u> 5. <u>POPPUS</u> <u>20</u> <u>Y</u> <u>FACW</u> 6. <u>ARTBCE</u> <u>5</u> <u>N</u> <u>FAC</u> 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover																		
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u> _____ = Total Cover				Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
Remarks: <u>Calculation was eliminated - presence of wetland veg</u>				Hydrophytic Vegetation Present? Yes ☒ No _____														

SOIL

Sampling Point: 43

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ¹		
0-7	10YR 3/2	100					sil	
7-10	10YR 3/2	95	2.5YR 5/6	5		m	sil	
10-16	2.5Y 4/2	90	2.5YR 5/6	5		m	sil	
			2.5Y 5/1	5		m	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☒ Surface Soil Cracks (B6) |
| ☒ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 12"Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 4
 Investigator(s): GWM, NPH Section, Township, Range: 19-156-87
 Landform (hillslope, terrace, etc.): depr Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.321206 Long: -101.911678 Datum: NAD83
 Soil Map Unit Name: MmC Max-Williams loams, rolling NWI classification: PERC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks: <u>deposition with high water level</u> <u>EXATHE - in Interior</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)														
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> </table> Prevalence Index = B/A = <u> </u>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u> </u>	x 1 = <u> </u>																	
FACW species <u> </u>	x 2 = <u> </u>																	
FAC species <u> </u>	x 3 = <u> </u>																	
FACU species <u> </u>	x 4 = <u> </u>																	
UPL species <u> </u>	x 5 = <u> </u>																	
Column Totals: <u> </u> (A)	<u> </u> (B)																	
Sapling/Shrub Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u> </u>																		
2. <u> </u>																		
3. <u> </u>																		
4. <u> </u>																		
5. <u> </u>																		
<u> </u> = Total Cover																		
Herb Stratum (Plot size: <u>20'</u>)																		
1. <u>BARBER</u>	<u>45</u>	<u>Y</u>	<u>FAC</u>															
2. <u>RUMEX</u>	<u>15</u>	<u>N</u>	<u>FACW</u>															
3. <u>ARTEM</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
4. <u>POA</u>	<u>20</u>	<u>Y</u>	<u>OPL</u>															
5. <u>STYAL</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>															
6. <u> </u>																		
7. <u> </u>																		
8. <u> </u>																		
9. <u> </u>																		
10. <u> </u>																		
<u>110</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>														
1. <u> </u>																		
2. <u> </u>																		
<u> </u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>	<u> </u> = Total Cover																	
Remarks: <u>Poa along riparian</u> <u>Shrub / ALI PLANT - in Interior</u>																		

SOIL

Sampling Point: 444

19/56 087-444

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type			
0-6	10YR 3/4	100					Sil	
6-11	2.5Y 4/2	10	2.5Y 3/2	15	d	m	sil	
			2.5YR 5/6	5	c	m	sil	
11-18	2.5Y 3/4	90	2.5YR 5/6	10	c	m	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☒ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Tank

4PL-4

0-6Y 3/4 R 3/4

6-10 10YR 3/4

10-15 2.5Y 4/2 - 444

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required, check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|---|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) | ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ (where tilled) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) | ☐ Crayfish Burrows (C8) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) | ☒ Saturation Visible on Aerial Imagery (C9) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☐ Geomorphic Position (D2) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ FAC-Neutral Test (D5) |
| ☐ Water-Stained Leaves (B9) | | ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☐ Depth (inches): 12"Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

POMC

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: 46+5
 Investigator(s): SNM, NPH Section, Township, Range: 19-156-87
 Landform (hillslope, terrace, etc.): tiny up Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.321515 Long: -101.912734 Datum: NAD83
 Soil Map Unit Name: Mac Mac-Williams loams, rolling NWI classification: 10A1
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: <u>Tiny depression</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u>35</u> x 2 = <u>70</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>15</u> x 5 = <u>75</u> Column Totals: <u>100</u> (A) <u>270</u> (B) Prevalence Index = B/A = <u>2.7</u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u>X</u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>ARTISIA</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
2. <u>CECUM</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	
3. <u>AUFET</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
4. <u>AMARET</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Poa</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>40</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>				
Remarks: <u>Poa along upland edge</u>				

SOIL

Sampling Point:

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	100					sil	
6-10	10YR 3/2	75	7.5YR 5/6	5	C	✓	sil	
10-	2.5YR 4/2	95	2.5YR 5/6	5	C	✓	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: Depth (inches): Hydric Soil Present? Yes ☒ No ☐Remarks: 7mbs - Deep Profile in center

up to 4 =
 0-9 = 10YR 3/1
 4-10 = 10YR 4/2

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☒ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): Water Table Present? Yes ☐ No ☒ Depth (inches): Saturation Present? Yes ☐ No ☒ Depth (inches):
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 6
 Investigator(s): GWM, NPH Section, Township, Range: 19-156-87
 Landform (hillslope, terrace, etc.): Dep. Local relief (concave, convex, none): 1 Slope (%): 1
 Subregion (LRR): E Lat: 48.321287 Long: -101.915914 Datum: NAD 83
 Soil Map Unit Name: MmC-Mox-Williams/cons. rolling NWI classification: PEMCD
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks: <u>- depression wetland with owl & burrhead/cottails indicator</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0' <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>CERARV</u>	<u>30</u>	<u>Y</u>	<u>FacU</u>	
2. <u>PERB</u>	<u>5</u>	<u>N</u>	<u> </u>	
3. <u>EPI STL</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Rumex</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
5. <u>ART BJC</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
6. <u>SETGLA</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Added in interview</u>				

19150087

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-2	10YR 3/1	100					SI	
2-10	2.5Y 7/2	100					SI	
10-22	2.5Y 4/1	98	2.5YR 3/2	2	c	m	SI	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☐ Loamy Gleyed Matrix (F2)	☐ (LRR H outside of MLRA 72 & 73)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)	☐ Reduced Vertic (F18)
☒ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (TF2)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)	
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	☐ (MLRA 72 & 73 of LRR H)	

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No _____
--	--

Remarks: *Take*

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required, check all that apply) ☒ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☒ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5) ☐ Frost-Heave Hummocks (D7) (LRR F)
Field Observations: Surface Water Present? Yes ☒ No _____ Depth (inches): <u>24"</u> Water Table Present? Yes _____ No ☒ Depth (inches): _____ Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <i>None</i>	

WETLAND DETERMINATION DATA FORM – Great Plains Region

19156087-127

Project/Site: BLLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 7
 Investigator(s): QWM, NPH Section, Township, Range: 19, 156, 087
 Landform (hillslope, terrace, etc.): CRP Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.320696 Long: -101.918122 Datum: NAD83
 Soil Map Unit Name: MacMax-Williams loess, rolling NWI classification: PERC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u>	No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>	
Remarks: <u>Depressed wetland</u> <u>OW in center</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
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<u> </u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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2. <u> </u>				
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
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3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
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4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-2	2.5Y 2.5/1	100						
7-12	2.5Y 3/1	90	2.5YR 5/6	10	C	in	silt	
12-15	2.5Y 2.5/1	100						
15-21	2.5Y 4/1	90	2.5YR 5/6	5	C	in	silt	
			2.5Y 6/2	50	d	in	silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☐ Loamy Gleyed Matrix (F2)	☐ (LRR H outside of MLRA 72 & 73)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)	☐ Reduced Vertic (F18)
☐ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (TF2)
☒ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)	wetland hydrology must be present,
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	☐ (MLRA 72 & 73 of LRR H)	unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

sediment along wetland edge
due to cultivation
thick overburden

11/26/7 0-5-10YR 3/1
3-10 10YR 3/1 - 80
14YR 3/1 - 90
10- 10YR 3/1

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required, check all that apply)

☒ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)
☐ Water Marks (B1)	☐ Dry-Season Water Table (C2)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ (where not tilled)
☐ Algal Mat or Crust (B4)	☐ Presence of Reduced Iron (C4)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)	

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present?	Yes ☒ No ☐	Depth (inches): 24"
Water Table Present?	Yes ☐ No ☒	Depth (inches):
Saturation Present?	Yes ☒ No ☐	Depth (inches): 40"

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

NWS - RMC

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: 28
 Investigator(s): GWM, NPH Section, Township, Range: 19 154 87
 Landform (hillslope, terrace, etc.): depts Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.320578 Long: -101.920753 Datum: NAD 83
 Soil Map Unit Name: Pe Rinell soils, very poorly drained NWI classification: PEMC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u> No <u> </u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>		
Remarks: <u>large depression expansive and eroded</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
<u> </u> = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
Herb Stratum (Plot size: <u>20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>SPARCE</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>BRDINC</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
3. <u>CITRUS</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
4. <u>SUNARV</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
5. <u>SOLCAN</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>ROLAM E</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
7. <u> </u>				
8. <u> </u>				
9. <u> </u>				
10. <u> </u>				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u> </u>				
2. <u> </u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>C. Hails in interior</u>				

19156087-08

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features		Type	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-3	10YR 3/1						Silt	
3-12	2.5Y 4/2	80	7.5YR 5/6	20	C	M	Silt	
12-14	6.5Y 1/1	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☒ Loamy Gleyed Matrix (F2)	☐ Reduced Vertic (F18)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)	☐ Red Parent Material (TF2)
☒ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)	☐ Other (Explain in Remarks)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)	
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)	
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)	

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes ☒ No ☐
--	--

Remarks:
4PL-8-0-3 10YR 3/2
3-8 10YR 3/3

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1)	☐ Salt Crust (B11)	☐ Surface Soil Cracks (B6)
☒ High Water Table (A2)	☐ Aquatic Invertebrates (B13)	☐ Sparsely Vegetated Concave Surface (B8)
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Drainage Patterns (B10)
☐ Water Marks (B1)	☐ Dry-Season Water Table (C2)	☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)	☐ Crayfish Burrows (C8)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)
☐ Inundation Visible on Aerial Imagery (B7)		☐ Frost-Heave Hummocks (D7) (LRR F)
☐ Water-Stained Leaves (B9)		

Field Observations:		Wetland Hydrology Present? Yes ☒ No ☐
Surface Water Present? Yes ☒ No ☐	Depth (inches): 24 - 30	
Water Table Present? Yes ☒ No ☐	Depth (inches): 4"	
Saturation Present? (includes capillary fringe) Yes ☒ No ☐	Depth (inches): 0"	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

20136 087.001

Project/Site: BLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 4
 Investigator(s): GWM, NPH Section, Township, Range: 20 136 087
 Landform (hillslope, terrace, etc.): dep. Local relief (concave, convex, none): 1 Slope (%): 1
 Subregion (LRR): F Lat: 48.322235 Long: -101.894568 Datum: NAD-83
 Soil Map Unit Name: MmC Max-Williams loams, rolling NWI classification: Pemc

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes 2 No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: <u>Large depression wetland - cultivated along upper edge</u> <u>Expansive on area</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover				Prevalence Index worksheet: <table style="width:100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>260</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.6</u>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u>100</u>	(A) <u>260</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>30</u>	x 1 = <u>30</u>																	
FACW species <u>25</u>	x 2 = <u>50</u>																	
FAC species <u> </u>	x 3 = <u> </u>																	
FACU species <u>45</u>	x 4 = <u>180</u>																	
UPL species <u> </u>	x 5 = <u> </u>																	
Column Totals: <u>100</u>	(A) <u>260</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u> </u>)																		
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover																		
Herb Stratum (Plot size: <u>20'</u>)																		
1. <u>POLYMIA</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>															
2. <u>HELIANT</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>															
3. <u>BRUEN</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>															
4. <u>CERARV</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>															
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u> </u>)																		
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Remarks: <u>Controls for indicator</u>																		

Hydrophytic Vegetation Indicators:
 ___ Dominance Test is >50%
X Prevalence Index is ≤3.0¹
 ___ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/1	100						
8-10	10YR 3/1	45						
	10YR 3/2	55						
10-12	2.5Y 4/1	95	2.5YR 5/6	5	C	in	silt	
12-15	2.5Y 4/1	98	2.5YR 5/6	2	C	in	silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

- sediment caught just above wetland boundary

 upl-3 0-7 10YR 3/1 F16
 7-14 10YR 3/2 M-Hy
 14-16 2.5Y 5/3
 16-18 10YR 3/2

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required, check all that apply)

- | | |
|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☐ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

- | | | |
|------------------------|---|---------------------|
| Surface Water Present? | Yes ☒ No ☐ | Depth (inches): 36" |
| Water Table Present? | Yes ☐ No ☒ | Depth (inches): |
| Saturation Present? | Yes ☐ No ☐ | Depth (inches): |

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

P.E.M.

WETLAND DETERMINATION DATA FORM – Great Plains Region

20156087-29

Project/Site: BLLP City/County: Wood Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 5
 Investigator(s): GWM, NPH Section, Township, Range: 20-156-87
 Landform (hillslope, terrace, etc.): dep Local relief (concave, convex, none): concave Slope (%): 41
 Subregion (LRR): F Lat: 48.322193 Long: -101.898007 Datum: NAD-83
 Soil Map Unit Name: WIC Williams (peds), undulating NWI classification: PEM1C
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present? Yes ☒ No ☐	
Wetland Hydrology Present? Yes ☒ No ☐	
Remarks: <u>depression wetland with steep slopes draining into 200s. at bottom of converging slopes</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>201</u>)				
1. <u>FLAX</u>	<u>35</u>	<u>4</u>	<u>UPL</u>	
2. <u>POLARIS</u>	<u>45</u>	<u>1</u>	<u>OBL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>20</u>	_____ = Total Cover			
Remarks: <u>POLARIS in basin</u>				

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species <u>45</u>	x 1 = <u>45</u>
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species <u>25</u>	x 5 = <u>125</u>
Column Totals: <u>80</u> (A)	<u>220</u> (B)
Prevalence Index = B/A = <u>2.75</u>	
Hydrophytic Vegetation Indicators:	
___ Dominance Test is >50%	
☒ Prevalence Index is ≤3.0 ¹	
___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
___ Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Hydrophytic Vegetation Present? Yes ☒ No ☐	

20156089-109

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-4	2.5Y 4/2	100					sil	
4-8	2.5Y 4/2	90	2.5Y 4/2	10	C	m	sil	
8-12	2.5Y 4/2	80	2.5Y 4/2	10	C	m	sil	
	2.5Y 4/1	10						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Tanka Series

up to 4 ft thick
0-4 2.5Y 4/2
4-24 2.5Y 4/1

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|--|
| ☐ Surface Soil Cracks (B6) |
| ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☒ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☐ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 12

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? Yes ☐ No ☒ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PEMC

WETLAND DETERMINATION DATA FORM – Great Plains Region

2015087-01

Project/Site: BLP City/County: Wood Sampling Date: 8/4/10
 Applicant/Owner: McCaik State: ND Sampling Point: Wet 1
 Investigator(s): GWM, NPH Section, Township, Range: 20-156-87
 Landform (hillslope, terrace, etc.): Sp Local relief (concave, convex, none): _____ Slope (%): 1
 Subregion (LRR): E Lat: 48.322462 Long: -101.882025 Datum: NAD 83
 Soil Map Unit Name: Pa Parnell silty clay loam NWI classification: PERM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: <u>Depression wetland with potholes & surface water</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-):	<u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>25</u> (A/B)
4. _____	_____	_____	_____		
_____ = Total Cover					
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species _____	x 1 = _____
3. _____				FACW species _____	x 2 = _____
4. _____				FAC species _____	x 3 = _____
5. _____				FACU species _____	x 4 = _____
_____ = Total Cover				UPL species _____	x 5 = _____
Herb Stratum (Plot size: <u>20'</u>)				Column Totals:	(A) _____ (B) _____
1. <u>ALB</u>	<u>20</u>	<u>Y</u>	<u>UPL</u>	Prevalence Index = BA = _____	
2. <u>SUN ORB</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
3. <u>MONJUB</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	<u>X</u> Dominance Test is >50%	
4. <u>IGC SC0</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	____ Prevalence Index is ≤3.0 ¹	
5. <u>ALRCAN</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. _____				____ Problematic Hydrophytic Vegetation ¹ (Explain)	
7. _____					
8. _____					
9. _____					
10. _____					
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?	
1. _____				Yes <u>X</u> No _____	
2. _____					
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>0</u>					
Remarks: <u>Woody species along wetland edge</u>					

2015487-01

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					silt	
5-9	10YR 3/1	70	2.5YR 5/6	10	C	m	silt	
9-15	2.5Y 4/1	90	2.5YR 5/6	10	C	m	silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☒ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Takes series

Upland - U1
Wetland

No Hydrology

0-7 10YR 3/1
7-12 2.5Y 4/2 - 50

Upland soils

10-15 2.5Y 5/3 - 80

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) | ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ (where tilled) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) | ☐ Crayfish Burrows (C8) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) | ☒ Saturation Visible on Aerial Imagery (C9) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☒ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ FAC-Neutral Test (D5) |
| ☐ Water-Stained Leaves (B9) | | ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 12"Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLP City/County: Ward Sampling Date: 2015087-02
 Applicant/Owner: McCain State: ND Sampling Point: Wet 2
 Investigator(s): GWM, NPH Section, Township, Range: 30-156-87
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.32065 Long: -101.887406 Datum: NAD83
 Soil Map Unit Name: Pe Parnell soils, very poorly drained NWI classification: PABF

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: <u>Depression wetland with cattails/white-top in center</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
= Total Cover				
Herb Stratum (Plot size: <u>20</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0' <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Wheat</u>	<u>25</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Horsetail</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Red clover</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Spadec</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
5. <u>Alfalfa</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
6. <u>Flax</u>	<u>5</u>	<u>N</u>	<u>UPL</u>	
7. <u> </u>				
8. <u> </u>				
9. <u> </u>				
10. <u> </u>				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
= Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Cattails in center</u>				

20156 87-203

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/1	100					sil	
9-15	2.5Y 4/2	85	7.5YR 5/6	5	C	m	sil	
	10YR 3/1	10						
15-22	2.5Y 4/2	80	7.5YR 5/6	10	C	m	sil	
	2.5Y 5/1	10						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophylic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Yonke Series
upl-3 - wet - 70%
hydrology - no
0-7" 10YR 3/1 80%
7-14" 2.5Y 5/1 100%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) | ☐ Sparsely Vegetated Concave Surface (B8) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ (where tilled) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) | ☐ Crayfish Burrows (C8) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☒ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ FAC-Neutral Test (D5) |
| ☐ Water-Stained Leaves (B9) | | ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 12"Water Table Present? Yes ☐ No ☒ Depth (inches):Saturation Present? Yes ☐ No ☒ Depth (inches):

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

pomo

WETLAND DETERMINATION DATA FORM – Great Plains Region

2015087-W

Project/Site: BLLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 3
 Investigator(s): GWM, NPH Section, Township, Range: 20-156-87
 Landform (hillslope, terrace, etc.): dep Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.322321 Long: -101.889005 Datum: NAD-83
 Soil Map Unit Name: WIC Williams loams, undulating NWI classification: PABF
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: <u>depression wetland - (aka on south end is cultivated)</u> <u>Wet 3 in 1/2010</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u> </u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0' <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>KUG. SED</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Wheat</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
9. <u> </u>				
10. <u> </u>				
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>Y</u> No <u> </u>
1. <u> </u>				
2. <u> </u>				
<u>30</u> = Total Cover				
% Bare Ground in Herb Stratum <u>30</u>				
Remarks: <u>Cattails in center → HORNB/CRACK REED ARE PRESENT IF 1/2010 WASN'T CULTIVATED</u>				

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-7	10YR 3/1	100					sil	
7-10	2.5Y 3/1	60	2.5Y 3/1	30	d	m	sil	
			2.5YR 3/1	10	c	m	sil	
10-18	2.5Y 4/1	95	2.5YR 4/1	10	c	m	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophylic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐Remarks: *Toke Series**uph3*

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☒ Surface Soil Cracks (B6) |
| ☒ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): *24" - indeterminate*Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *PEMC*

WETLAND DETERMINATION DATA FORM – Great Plains Region

215487-01

Project/Site: BLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: McCain State: ND Sampling Point: Wet 1
 Investigator(s): GWM, NPH Section, Township, Range: 21 156 87
 Landform (hillslope, terrace, etc.): Sp. Local relief (concave, convex, none): _____ Slope (%): <1
 Subregion (LRR): F Lat: 48.322755 Long: -101.866005 Datum: NAD 83
 Soil Map Unit Name: Pa Perrell silty clay loam NWI classification: PEMFD

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: <u>depressive wetland with shallow drainage ditch extending to south</u> <u>- tilled along wetland edge</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-):	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>67</u> (A/B)
4. _____	_____	_____	_____		
_____ = Total Cover					
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x 1 = _____
3. _____	_____	_____	_____	FACW species _____	x 2 = _____
4. _____	_____	_____	_____	FAC species _____	x 3 = _____
5. _____	_____	_____	_____	FACU species _____	x 4 = _____
_____ = Total Cover				UPL species _____	x 5 = _____
				Column Totals:	(A) _____ (B) _____
				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: <u>20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>EPICL</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	<u>X</u> Dominance Test is >50%	
2. <u>wheat</u>	<u>30</u>	<u>Y</u>	<u>UA</u>	Prevalence Index is ≤3.0 ¹	
3. <u>URSAL</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <u>SET GLA</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)	
5. <u>BLOJAP</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
_____ = Total Cover					
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>0</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Remarks: <u>Cattails / RECSY2 in center</u> <u>wheat - upland side</u>					

21 156 087-01

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	30					sil	
6-18	2.5Y 4/1	92	7.5YR 5/6	5	c	m	sil	
			2.5Y 4/1	3	d	m	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☒ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Fork

upl-1

0-7-10YR 2/1 92/2.5Y 4/1 5-6
ant get 7.5Y 5/6 5-6

deeper - least no hydrology

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☒ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☒ Surface Soil Cracks (B6)
☒ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 20" — ForkWater Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.

Remarks:

NWI - PEMFO

WETLAND DETERMINATION DATA FORM – Great Plains Region

21156082 W2

Project/Site: BLLP City/County: Ward Sampling Date: 8/4/2010
 Applicant/Owner: Mc Cain State: ND Sampling Point: W2
 Investigator(s): GWM, NPH Section, Township, Range: 21 156 87
 Landform (hillslope, terrace, etc.): shallow dip Local relief (concave, convex, none): concave Slope (%): <1
 Subregion (LRR): F Lat: 48.302586 Long: -101.871082 Datum: NAD 83
 Soil Map Unit Name: WIC Williams loams, undulating NWI classification: PEMFD
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: <u>shallow depression - ditch running south out of wetland</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>															
<u> </u> = Total Cover				Prevalence Index worksheet: <table style="width:100%"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u> </u></td> <td>x 1 = <u> </u></td> </tr> <tr> <td>FACW species <u> </u></td> <td>x 2 = <u> </u></td> </tr> <tr> <td>FAC species <u> </u></td> <td>x 3 = <u> </u></td> </tr> <tr> <td>FACU species <u> </u></td> <td>x 4 = <u> </u></td> </tr> <tr> <td>UPL species <u> </u></td> <td>x 5 = <u> </u></td> </tr> <tr> <td>Column Totals: <u> </u> (A)</td> <td><u> </u> (B)</td> </tr> </table> Prevalence Index = B/A = <u> </u>	Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u> </u>	x 1 = <u> </u>																	
FACW species <u> </u>	x 2 = <u> </u>																	
FAC species <u> </u>	x 3 = <u> </u>																	
FACU species <u> </u>	x 4 = <u> </u>																	
UPL species <u> </u>	x 5 = <u> </u>																	
Column Totals: <u> </u> (A)	<u> </u> (B)																	
Sapling/Shrub Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u> </u>																		
2. <u> </u>																		
3. <u> </u>																		
4. <u> </u>																		
5. <u> </u>																		
<u> </u> = Total Cover																		
Herb Stratum (Plot size: <u>20'</u>)																		
1. <u>HORSUB</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>															
2. <u>POLEME</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>															
3. <u>AUFAT</u>	<u>10</u>	<u>Y</u>	<u>HPL</u>															
4. <u>KOCSO</u>	<u>10</u>	<u>N</u>	<u>FAC</u>															
5. <u>LENERA</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
6. <u>EPICTH</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
7. <u> </u>																		
8. <u> </u>																		
9. <u> </u>																		
10. <u> </u>																		
<u>100</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>														
1. <u> </u>																		
2. <u> </u>																		
<u> </u> = Total Cover																		
% Bare Ground in Herb Stratum <u>0</u>																		
Remarks: <u> </u>																		

SOIL

Sampling Point: _____

1915487-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-12	2.5Y 2.5/1	100						
12-18	2.5Y 2.5/1	100						
18-24	2.5Y 2.5/1	95	2.5Y 2.5/1	5	L	m	Sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) (LRR F)
☐ 1 cm Muck (A9) (LRR F, G, H)
☐ Depleted Below Dark Surface (A11)
☒ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Deep + Dark

U2-D-18-104R3/1

18-30 104R3/2 95-2.5Y 2.5/1

No deep

Set 6.0A/Ammonia + 35

MUT - Cracks, AUCPAT-12

C180W-10

EOL-5

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Dry-Season Water Table (C2)
☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
☐ Presence of Reduced Iron (C4)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☒ Surface Soil Cracks (B6)
☒ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

MUT - REMFD

WETLAND DETERMINATION DATA FORM – Great Plains Region

2156 087-W3

Project/Site: BLLP City/County: Ward Sampling Date: 8/4/10
 Applicant/Owner: McCain State: ND Sampling Point: Wet 3
 Investigator(s): GWM, NPH Section, Township, Range: 21-156-87
 Landform (hillslope, terrace, etc.): deep, sandy Local relief (concave, convex, none): _____ Slope (%): 21
 Subregion (LRR): E Lat: 48.322196 Long: -101.876767 Datum: NAD 83
 Soil Map Unit Name: Pe Perrell silty clay loam NWI classification: PEM/ABF

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>✓</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>✓</u>	No _____
Hydric Soil Present?	Yes <u>✓</u>	No _____			
Wetland Hydrology Present?	Yes <u>✓</u>	No _____			
Remarks: <u>obs. pt. in bore to east of wetland</u> 					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>20'</u>) 1. <u>RUMEX</u> <u>30</u> <u>Y</u> <u>FACW</u> 2. <u>AVE FAT</u> <u>25</u> <u>Y</u> <u>UPL</u> 3. <u>HERB</u> <u>25</u> <u>Y</u> <u>FACW</u> 4. <u>SET GLA</u> <u>15</u> <u>N</u> <u>FACU</u> 5. <u>CONV</u> <u>5</u> <u>N</u> <u>FACU</u> 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> _____ = Total Cover				
Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____				
Remarks: <u>bulbs in main basin</u>				

SOIL

Sampling Point: 43

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-13	2.5Y 2.5/1	100						
13-20	2.5Y 4/1	95	7.5YR 5/6	5	C	m	sil	
20-24	2.5Y 4/2	60	7.5YR 5/6	5	C	m	sil	
	2.5Y 4/1	35						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☐ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☒ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | ☐ (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

obs pt. is sulfate coming from wet land

obs. 43- 0-7 10YR 3/1
2-10 10YR 4/3 - 100
No hydrology

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☒ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ (where not tilled) |
| ☒ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- | |
|---|
| ☒ Surface Soil Cracks (B6) |
| ☒ Sparsely Vegetated Concave Surface (B8) |
| ☐ Drainage Patterns (B10) |
| ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ (where tilled) |
| ☐ Crayfish Burrows (C8) |
| ☒ Saturation Visible on Aerial Imagery (C9) |
| ☒ Geomorphic Position (D2) |
| ☐ FAC-Neutral Test (D5) |
| ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☐ No ☒ Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

P&MC - in main soil

WETLAND DETERMINATION DATA FORM – Great Plains Region

22156087-01

Project/Site: BLLP City/County: Ward Sampling Date: 8/3/2010
 Applicant/Owner: McCaig State: ND Sampling Point: Wet 1
 Investigator(s): GWM, NPH Section, Township, Range: 22-156-87
 Landform (hillslope, terrace, etc.): cpd Local relief (concave, convex, none): _____ Slope (%): 1
 Subregion (LRR): F Lat: 48.32296 Long: -101.850072 Datum: NAD 83
 Soil Map Unit Name: Lo Man vel's loam, nearly level to gently sloping NWI classification: PAGE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>✓</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>✓</u> No _____	
Wetland Hydrology Present?	Yes <u>✓</u> No _____	
Remarks: <u>Large depression wetland - expansive open area with obs. pt. in converging drainage going into wetland</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-):	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x 1 = _____
3. _____	_____	_____	_____	FACW species _____	x 2 = _____
4. _____	_____	_____	_____	FAC species _____	x 3 = _____
5. _____	_____	_____	_____	FACU species _____	x 4 = _____
Herb Stratum (Plot size: <u>20'</u>)				UPL species _____	x 5 = _____
1. <u>JUN BSL</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Column Totals:	(A) _____ (B) _____
2. <u>GLTLEP</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	Prevalence Index = B/A = _____	
3. <u>AGRCAN</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
4. <u>POTANIS</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	<u>X</u> Dominance Test is >50%	
5. <u>MELUFP</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	Prevalence Index is ≤3.0 ¹	
6. _____	_____	_____	_____	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7. _____	_____	_____	_____	Problematic Hydrophytic Vegetation ¹ (Explain)	
8. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
9. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
10. _____	_____	_____	_____		
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
% Bare Ground in Herb Stratum <u>0</u>					
Remarks: <u>Diverse area SPAREL above</u>					

22134087-21

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					SCR	sandy clay 100%
5-11	2.5Y 4/2	85	2.5YR 5/6	15	C	m	SCR	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☐ Loamy Gleyed Matrix (F2)	☐ (LRR H outside of MLRA 72 & 73)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)	☐ Reduced Vertic (F18)
☒ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (TF2)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)	☐ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)	wetland hydrology must be present,
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	☐ (MLRA 72 & 73 of LRR H)	unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Reduced matrix in upper 6" of soil

Many surface rocks nearly obs. pl.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required, check all that apply)

☒ Surface Water (A1)	☐ Salt Crust (B11)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☒ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)
☐ Water Marks (B1)	☐ Dry-Season Water Table (C2)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ (where not tilled)
☐ Algal Mat or Crust (B4)	☐ Presence of Reduced Iron (C4)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☒ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)
☐ Water-Stained Leaves (B9)	

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Drainage Patterns (B10)
☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)
☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 36"

Water Table Present? Yes ☐ No ☒ Depth (inches): 0"

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: NWI = PEMF

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Ward Sampling Date: 23/56 087- W2 8/3/200
 Applicant/Owner: McCain State: ND Sampling Point: Wet 2
 Investigator(s): GWM, NPH Section, Township, Range: 23, 156, 087
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): _____ Slope (%): 1
 Subregion (LRR): F Lat: 48.324579 Long: -10.825713 Datum: NAD 83
 Soil Map Unit Name: Pa Pennell silty clay loam NWI classification: PERC
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>depression wetland</u> <u>PERC</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)	_____	_____	_____	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)	_____	_____	_____	Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>SPARCE</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>POLAME</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	
3. <u>BROINE</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
4. <u>SONARV</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
% Bare Ground in Herb Stratum <u>0</u>	_____	_____	_____	
Remarks: <u>POLAME Co.</u> <u>Invasive</u>				

SOIL

23156087-022

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	100					Silt	
5-24"	2.5Y 7/2	85	7.5YR 5/6	15	C	ma	Silt	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|---|--|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) | ☐ 1 cm Muck (A9) (LRR I, J) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) | ☐ Coast Prairie Redox (A16) (LRR F, G, H) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) | ☐ Dark Surface (S7) (LRR G) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) | ☐ High Plains Depressions (F16) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) | ☐ (LRR H outside of MLRA 72 & 73) |
| ☐ 1 cm Muck (A9) (LRR F, G, H) | ☒ Depleted Matrix (F3) | ☐ Reduced Vertic (F18) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) | ☐ Red Parent Material (TF2) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) | ☐ Other (Explain in Remarks) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) | ³ Indicators of hydrophytic vegetation and |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) | wetland hydrology must be present, |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) | unless disturbed or problematic. |

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Tanka Series

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (minimum of two required)

- | | | |
|--|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) | ☐ Sparsely Vegetated Concave Surface (B8) |
| ☒ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Drainage Patterns (B10) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☒ Oxidized Rhizospheres on Living Roots (C3) | (where tilled) |
| ☐ Drift Deposits (B3) | (where not tilled) | ☐ Crayfish Burrows (C8) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☐ Geomorphic Position (D2) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ FAC-Neutral Test (D5) |
| ☐ Water-Stained Leaves (B9) | | ☐ Frost-Heave Hummocks (D7) (LRR F) |

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 6"Water Table Present? Yes ☐ No ☒ Depth (inches):Saturation Present? Yes ☒ No ☐ Depth (inches): 4"

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VNI - Pemic

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: ward Sampling Date: 8/3/2010
 Applicant/Owner: McCain State: ND Sampling Point: 42
 Investigator(s): CWM, NPH Section, Township, Range: 23-156-87
 Landform (hillslope, terrace, etc.): Slope above wetland Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR): F Lat: _____ Long: _____ Datum: NAD 83
 Soil Map Unit Name: Zahl-man loamy hill NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>Upland Camp pt.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>EUPESU</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>TOAPRA</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
3. <u>SUNBAL</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
4. <u>TRIDINE</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks:				

23156087-42

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		
0-5	10YR 3/2	100					Sandy	
5-12	2.5Y 4/1	70	7.5 YR 4/4	30			Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 1 cm Muck (A9) (LRR I, J)
☐ Histic Epipedon (A2)	☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Black Histic (A3)	☐ Dark Surface (S7) (LRR G)
☐ Hydrogen Sulfide (A4)	☐ High Plains Depressions (F16)
☐ Stratified Layers (A5) (LRR F)	☐ (LRR H outside of MLRA 72 & 73)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Reduced Vertic (F18)
☐ Depleted Below Dark Surface (A11)	☐ Red Parent Material (TF2)
☐ Thick Dark Surface (A12)	☐ Other (Explain in Remarks)
☐ Sandy Mucky Mineral (S1)	³ Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic.
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	
☐ Sandy Gleyed Matrix (S4)	
☐ Sandy Redox (S5)	
☐ Stripped Matrix (S6)	
☐ Loamy Mucky Mineral (F1)	
☐ Loamy Gleyed Matrix (F2)	
☐ Depleted Matrix (F3)	
☐ Redox Dark Surface (F6)	
☐ Depleted Dark Surface (F7)	
☐ Redox Depressions (F8)	
☐ High Plains Depressions (F16) (MLRA 72 & 73 of LRR H)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (minimum of two required)
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Water-Stained Leaves (B9)	☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Dry-Season Water Table (C2) ☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled) ☐ Presence of Reduced Iron (C4) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)
☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Geomorphic Position (D2) ☐ FAC-Neutral Test (D5) ☐ Frost-Heave Hummocks (D7) (LRR F)	
Field Observations:	Wetland Hydrology Present? Yes _____ No ☒
Surface Water Present? Yes _____ No ☒ Depth (inches): _____ Water Table Present? Yes _____ No ☒ Depth (inches): _____ Saturation Present? Yes _____ No ☒ Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Obs. on slope wetland boundary	

WETLAND DETERMINATION DATA FORM – Great Plains Region

23156087-4

Project/Site: BLP City/County: Ward Sampling Date: 8/13/2010
 Applicant/Owner: McCaig State: ND Sampling Point: Wet3
 Investigator(s): Gwm. NPH Section, Township, Range: 23-56-87
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): F Lat: 48.324574 Long: -101.828847 Datum: NAD-83
 Soil Map Unit Name: Pe Parnell soils very poorly drained NWI classification: L2ABG
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____ Soil _____ or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____ Soil _____ or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>Large depression wetland</u> <u>expansive open area with patches of cattails</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% Prevalence Index is ≤3.0' Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>JUNCE</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
2. <u>ASTER</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>SPAR</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
4. <u>HECALB</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
5. <u>SONARV</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
6. <u>RTANS</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
7. _____				
8. _____				
9. _____				
10. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>				
Remarks: <u>Junkies River along upland edge</u>				

SOIL

Sampling Point: 2-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1	100					sil	
3-6	2.5Y 4/1	98	7.5YR 3/6	2	C	m	sil	
6-14	2.5Y 3/1	90	7.5YR 3/6	2	C	m	sil	
14-17	2.5Y 8/2	85	7.5YR 3/6	5	C	m	sil	
	2.5Y 4/1	90						
17-24	2.5Y 3/1	90	7.5YR 3/6	5	C	m	sil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|---|--|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Stratified Layers (A5) (LRR F) | ☐ Loamy Gleyed Matrix (F2) |
| ☒ 1 cm Muck (A9) (LRR F, G, H) | ☒ Depleted Matrix (F3) |
| ☒ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | ☐ High Plains Depressions (F16) |
| ☐ 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16)
- ☐ (LRR H outside of MLRA 72 & 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|---|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☒ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☒ Drift Deposits (B3) | (where not tilled) |
| ☐ Algal Mat or Crust (B4) | ☐ Presence of Reduced Iron (C4) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☒ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ (where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 30"

Water Table Present? Yes ☐ No ☒ Depth (inches): _____

Saturation Present? Yes ☒ No ☐ Depth (inches): 4"

(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

23/50087-W4

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: BLLP City/County: Ward Sampling Date: 8/3/2010
 Applicant/Owner: McCain State: ND Sampling Point: W4
 Investigator(s): GWM, NPH Section, Township, Range: 23, 156, 087
 Landform (hillslope, terrace, etc.): dep Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): F Lat: 48.32427 Long: -101.834776 Datum: NAD 83
 Soil Map Unit Name: WIC Williams loams, undulating NWI classification: Pemc

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X
 Are Vegetation X, Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No <u> </u>
Hydric Soil Present?	Yes <u> </u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>X</u>	No <u> </u>			
Remarks: <u>Depression wetland sparsely barren of vegetation</u> <u>ARTSIE would be in wetland</u>					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Herb Stratum (Plot size: <u>20</u>)				
1. <u>WORMS</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Wheat</u>	<u>30</u>	<u>Y</u>	<u>UPL</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>40</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>60</u>				
Remarks: <u>Wheat along upland edge</u>				

Hydrophytic Vegetation Indicators:
 ___ Dominance Test is >50%
 ___ Prevalence Index is ≤3.0¹
 ___ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No