

# **Appendix A**

## **Summary Table**

Survey Date (s)	Site	Native Plant Community Code	Description	Calcareous Fen Point Summary
6/29/2016 and 8/15/2016	BR01	OPp93	Calc Fen - Prairie Extremely Rich Fen	80
7/1/2016	BR02	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR02	MRp93	Prairie Bulrush-Arrowhead Marsh	0
6/30/2016	BR03	WMp73	Prairie Wet Meadow/Carr	0
6/30/2016	BR04	WMS83	Southern Seepage Meadow/Carr	0
6/30/2016	BR05	None	Degraded Wet Meadow/Cattail Marsh	0
6/30/2016	BR06	None	Drainage swale dominated by reed canary grass	0
N/A	BR07	N/A	Not Evaluated	0
6/30/2016	BR08	WM	Wet Meadow Community - no type assigned	0
6/30/2016	BR09	None	Upland	0
6/30/2016	BR10	None	Upland	0
6/30/2016	BR11	None	Drainage Swale	0
6/30/2016	BR12	WMS83	Southern Seepage Meadow/Carr	25
6/30/2016	BR13	WMS83	Southern Seepage Meadow/Carr	25
6/30/2016 and 8/15/2016	BR14	WM or OP	Wet Meadow or Calc Fen	50
7/1/2016	BR15	None	Upland	0
7/1/2016	BR16	None	Upland	0
7/1/2016	BR17	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR18	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR19	WMS83	Southern Seepage Meadow/Carr	25
7/1/2016	BR20	WMS83	Southern Seepage Meadow/Carr	25
7/1/2016	BR21	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR22	OPp93	Calc Fen - Prairie Extremely Rich Fen	190
7/1/2016	BR23	OPp93	Calc Fen - Prairie Extremely Rich Fen	55
8/16/2016	BR24	None	Upland	0
8/16/2016	BR25	OPp93	Calc Fen - Prairie Extremely Rich Fen	75
8/16/2016	BR26	None	Upland	0
8/16/2016	BR27	WM	Degraded Wet Meadow	0
8/16/2016	BR28	None	Upland/Degraded Wetland	0
8/16/2016	BR29	None	Upland	0
8/16/2016	BR30	None	Upland	0
8/16/2016	BR31	None	Upland	0
8/16/2016	BR32	OPp93	Calc Fen - Prairie Extremely Rich Fen	110
8/16/2016	BR33	WM	Wet Meadow Complex	0
8/28/2017	BR34	None	Drainage Swale	0
8/28/2017	BR35	None	Degraded Marsh	0
8/28/2017	BR36	None	Drainage Swale/Degraded Wetland	0
8/28/2017	BR37	WM	Degraded Wet Meadow	0

**Appendix B**  
**Summary of Scoring Results**

Site	<i>C. aquatilis</i>	<i>C. hystericina</i>	<i>C. prairea</i>	<i>C. sterilis</i>	<i>G. procera</i>	<i>L. kalmii</i>	<i>P. glauca</i>	<i>R. capillacea</i>	<i>S. verticillata</i>	<i>T. maritima</i>	<i>T. palustris</i>	<i>C. bulbosa</i>	<i>C. interior</i>	<i>E. angustifolium</i>	<i>L. loeselli</i>	<i>S. boreale</i>	Point Summary	Native Plant Community
BR01	25	25									25	5					80	OPp93
BR02a																	0	WMp73
BR02b																	0	MRp73
BR03																	0	WMs83
BR04																	0	WMs83
BR05																	0	None
BR06																	0	None
BR07																	0	N/A
BR08																	0	WM
BR09																	0	None
BR10																	0	None
BR11																	0	None
BR12		25															25	WMs83
BR13		25															25	WMs83
BR14		25				25											50	WM or OP
BR15																	0	None
BR16																	0	None
BR17																	0	WMp73
BR18																	0	WMp73
BR19		25															25	WMs83
BR20		25															25	WMs83
BR21																	0	WMp73
BR22	25		25		25		25	25		25	25		5		5	5	190	OPp93
BR23			25								25		5				55	OPp93
BR24																	0	None
BR25	25	25									25						75	OPp93
BR26																	0	None
BR27																	0	WM
BR28																	0	None
BR29																	0	None
BR30																	0	None
BR31																	0	None
BR32		25			25	25	25								5	5	110	OPp93
BR33																	0	WM
BR34																	0	None
BR35																	0	None
BR36																	0	None
BR37																	0	None

# **Appendix C**

## **Site Photos**



*BR01- June 29, 2016*



*BR02- June 30, 2016*



*BR02- June 30, 2016*



*BR03- June 29, 2016*



*BR04- June 30, 2016*



*BR05- June 30, 2016*



*BR06- June 30, 2016*



*BR08- June 30, 2016*



*BR09- June 30, 2016*



*BR10- June 30, 2016*



*BR11- June 30, 2016*



*BR12- June 30, 2016*





*BR13- June 30, 2016*



*BR14- June 30, 2016*



*BR15- July 1, 2016*



*BR16- July 1, 2016*



*BR17- July 1, 2016*



*BR18- July 1, 2016*



*BR19- July 1, 2016*



*BR20- July 1, 2016*



*BR21- July 1, 2016*



*BR22- July 1, 2016*



*BR23- July 1, 2016*



*BR24- August 16, 2016*



*BR25- August 16, 2016*



*BR26- August 16, 2016*



*BR27- August 16, 2016*



*BR28- August 16, 2016*



*BR29- August 16, 2016*



*BR30- August 16, 2016*



*BR31- August 16, 2016*



*BR32- August 16, 2016*



*BR33- August 16, 2016*



*BR34- August 28, 2017*



*BR35- August 28, 2017*



*BR36- August 28, 2017*



*BR37- August 28, 2017*

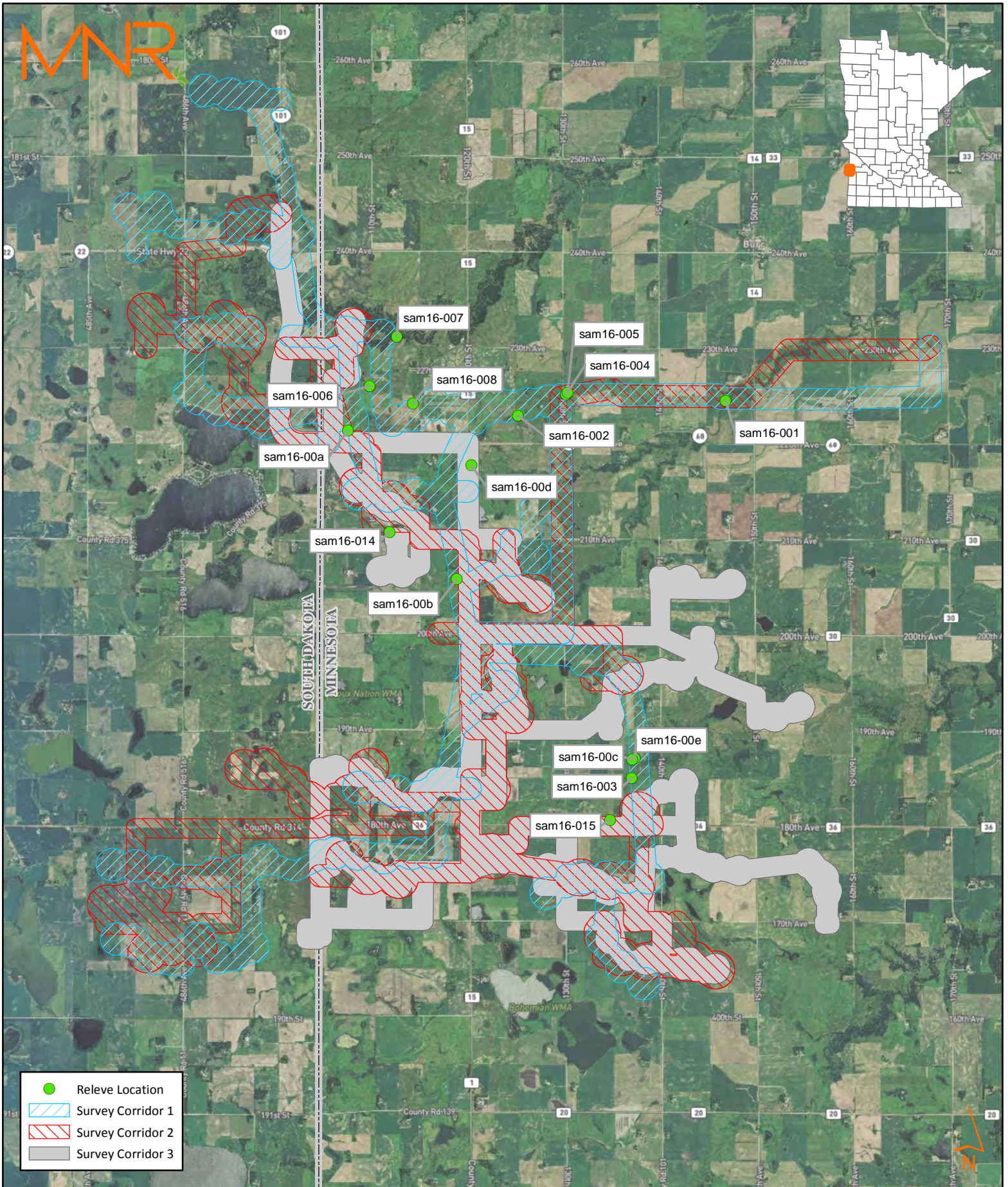
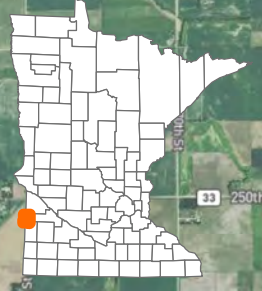
# **Appendix D**

## **Relevé Forms**



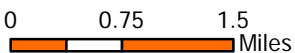
Survey Date	Site	Native Plant Community Code	Description	Calcareous Fen Point Summary
6/29/2016	BR01	OPp93	Calc Fen - Prairie Extremely Rich Fen	80
7/1/2016	BR02	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR02	MRp93	Prairie Bulrush-Arrowhead Marsh	0
6/30/2016	BR03	WMp73	Prairie Wet Meadow/Carr	0
6/30/2016	BR04	WMs83	Southern Seepage Meadow/Carr	0
6/30/2016	BR05	None	Degraded Wet Meadow/Cattail Marsh	0
6/30/2016	BR06	None	Drainage swale dominated by reed canary grass	0
N/A	BR07	N/A	Not Evaluated	0
6/30/2016	BR08	WM	Wet Meadow Community - no type assigned	0
6/30/2016	BR09	None	Upland	0
6/30/2016	BR10	None	Upland	0
6/30/2016	BR11	None	Drainage Swale	0
6/30/2016	BR12	WMs83	Southern Seepage Meadow/Carr	25
6/30/2016	BR13	WMs83	Southern Seepage Meadow/Carr	25
6/30/2016	BR14	WM or OP	Wet Meadow or Calc Fen	50
7/1/2016	BR15	None	Upland	0
7/1/2016	BR16	None	Upland	0
7/1/2016	BR17	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR18	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR19	WMs83	Southern Seepage Meadow/Carr	25
7/1/2016	BR20	WMs83	Southern Seepage Meadow/Carr	25
7/1/2016	BR21	WMp73	Prairie Wet Meadow/Carr	0
7/1/2016	BR22	OPp93	Calc Fen - Prairie Extremely Rich Fen	190
7/1/2016	BR23	OPp93	Calc Fen - Prairie Extremely Rich Fen	55
8/16/2016	BR24	None	Upland	0
8/16/2016	BR25	OPp93	Calc Fen - Prairie Extremely Rich Fen	75
8/16/2016	BR26	None	Upland	0
8/16/2016	BR27	WM	Degraded Wet Meadow	0
8/16/2016	BR28	None	Upland/Degraded Wetland	0
8/16/2016	BR29	None	Upland	0
8/16/2016	BR30	None	Upland	0

8/16/2016	BR31	None	Upland	0
8/16/2016	BR32	OPp93	Calc Fen - Prairie Extremely Rich Fen	110
8/16/2016	BR33	WM	Wet Meadow Complex	0
8/28/2017	BR34	None	Drainage Swale	0
8/28/2017	BR35	None	Degraded Marsh	0
8/28/2017	BR36	None	Drainage Swale/Degraded Wetland	0
8/28/2017	BR37	WM	Degraded Wet Meadow	0



Source: Mapbox Imagery, US Census, Date: 8/29/2017

**Releve Locations**  
**Bitter Root Wind Project**  
 Calcareous Fen Evaluation  
 Yellow Medicine County, MN





Initial Scan	_____
Entered	_____
QC'd	_____
Edited	_____
Final Scan	_____

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_  
 Surveyor(s): S. Milburn  
 Surveyor's Releve #: SAW11-001 Surveyor's Place Name: BR 81  
 Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNE  
 Purpose of Releve: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_  
 Revisit: (Y)es (N)o \_\_\_\_\_ Original DNR Releve #: \_\_\_\_\_  
 Date: 23 Month: JUN Year: 2016 (e.g. 09 JUL 2004)  
 MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland  
 NPC Code (Name): OP p 93 ( \_\_\_\_\_ )  
 NPC Ranking in Releve: \_\_\_\_\_  
 Stand Typical of NPC: (Y)es (N)o (U)ncertain  
 If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
 Releve Typical of Stand: (Y)es (N)o  
 If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_  
 Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 708653 E } (record in NAD83, Zone 16)  
4955729 N }  
 UTM Accuracy: \_\_\_\_\_ meters  
 Location Source: (G)PS (A)ir photo (T)opo map (L)idar (O)ther \_\_\_\_\_  
 County: VELVET MEDICINE Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_  
 Permanent Marker: (N)o (Y)es  
 Marker Type / Placement: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>  
 Elevation: \_\_\_\_\_ ft. Slope: 45 (°) or \_\_\_\_\_ (%) Aspect: S (e.g., N, NE, etc.; LV for level)  
 Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm  
 Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
 Humus Thickness: \_\_\_\_\_ cm  
 Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull  
 Earthworms Present: (Y)es (N)o  
 Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
 Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
 Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
 Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well  
 (S)omewhat poorly (P)oorly (V)ery poorly drained  
 Height of Moss Hummocks: \_\_\_\_\_ cm  
 Sphagnum Cover: \_\_\_\_\_ %  
 Depth of Standing Water: (>) \_\_\_\_\_ cm  
 pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
 Average Depth to Bedrock: \_\_\_\_\_ cm  
 Exposed Rock: \_\_\_\_\_ %  
 Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther  
 Rock Type: \_\_\_\_\_

	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
Soil Layers	1:	0 cm (>) _____ cm			
	2:	_____ cm (>) _____ cm			
	3:	_____ cm (>) _____ cm			
	4:	_____ cm (>) _____ cm			
	5:	_____ cm (>) _____ cm			
	6:	_____ cm (>) _____ cm			
	7:	_____ cm (>) _____ cm			
	8:	_____ cm (>) _____ cm			

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILC = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
 If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, 7 = unknown

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Side slope feature with obvious discharge. Dominated by graminoid cover (S. paludosus / S. acutus / S. pungens). Exposed peat and dark substrate in parts. Flowering early. Small waterways runs through feature and associated with chuffs. T. palustris associated with the waterway. S. acutus growing in clumps.

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes: 4827/4832

Prism Factor: \_\_\_\_\_  
 Releve-Wide DBH Statistics  
 Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o





MINNESOTA DEPARTMENT OF NATURAL RESOURCES RELEVE FORM  
MNDNR, Division of Ecological & Water Resources, 500 Lafayette Road, Box 25, St. Paul, MN 55155

Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_  
Surveyor(s): SAML-002  
Surveyor's Relève #: SAML-002 Surveyor's Place Name: BR02  
Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNR  
Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_  
Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_  
Date: 29 Month: JUN Year: 2016 (e.g. 09 JUL 2004)  
MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland  
NPC Code (Name): WMS83 \_\_\_\_\_  
NPC Ranking in Relève: \_\_\_\_\_  
Stand Typical of NPC: (Y)es (N)o (U)ncertain  
If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
Relève Typical of Stand: (Y)es (N)o  
If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_  
Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 705162 E (record in NAD83, Zone 15) Permanent Marker: (N)o (Y)es  
4955370 N Marker Type / Placement: \_\_\_\_\_  
UTM Accuracy: \_\_\_\_\_ meters UTM 14  
Location Source: (G)PS (A)ir photo (T)opo map (L)idar (O)ther \_\_\_\_\_  
County: YELLOW MEDICINE Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>  
Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)  
Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm  
Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
Humus Thickness: \_\_\_\_\_ cm  
Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull  
Earthworms Present: (Y)es (N)o  
Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well (S)omewhat poorly (P)oorly (V)ery poorly drained  
Height of Moss Hummocks: \_\_\_\_\_ cm  
Sphagnum Cover: \_\_\_\_\_ %  
Depth of Standing Water: (>) \_\_\_\_\_ cm  
pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
Average Depth to Bedrock: \_\_\_\_\_ cm  
Exposed Rock: \_\_\_\_\_ %  
Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther \_\_\_\_\_  
Rock Type: \_\_\_\_\_

	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
Soil Layers	1:	0 cm (>) _____ cm			
	2:	_____ cm (>) _____ cm			
	3:	_____ cm (>) _____ cm			
	4:	_____ cm (>) _____ cm			
	5:	_____ cm (>) _____ cm			
	6:	_____ cm (>) _____ cm			
	7:	_____ cm (>) _____ cm			
	8:	_____ cm (>) _____ cm			

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILCL = silty clay loam, SC = sandy clay, SICL = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck

If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge

<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders

<sup>C</sup> 0 < 15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Wet meadow system dominated by grasses with no shrub cover and limited herbaceous diversity. Primarily dominated by Carex pellita; the top of cattle grazing

Basal Area & Tree Diameters

Species	L/D	BA-1	BA-2	Ave.	DBH List: (C)omplete (P)artial
					DBH (cm)

Notes:

4830

Relève-Wide DBH Statistics

Prism Factor: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o

VEGETATION DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. Milburn Surveyor's Releve #: SMIL-002 Date: 6/29/16  
County: Yellow Medicine Surveyor's Place Name: 2285

Table with 4 columns: ID, C.S, SPECIES NAME, REMARKS. Contains handwritten entries at the bottom: CORNUS SP. OP

Table with 4 columns: ID, C.S, SPECIES NAME, REMARKS. Contains handwritten entries: HI-3b, B. PERENNIFOLIUM, L. LOEBELII, E. LEPIDOPHYLLUM, S. CURYCARPUM, E. MACULATUM, L. ASPER, A. CANADENSIS, S. CANADENSIS, TYPHA SP, P. HYDROPIPER, T. CANADENSIS, A. INCAHENSIS, E. ATLANTICUS, G. ALBERTICUM, Z. APICATA SP, P. NORWEGICA OP, L. AMERICANA OP, L. CILIATA OP, A. CANADENSIS OP, F. VIRGINIANA OP, VERBENA WASHINGTONIENSIS OP

Table with 4 columns: ID, C.S, SPECIES NAME, REMARKS. Contains handwritten entries: CI-3c, C. CANADENSIS STRICTA, S. PALLIDUS, J. BALTICUS, C. PELITA, S. PECTINATA, P. ARUNDINACEA, C. STRICTA, E. ERYTHROGON, J. DUDLEYI

Life Form: B = broadleaf evergreen, D = broadleaf deciduous, E = needleleaf evergreen, G = graminoids, H = forbs, L = lichens, M = mosses & liverworts, C = climbers, K = stem succulents, F = floating-leaved, S = submerged, X = epiphytes

Height: 8 > 35m, 7 = 20-35m, 6 = 10-20m, 5 = 5-10m, 4 = 2-5m, 3 = 0.5-2m, 2 = 0.1-0.5m, 1 = 0-0.1m

Cover: Group: c 5 75-100%, i 4 50-75%, p 3 25-50%, r 2 5-25%, b 1-5%, a <1%. Abundance: 1 <5% cover, many individuals, + <5% cover, few (2-20) individuals, r <5% cover, single

Sociability: 5 = extensive mat, 4 = small colonies, broken mat, 3 = large group, many plants, 2 = small dense clumps, 1 = growing singly

Reliability Code: 0 = variety certain, 1 = cf. var./subsp., 2 = species certain, 3 = species complex, 4 = cf. species, 5 = genus certain, 6 = cf. genus, 7 = unknown

Selected Remark Codes: DD = dead, DY = dying, GE = germinating, SD = seedling, SP = sprout (coppice), FR = fruiting, OP = outside plot (<2m), ## = specimen collection #

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_  
Surveyor(s): S.M. Ljund  
Surveyor's Relève #: Small 6-003 Surveyor's Place Name: BR14  
Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MUR  
Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_  
Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_  
Date: 30 Month: Aug Year: 2016 (e.g. 09 JUL 2004)  
MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland  
NPC Code (Name): \_\_\_\_\_ ( SEE NOTES WM or OP )  
NPC Ranking in Relève: \_\_\_\_\_  
Stand Typical of NPC: (Y)es (N)o (U)ncertain  
If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
Relève Typical of Stand: (Y)es (N)o  
If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_  
Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 707274 E (record in NAD83, Zone 16)  
4949312 N  
UTM Accuracy: 1 meters  
Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_  
County: YELLOW MEDICINE Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_  
Permanent Marker: (N)o (Y)es  
Marker Type / Placement: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>  
Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or 30 (%) Aspect: NW (e.g., N, NE, etc.; LV for level)  
Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm  
Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
Humus Thickness: \_\_\_\_\_ cm  
Humus Type: (M) or (M)oder (P)rairie mull (W)ormed mull  
Earthworms Present: (Y)es (N)o  
Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well  
(S)omewhat poorly (P)oorly (V)ery poorly drained  
Height of Moss Hummocks: \_\_\_\_\_ cm  
Sphagnum Cover: \_\_\_\_\_ %  
Depth of Standing Water: (>) \_\_\_\_\_ cm  
pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
Average Depth to Bedrock: \_\_\_\_\_ cm  
Exposed Rock: \_\_\_\_\_ %  
Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther  
Rock Type: \_\_\_\_\_  
General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	1:	0 cm (>) _____ cm		_____	_____
2:	_____ cm (>) _____ cm	_____	_____	_____	
3:	_____ cm (>) _____ cm	_____	_____	_____	
4:	_____ cm (>) _____ cm	_____	_____	_____	
5:	_____ cm (>) _____ cm	_____	_____	_____	
6:	_____ cm (>) _____ cm	_____	_____	_____	
7:	_____ cm (>) _____ cm	_____	_____	_____	
8:	_____ cm (>) _____ cm	_____	_____	_____	

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILC = silty clay loam, SC = sandy clay, SILC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Remarks: Seepage wetland in a hilltop; dominated by graminoids, particularly S. pungens and Carex hystericina. Other prominent graminoids include Calamagrostis stricta and Scirpus pallidus. Quality of features degrades further down slope but Amorphum is common below at the base. Discharge is obvious with exposed pebbles. Organic substrate appears abundant near base (mineral).

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes: Meets point criterion for wetlands but more representative of a seepage wet meadow.  
4876-4881

Prism Factor: \_\_\_\_\_  
Relève-Wide DBH Statistics  
Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o  
Revised June 2013



VEGETATION DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S.M. Iburn Surveyor's Relève #: SM16-003 Date: June 30, 2016  
 County: Yellow Medicine Surveyor's Place Name: B214

ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS
		<u>D1-3r</u>				<u>H1-3r</u>				<u>C1-3c</u>	
2		<u>CORNUS STOLONIFERA</u>		1		<u>S. CANADENSIS</u>		3		<u>S. PUNCTATUS</u>	
		<u>AMORPHA FRUTICOSA</u>		+		<u>T. DRACUNCULIFORMIS</u>		2		<u>S. PALLIDUS</u>	
				+		<u>A. INKERSATA</u>		+		<u>CALAMAGROSTIS STRICTA</u>	
		<u>C1-2a</u>		1		<u>S. CALICATA</u>		1		<u>J. HODGSONI</u>	
1		<u>P. VITACEA</u>		1		<u>E. M. LULCULUM</u>		1		<u>E. EPYMIOPADON</u>	
				1		<u>V. VITICOLA</u>		1		<u>P. ARUNDINACEA</u>	
				1		<u>L. ASPER</u>		1		<u>C. BIVATA</u>	
				1		<u>S. LANCEOLATUM</u>		1		<u>J. DUDLEYI</u>	
				1		<u>Z. LAUREA</u>		1		<u>C. PELLITA</u>	
				1		<u>I. CAPENSIS</u>		+		<u>C. GRANULATUS</u>	
				1		<u>V. HASTATA</u>				<u>G. GRANULIS</u>	OP
				1		<u>S. ARVENSIS</u>		1		<u>S. PECTINATA</u>	
				1		<u>E. LEUCOPHYLLUM</u>		3		<u>CAREX STRICTA</u>	
				1		<u>T. LYMAVENSE</u>		3		<u>C. HISTERICINA</u>	
				+		<u>A. ARTEMISIIFOLIA</u>		+		<u>C. VULPINOWICHI</u>	
				+		<u>L. AMERICANUS</u>					
				1		<u>EUPHROASIA ESCULENTUS</u>					
				+		<u>T. REPENS</u>					
				+		<u>E. PROFOLIATUM</u>					
				+		<u>POTENTILLA ANSERINA</u>					
				1		<u>LOBELIA KALMII</u>					
				+		<u>HELENIUM AUTUMNALE</u>					
				1		<u>AGALINIS TENORIFOLIA</u>					

**Life Form**  
 B = broadleaf evergreen  
 D = broadleaf deciduous  
 E = needleleaf evergreen  
 G = graminoids  
 H = forbs  
 L = lichens  
 M = mosses & liverworts  
 C = climbers  
 K = stem succulents  
 F = floating-leaved  
 S = submerged  
 X = epiphytes

**Height**  
 8 >35m  
 7 = 20-35m  
 6 = 10-20m  
 5 = 5-10m  
 4 = 2-5m  
 3 = 0.5-2m  
 2 = 0.1-0.5m  
 1 = 0-0.1m

**Cover**  
 Group Species  
 c 5 75-100%  
 i 4 50-75%  
 p 3 25-50%  
 r 2 5-25%  
 b 1-5%  
 a <1%  
**Abundance**  
 1 <5% cover, many individuals  
 + <5% cover, few (2-20) individuals  
 r <5% cover, single

**Sociability**  
 5 = extensive mat  
 4 = small colonies, broken mat  
 3 = large group, many plants  
 2 = small dense clumps  
 1 = growing singly

**Reliability Code**  
 0 = variety certain  
 1 = cf. var./subsp.  
 2 = species certain  
 3 = species complex  
 4 = cf. species  
 5 = genus certain  
 6 = cf. genus  
 7 = unknown

**Selected Remark Codes**  
 DD = dead  
 DY = dying  
 GE = germinating  
 SD = seedling  
 SP = sprout (coppice)  
 FR = fruiting  
 OP = outside plot (<2m)  
 ## = specimen collection #

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S.M. LEWIS

Surveyor's Relève #: 39M116-004 Surveyor's Place Name: BP#2

Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MAWR

Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_

Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_

Date: 30 Month: JUN Year: 2016 (e.g. 09 JUL 2004)

MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU)wooded upland (OU)open upland (WW)wooded wetland (OW)open wetland

NPC Code (Name): Wm p 73

NPC Ranking in Relève: \_\_\_\_\_

Stand Typical of NPC: (Y)es (N)o (U)ncertain

If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_

Relève Typical of Stand: (Y)es (N)o

If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_

Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 78 5964 E (record in NAD83, Zone 14)  
4955748 N

Permanent Marker: (N) (Y)es

Marker Type / Placement: \_\_\_\_\_

UTM Accuracy: \_\_\_\_\_ meters

Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_

County: WALTON Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>

Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or 0 (%) Aspect: LV (e.g., N, NE, etc.; LV for level)

Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm

Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_

Humus Thickness: \_\_\_\_\_ cm

Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull

Earthworms Present: (Y)es (N)o

Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)

Depth to Semi-Permeable Layer: \_\_\_\_\_ cm

Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm

Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well

(S)omewhat poorly (P)oorly (V)ery poorly drained

Height of Moss Hummocks: \_\_\_\_\_ cm

Sphagnum Cover: \_\_\_\_\_ %

Depth of Standing Water: (>) \_\_\_\_\_ cm

pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_

Average Depth to Bedrock: \_\_\_\_\_ cm

Exposed Rock: \_\_\_\_\_ %

Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther

Rock Type: \_\_\_\_\_

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Grassland dominated wet meadow with no shrub cover.

Soil Layers	Depth of Layer		Coarse Fragments		
	Top	Bottom	Texture <sup>A</sup>	Type <sup>B</sup>	Volume <sup>C</sup>
	_____ cm	(>) _____ cm			
1:	0	(>) _____			
2:	_____	(>) _____			
3:	_____	(>) _____			
4:	_____	(>) _____			
5:	_____	(>) _____			
6:	_____	(>) _____			
7:	_____	(>) _____			
8:	_____	(>) _____			

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILC = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck

If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge

<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders

<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes: \_\_\_\_\_

Relève-Wide DBH Statistics

Prism Factor: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o

## VEGETATION DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. Milburn Surveyor's Relève #: 2016-004 Date: 6/30/16  
 County: Yellow Medicine Surveyor's Place Name: RR2

ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS
		<u>D1-2b</u>				<u>H1-3r</u>				<u>G1-3c</u>	
		<u>↓ C. STOLONIFERA</u>		<u>2</u>		<u>Z. AQUILA</u>		<u>1</u>		<u>J. BALTICUS</u>	
				<u>1</u>		<u>A. CANADENSIS</u>		<u>4</u>		<u>C. PELLITA</u>	
				<u>+</u>		<u>R. CRISPUS</u>		<u>2</u>		<u>C. CLAMMIDIOSA STRICTA</u>	
				<u>1</u>		<u>T. CANADENSIS</u>		<u>2</u>		<u>S. PALLIDUS</u>	
				<u>1</u>		<u>P. AUREA</u>		<u>3</u>		<u>A. GIGANTEA</u>	
				<u>1</u>		<u>A. CANADENSIS</u>		<u>1</u>		<u>P. PRATENSIS</u>	
				<u>2</u>		<u>G. LEPIDATA</u>		<u>1</u>		<u>D. HIRTUM</u>	
				<u>1</u>		<u>C. MACULATA</u>		<u>!</u>		<u>C. PRÆCIPILLIS</u>	
				<u>1</u>		<u>S. LANCEOLATUM</u>		<u>1</u>		<u>G. STRIPATA</u>	
				<u>1</u>		<u>S. CANADENSIS</u>		<u>1</u>		<u>E. BRACHYDIPYDA</u>	
				<u>1</u>		<u>T. DASYCARPUM</u>		<u>1</u>		<u>H. JUSATUM</u>	
						<u>Z. APTERA</u>	<u>OP</u>	<u>1</u>		<u>J. DUMLEYI</u>	
						<u>  </u>		<u>+</u>		<u>C. VULPINIDEA</u>	
								<u>1</u>		<u>E. COMPRESSA</u>	
										<u>S. PECTINATA</u>	<u>OP</u>

**Life Form**

- B = broadleaf evergreen
- D = broadleaf deciduous
- E = needleleaf evergreen
- G = graminoids
- H = forbs
- L = lichens
- M = mosses & liverworts
- C = climbers
- K = stem succulents
- F = floating-leaved
- S = submerged
- X = epiphytes

**Height**

- 8 >35m
- 7 = 20-35m
- 6 = 10-20m
- 5 = 5-10m
- 4 = 2-5m
- 3 = 0.5-2m
- 2 = 0.1-0.5m
- 1 = 0-0.1m

**Cover**

- |              |                |
|--------------|----------------|
| <i>Group</i> | <i>Species</i> |
| c            | 5 75-100%      |
| i            | 4 50-75%       |
| p            | 3 25-50%       |
| r            | 2 5-25%        |
| b            | 1-5%           |
| a            | <1%            |
- Abundance**
- 1 <5% cover, many individuals
  - + <5% cover, few (2-20) individuals
  - r <5% cover, single

**Sociability**

- 5 = extensive mat
- 4 = small colonies, broken mat
- 3 = large group, many plants
- 2 = small dense clumps
- 1 = growing singly

**Reliability Code**

- 0 = variety certain
- 1 = cf. var./subsp.
- 2 = species certain
- 3 = species complex
- 4 = cf. species
- 5 = genus certain
- 6 = cf. genus
- 7 = unknown

**Selected Remark Codes**

- DD = dead
- DY = dying
- GE = germinating
- SD = seedling
- SP = sprout (coppice)
- FR = fruiting
- OP = outside plot (<2m)
- ## = specimen collection #

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. M. [unclear]

Surveyor's Relève #: SAMU-005 Surveyor's Place Name: BR02 part 2

Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M  (O)ther MNR

Purpose of Relève:  (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_

Revisit:  (Y)es  (N)o Original DNR Relève #: \_\_\_\_\_

Date: 30 Month: JUN Year: 2016 (e.g. 09 JUL 2004)

MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland  (OW) open wetland

NPC Code (Name): MBP93 ( \_\_\_\_\_ )

NPC Ranking in Relève: \_\_\_\_\_

Stand Typical of NPC:  (Y)es  (N)o  (U)ncertain

If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_

Relève Typical of Stand:  (Y)es  (N)o

If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_

Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary  (C)lose to boundary, (E)cotonal

LOCATION INFORMATION

UTM: 705991 E (record in NAD83, Zone 15)  
4955781 N

Permanent Marker:  (N)o  (Y)es  
Marker Type / Placement: \_\_\_\_\_

UTM Accuracy: \_\_\_\_\_ meters

Location Source:  (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_

County: YELLOW MEDICINE Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QQRT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>

Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)

Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat  (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm

Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_

Humus Thickness: \_\_\_\_\_ cm

Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull

Earthworms Present:  (Y)es  (N)o

Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)

Depth to Semi-Permeable Layer: \_\_\_\_\_ cm

Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm

Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well

(S)omewhat poorly  (P)oorly (V)ery poorly drained

Height of Moss Hummocks: \_\_\_\_\_ cm

Sphagnum Cover: \_\_\_\_\_ %

Depth of Standing Water: (>) \_\_\_\_\_ cm

pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_

Average Depth to Bedrock: \_\_\_\_\_ cm

Exposed Rock: \_\_\_\_\_ %

Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)ioux quartzite (O)ther

Rock Type: \_\_\_\_\_

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Seasonally inundated system in a depressed basin and adjacent to a WMP 73 community. Dominated by grass sedge with bulrushes (sedges) distributed in waters. No surface peat at the time of survey.

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	1:	0 cm (>)		_____ cm	_____
2:	_____ cm (>)	_____ cm	_____	_____	
3:	_____ cm (>)	_____ cm	_____	_____	
4:	_____ cm (>)	_____ cm	_____	_____	
5:	_____ cm (>)	_____ cm	_____	_____	
6:	_____ cm (>)	_____ cm	_____	_____	
7:	_____ cm (>)	_____ cm	_____	_____	
8:	_____ cm (>)	_____ cm	_____	_____	

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILC = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave. DBH (cm)	

Notes: 4888  
Underdocumented community type

Releve-Wide DBH Statistics  
Prism Factor: \_\_\_\_\_  
Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken:  (Y)es  (N)o





Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): Scott M. Muehlen

Surveyor's Relève #: SAM16-506 Surveyor's Place Name: BR17

Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNR

Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_

Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_

Date: 01 Month: JUL Year: 2014 (e.g. 09 JUL 2004)

MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland

NPC Code (Name): WMP73 ( \_\_\_\_\_ )

NPC Ranking in Relève: \_\_\_\_\_

Stand Typical of NPC: (Y)es (N)o (U)ncertain

If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_

Relève Typical of Stand: (Y)es (N)o

If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_

Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 702040 E (record in NAD83, Zone 15)  
4955787 N

Permanent Marker: (N)o (Y)es  
Marker Type / Placement: \_\_\_\_\_

UTM Accuracy: \_\_\_\_\_ meters

Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_

County: Yellow Medicine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QRT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>

Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or 0 (%) Aspect: LV (e.g., N, NE, etc.; LV for level)

Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm

Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_

Humus Thickness: \_\_\_\_\_ cm

Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull

Earthworms Present: (Y)es (N)o

Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)

Depth to Semi-Permeable Layer: \_\_\_\_\_ cm

Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm

Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well

(S)omewhat poorly (P)oorly (V)ery poorly drained

Height of Moss Hummocks: \_\_\_\_\_ cm

Sphagnum Cover: \_\_\_\_\_ %

Depth of Standing Water: (>) \_\_\_\_\_ cm

pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_

Average Depth to Bedrock: \_\_\_\_\_ cm

Exposed Rock: \_\_\_\_\_ %

Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther

Rock Type: \_\_\_\_\_

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Wet Meadow community in an active pasture; no shrub cover and limited forb cover.

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	_____ cm	(>) _____ cm			
1:	0	(>) _____			
2:	_____	(>) _____			
3:	_____	(>) _____			
4:	_____	(>) _____			
5:	_____	(>) _____			
6:	_____	(>) _____			
7:	_____	(>) _____			
8:	_____	(>) _____			

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILC = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes: 4900

Prism Factor: \_\_\_\_\_ Relève-Wide DBH Statistics  
Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o

VEGETATION DATA SHEET

DNR RELEVÉ # \_\_\_\_\_

Surveyor(s): S. M. [unclear] Surveyor's Relevé #: SAM16-006 Date: 7/1/2014  
 County: Yellow Medicine Surveyor's Place Name: BR17

ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS
						H1-3b				G1-3c	
				1.		S. BULICATUM		3.		S. PECTINATA	
				2.		M. ADLUNSI		2.		C. PELLITA	
								1.		C. PRACARBICUS	
								4.		C. STRICTA	
								2.		A. GIGANTEA	
								1.		S. PALLIDUS	
								1.		C. MARGOSIS STELIA	
								1.		C. GRANULIS	
								+		E. REVENS	

Life Form

- B = broadleaf evergreen
- D = broadleaf deciduous
- E = needleleaf evergreen
- G = graminoids
- H = forbs
- L = lichens
- M = mosses & liverworts
- C = climbers
- K = stem succulents
- F = floating-leaved
- S = submerged
- X = epiphytes

Height

- 8 >35m
- 7 = 20-35m
- 6 = 10-20m
- 5 = 5-10m
- 4 = 2-5m
- 3 = 0.5-2m
- 2 = 0.1-0.5m
- 1 = 0-0.1m

Cover

- |              |                |
|--------------|----------------|
| <u>Group</u> | <u>Species</u> |
| c            | 5 75-100%      |
| i            | 4 50-75%       |
| p            | 3 25-50%       |
| r            | 2 5-25%        |
| b            | 1-5%           |
| a            | <1%            |

Abundance

- 1 <5% cover, many individuals
- + <5% cover, few (2-20) individuals
- r <5% cover, single

Sociability

- 5 = extensive mat
- 4 = small colonies, broken mat
- 3 = large group, many plants
- 2 = small dense clumps
- 1 = growing singly

Reliability Code

- 0 = variety certain
- 1 = cf. var./subsp.
- 2 = species certain
- 3 = species complex
- 4 = cf. species
- 5 = genus certain
- 6 = cf. genus
- 7 = unknown

Selected Remark Codes

- DD = dead
- DY = dying
- GE = germinating
- SD = seedling
- SP = sprout (coppice)
- FR = fruiting
- OP = outside plot (<2m)
- ## = specimen collection #

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

**GENERAL INFORMATION**

**SITE DATA SHEET**

DNR RELEVE # \_\_\_\_\_  
Surveyor(s): S.A.M. Nelson  
Surveyor's Relève #: SAM16-607 Surveyor's Place Name: BE10  
Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)the MNL  
Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_  
Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_  
Date: 01 Month: JUL Year: 2014 (e.g. 09 JUL 2004)  
MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

**VEGETATION INFORMATION**

Vegetation Group: (WU)wooded upland (OU)open upland (WW)wooded wetland (OW)open wetland  
NPC Code (Name): WM 83  
NPC Ranking in Relève: \_\_\_\_\_  
Stand Typical of NPC: (Y)es (N)o (U)ncertain  
If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
Relève Typical of Stand: (Y)es (N)o  
If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_  
Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

**LOCATION INFORMATION**

UTM: 10 3081 E (record in NAD83, Zone 16)  
4950637 N  
UTM Accuracy: \_\_\_\_\_ meters  
Location Source: (GPS) (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_  
County: Yellowknife Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_  
Permanent Marker: (N)o (Y)es  
Marker Type / Placement: \_\_\_\_\_

**PLOT INFORMATION**

Plot Size: 16 m x 16 m = 100 m<sup>2</sup>  
Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or 45 (%) Aspect: 11 (e.g., N, NE, etc.; LV for level)  
Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

**SOIL INFORMATION**

Litter Thickness: \_\_\_\_\_ cm  
Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
Humus Thickness: \_\_\_\_\_ cm  
Humus Type: (M)or (M)oder (P)ratric mull (W)ormed mull  
Earthworms Present: (Y)es (N)o  
Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well (S)omewhat poorly (P)oorly (V)ery poorly drained  
Height of Moss Hummocks: \_\_\_\_\_ cm  
Sphagnum Cover: \_\_\_\_\_ %  
Depth of Standing Water: (>) \_\_\_\_\_ cm  
pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
Average Depth to Bedrock: \_\_\_\_\_ cm  
Exposed Rock: \_\_\_\_\_ %  
Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther  
Rock Type: \_\_\_\_\_  
General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
1:	0 cm	(>) _____ cm			
2:	_____ cm	(>) _____ cm			
3:	_____ cm	(>) _____ cm			
4:	_____ cm	(>) _____ cm			
5:	_____ cm	(>) _____ cm			
6:	_____ cm	(>) _____ cm			
7:	_____ cm	(>) _____ cm			
8:	_____ cm	(>) _____ cm			

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SICL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Remarks: Seepage feature on a side slope with significant erosion;

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave. DBH (cm)	

Notes: \_\_\_\_\_

Prism Factor: \_\_\_\_\_  
Relève-Wide DBH Statistics  
Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o



VEGETATION DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. Milburn Surveyor's Releve #: SM16-09 Date: 7/1/2016  
 County: Yellow Medicine Surveyor's Place Name: BRIA

ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS
		D1-3r				H1-3c				G1-3r	
1		F. PENNSYLVANICA		4		E. ARVENSI		2		S. PALLIDUS	
+		O. VIRGINIANA		1		S. GIGANTEA		1		E. BRITANNICA	
				+		P. MAJOR		4		C. INSEBRICINA	
				+		Z. AUREA		1		J. DUREGII	
				5	1	T. PIMA		1		J. NODOSUS	
				+		E. PORPHYLLIUM		1		A. GIGANTEA	
				1		G. ROZALE					
				+		M. ALBA					
				+		M. ARVENSI					
				1		L. CAPENSIS					
				+		V. NEPAPHYLLA					
				+		L. AMERICANA					
				+		H. AUTUMNALE					
				+		S. ARVENSI					
				+		C. ARVENSI					
				1		P. AULLA					

Life Form

- B = broadleaf evergreen
- D = broadleaf deciduous
- E = needleleaf evergreen
- G = graminoids
- H = forbs
- L = lichens
- M = mosses & liverworts
- C = climbers
- K = stem succulents
- F = floating-leaved
- S = submerged
- X = epiphytes

Height

- 8 >35m
- 7 = 20-35m
- 6 = 10-20m
- 5 = 5-10m
- 4 = 2-5m
- 3 = 0.5-2m
- 2 = 0.1-0.5m
- 1 = 0-0.1m

Cover

- |       |           |
|-------|-----------|
| Group | Species   |
| c     | 5 75-100% |
| i     | 4 50-75%  |
| p     | 3 25-50%  |
| r     | 2 5-25%   |
| b     | 1-5%      |
| a     | <1%       |

Abundance

- 1 <5% cover, many individuals
- + <5% cover, few (2-20) individuals
- r <5% cover, single

Sociability

- 5 = extensive mat
- 4 = small colonies, broken mat
- 3 = large group, many plants
- 2 = small dense clumps
- 1 = growing singly

Reliability Code

- 0 = variety certain
- 1 = cf. var./subsp.
- 2 = species certain
- 3 = species complex
- 4 = cf. species
- 5 = genus certain
- 6 = cf. genus
- 7 = unknown

Selected Remark Codes

- DD = dead
- DY = dying
- GE = germinating
- SD = seedling
- SP = sprout (coppice)
- FR = fruiting
- OP = outside plot (<2m)
- ## = specimen collection #

Note: Indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

**GENERAL INFORMATION**

**SITE DATA SHEET**

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. Muzard

Surveyor's Releve #: SNM16-008 Surveyor's Place Name: Bertha

Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNR

Purpose of Releve: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_

Revisit: (Y)es (N)o Original DNR Releve #: \_\_\_\_\_

Date: 30 Month: Jun Year: 2016 (e.g. 09 JUL 2004)

MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

**VEGETATION INFORMATION**

Vegetation Group: (WU)wooded upland (OU)open upland (WW)wooded wetland (OW)open wetland

NPC Code (Name): WMS 83 ( \_\_\_\_\_ )

NPC Ranking in Releve: \_\_\_\_\_

Stand Typical of NPC: (Y)es (N)o (U)ncertain

If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_

Releve Typical of Stand: (Y)es (N)o

If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_

Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

**LOCATION INFORMATION**

UTM: 703389 E  
4955511 N (record in NAD83, Zone 16)

Permanent Marker: (N)o (Y)es  
Marker Type / Placement: \_\_\_\_\_

UTM Accuracy: \_\_\_\_\_ meters

Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_

County: Yellow Medicine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QVRT: \_\_\_\_\_ of QRT: \_\_\_\_\_

**PLOT INFORMATION**

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>

Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)

Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

**SOIL INFORMATION**

Litter Thickness: \_\_\_\_\_ cm

Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_

Humus Thickness: \_\_\_\_\_ cm

Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull

Earthworms Present: (Y)es (N)o

Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)

Depth to Semi-Permeable Layer: \_\_\_\_\_ cm

Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm

Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well

(S)omewhat poorly (P)oorly (V)ery poorly drained

Height of Moss Hummocks: \_\_\_\_\_ cm

Sphagnum Cover: \_\_\_\_\_ %

Depth of Standing Water: (>) \_\_\_\_\_ cm

pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_

Average Depth to Bedrock: \_\_\_\_\_ cm

Exposed Rock: \_\_\_\_\_ %

Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther \_\_\_\_\_

Rock Type: \_\_\_\_\_

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: A wet meadow community dominated by graminoids, primarily Carex stricta. Area surrounding feature is hayed. Feature is depression and includes an open water component with non-native cattails. Tussocks present. Soils with high organic content at surface with mucky mineral below.

Soil Layers	Depth of Layer		Coarse Fragments		
	Top	Bottom	Texture <sup>A</sup>	Type <sup>B</sup>	Volume <sup>C</sup>
	_____ cm	(>) _____ cm			
1:	0	(>) _____			
2:	_____	(>) _____			
3:	_____	(>) _____			
4:	_____	(>) _____			
5:	_____	(>) _____			
6:	_____	(>) _____			
7:	_____	(>) _____			
8:	_____	(>) _____			

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SICL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 < 15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes: 4843-4844

Releve-Wide DBH Statistics  
Prism Factor: \_\_\_\_\_  
Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o





Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. Milburn

Surveyor's Relève #: SM16-014 Surveyor's Place Name: B232

Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNR

Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_

Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_

Date: 11 Month: Aug Year: 2016 (e.g. 09 JUL 2004)

MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland

NPC Code (Name): OP p 93 ( \_\_\_\_\_ )

NPC Ranking in Relève: \_\_\_\_\_

Stand Typical of NPC: (Y)es (N)o (U)ncertain

If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_

Relève Typical of Stand: (Y)es (N)o

If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_

Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 703083E (record in NAD83, Zone 14)  
4953310N

Permanent Marker: (N)o (Y)es

Marker Type / Placement: \_\_\_\_\_

UTM Accuracy: \_\_\_\_\_ meters

Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_

County: Yellow Medicine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QVRT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>

Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)

Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm

Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_

Humus Thickness: \_\_\_\_\_ cm

Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull

Earthworms Present: (Y)es (N)o

Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)

Depth to Semi-Permeable Layer: \_\_\_\_\_ cm

Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm

Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well

(S)omewhat poorly (P)oorly (V)ery poorly drained

Height of Moss Hummocks: \_\_\_\_\_ cm

Sphagnum Cover: \_\_\_\_\_ %

Depth of Standing Water: (>) \_\_\_\_\_ cm

pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_

Average Depth to Bedrock: \_\_\_\_\_ cm

Exposed Rock: \_\_\_\_\_ %

Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther

Rock Type: \_\_\_\_\_

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Mounded calcareous fen feature; obvious discharge and peat soils. Much of the feature is dominated by non-native cattails.

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	1:	0 cm (>) _____ cm		_____	_____
2:	_____ cm (>) _____ cm	_____	_____	_____	
3:	_____ cm (>) _____ cm	_____	_____	_____	
4:	_____ cm (>) _____ cm	_____	_____	_____	
5:	_____ cm (>) _____ cm	_____	_____	_____	
6:	_____ cm (>) _____ cm	_____	_____	_____	
7:	_____ cm (>) _____ cm	_____	_____	_____	
8:	_____ cm (>) _____ cm	_____	_____	_____	

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILC = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck

If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge

<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders

<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave. DBH (cm)	

Notes: 5089

Relève-Wide DBH Statistics

Prism Factor: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o





Initial Scan	_____
Entered	_____
QC'd	_____
Edited	_____
Final Scan	_____

DNR RELEVE # \_\_\_\_\_

**SITE DATA SHEET**

**GENERAL INFORMATION**

DNR RELEVE # \_\_\_\_\_  
 Surveyor(s): S. M. M... ..  
 Surveyor's Releve #: SM16-015 Surveyor's Place Name: BR25  
 Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M<sup>K</sup>(O)ther: M.N.Z.  
 Purpose of Releve: (C)lassification (R)are species habitat (M)onitoring (O)ther \_\_\_\_\_  
 Revisit: (Y)es (N)o \_\_\_\_\_ Original DNR Releve #: \_\_\_\_\_  
 Date: 14 Month: AUG Year: 2016 (e.g. 09 JUL 2004)  
 MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

**VEGETATION INFORMATION**

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland  
 NPC Code (Name): OP09B ( \_\_\_\_\_ )  
 NPC Ranking in Releve: \_\_\_\_\_  
 Stand Typical of NPC: (Y)es (N)o (U)ncertain  
 If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
 Releve Typical of Stand: (Y)es (N)o  
 If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther: Impacted by Cattle  
 Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

**LOCATION INFORMATION**

UTM: 706921E (record in NAD83, Zone 15) 1A Permanent Marker: (N)o (Y)es  
4948581N Marker Type / Placement: \_\_\_\_\_  
 UTM Accuracy: \_\_\_\_\_ meters  
 Location Source: (G)PS (A)ir photo (T)opo map (L)idar (O)ther \_\_\_\_\_  
 County: YELLOW MEDICINE Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_

**PLOT INFORMATION**

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>  
 Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or 15 (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)  
 Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

**SOIL INFORMATION**

Litter Thickness: \_\_\_\_\_ cm  
 Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
 Humus Thickness: \_\_\_\_\_ cm  
 Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull  
 Earthworms Present: (Y)es (N)o  
 Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
 Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
 Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
 Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well  
 (S)omewhat poorly (P)oorly (V)ery poorly drained  
 Height of Moss Hummocks: \_\_\_\_\_ cm  
 Sphagnum Cover: \_\_\_\_\_ %  
 Depth of Standing Water: (>) \_\_\_\_\_ cm  
 pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
 Average Depth to Bedrock: \_\_\_\_\_ cm  
 Exposed Rock: \_\_\_\_\_ %  
 Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther \_\_\_\_\_  
 Rock Type: \_\_\_\_\_  
 General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
1:	0 cm (>)	_____ cm	_____	_____	_____
2:	_____ cm (>)	_____ cm	_____	_____	_____
3:	_____ cm (>)	_____ cm	_____	_____	_____
4:	_____ cm (>)	_____ cm	_____	_____	_____
5:	_____ cm (>)	_____ cm	_____	_____	_____
6:	_____ cm (>)	_____ cm	_____	_____	_____
7:	_____ cm (>)	_____ cm	_____	_____	_____
8:	_____ cm (>)	_____ cm	_____	_____	_____

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SICL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
 If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, 7 = unknown

Remarks: Site slope features; impacted by cattle grazing; dominated by grasses with very few forbs and limited herb cover in general. Obvious discharge with exposed muck.

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave. DBH (cm)	

Releve-Wide DBH Statistics  
 Prism Factor: \_\_\_\_\_  
 Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Notes: 5712

Photos Taken: (Y)es (N)o





Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. MILBUEN

Surveyor's Relève #: SAMHE-40A Surveyor's Place Name: BR05

Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNR

Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther Documentation

Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_

Date: 30 Month: JUN Year: 2016 (e.g. 09 JUL 2004)

MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland

NPC Code (Name): \_\_\_\_\_ (NONE → Degraded feature)

NPC Ranking in Relève: \_\_\_\_\_

Stand Typical of NPC: (Y)es (N)o (U)ncertain

If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_

Relève Typical of Stand: (Y)es (N)o

If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_

Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 102309 E (record in NAD83, Zone 18)  
4955027 N 14

Permanent Marker: (N)o (Y)es

Marker Type / Placement: \_\_\_\_\_

UTM Accuracy: \_\_\_\_\_ meters

Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_

County: Yellow Medicine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>

Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or 0 (%) Aspect: LV (e.g., N, NE, etc.; LV for level)

Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm

Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_

Humus Thickness: \_\_\_\_\_ cm

Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull

Earthworms Present: (Y)es (N)o

Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)

Depth to Semi-Permeable Layer: \_\_\_\_\_ cm

Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm

Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well (S)omewhat poorly (P)oorly (V)ery poorly drained

Height of Moss Hummocks: \_\_\_\_\_ cm

Sphagnum Cover: \_\_\_\_\_ %

Depth of Standing Water: (>) \_\_\_\_\_ cm

pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_

Average Depth to Bedrock: \_\_\_\_\_ cm

Exposed Rock: \_\_\_\_\_ %

Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther \_\_\_\_\_

Rock Type: \_\_\_\_\_

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Shallow wet meadow/morph depression dominated by cattails with P. arundinacea, C. lacustris, and B. flummitis. Mineral rich; no indication of fire conditions

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
1:	0 cm (>)	_____ cm			
2:	_____ cm (>)	_____ cm			
3:	_____ cm (>)	_____ cm			
4:	_____ cm (>)	_____ cm			
5:	_____ cm (>)	_____ cm			
6:	_____ cm (>)	_____ cm			
7:	_____ cm (>)	_____ cm			
8:	_____ cm (>)	_____ cm			

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SICL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes:

48 #6

Relève-Wide DBH Statistics

Prism Factor: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o



VEGETATION DATA SHEET

DNR RELEVÉ # \_\_\_\_\_

Surveyor(s): S. Milburn Surveyor's Relevé #: 50M16-00A Date: 6/30/2016  
 County: Yellow Medicine Surveyor's Place Name: BRØS

ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS
						H1-3c				G1-3p	
		4. <i>T. x glauca</i>				1. <i>C. LACUSSTRIS</i>				1. <i>B. FLUVIATILIS</i>	
		+ <i>S. LANCEOLATUM</i>				3. <i>P. APRUNIFLORUM</i>					
		+ <i>A. INCARNATA</i>									
		1. <i>P. PENNSYLVANICA</i>									
		+ <i>V. HASTATA</i>									
		<i>T. CANADENSE</i>	OP								
		<i>S. BURNINGHAMII</i>	OP								
		<i>L. ASPER</i>	OP								
		<i>H. GRASSCUTUS</i>	OP								
		<i>U. DIACA</i>	OP								

Life Form

- B = broadleaf evergreen
- D = broadleaf deciduous
- E = needleleaf evergreen
- G = graminoids
- H = forbs
- L = lichens
- M = mosses & liverworts
- C = climbers
- K = stem succulents
- F = floating-leaved
- S = submerged
- X = epiphytes

Height

- 8 >35m
- 7 = 20-35m
- 6 = 10-20m
- 5 = 5-10m
- 4 = 2-5m
- 3 = 0.5-2m
- 2 = 0.1- 0.5m
- 1 = 0-0.1m

Cover

- |       |           |
|-------|-----------|
| Group | Species   |
| c     | 5 75-100% |
| i     | 4 50-75%  |
| p     | 3 25-50%  |
| r     | 2 5-25%   |
| b     | 1-5%      |
| a     | <1%       |

Abundance

- 1 <5% cover, many individuals
- + <5% cover, few (2-20) individuals
- r <5% cover, single

Sociability

- 5 = extensive mat
- 4 = small colonies, broken mat
- 3 = large group, many plants
- 2 = small dense clumps
- 1 = growing singly

Reliability Code

- 0 = variety certain
- 1 = cf. var./subsp.
- 2 = species certain
- 3 = species complex
- 4 = cf. species
- 5 = genus certain
- 6 = cf. genus
- 7 = unknown

Selected Remark Codes

- DD = dead
- DY = dying
- GE = germinating
- SD = seedling
- SP = sprout (coppice)
- FR = fruiting
- OP = outside plot (<2m)
- ## = specimen collection #

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan	_____
Entered	_____
QC'd	_____
Edited	_____
Final Scan	_____

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. MILLER

Surveyor's Relève #: SA116-008 Surveyor's Place Name: BRB

Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MND

Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther DOCUMENTATION

Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_

Date: 30 Month: JUL Year: 2016 (e.g. 09 JUL 2004)

MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland

NPC Code (Name): WM (Wet Meadow)

NPC Ranking in Relève: \_\_\_\_\_

Stand Typical of NPC: (Y)es (N)o (U)ncertain

If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_

Relève Typical of Stand: (Y)es (N)o

If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_

Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 784216 E (record in NAD83, Zone 18A)  
4952572 N

Permanent Marker: (N)o (Y)es

Marker Type / Placement: \_\_\_\_\_

UTM Accuracy: \_\_\_\_\_ meters

Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_

County: Yellow Medicine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>

Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: LV (e.g., N, NE, etc.; LV for level)

Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm

Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_

Humus Thickness: \_\_\_\_\_ cm

Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull

Earthworms Present: (Y)es (N)o

Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)

Depth to Semi-Permeable Layer: \_\_\_\_\_ cm

Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm

Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well

(S)omewhat poorly (P)oorly (V)ery poorly drained

Height of Moss Hummocks: \_\_\_\_\_ cm

Sphagnum Cover: \_\_\_\_\_ %

Depth of Standing Water: (>) \_\_\_\_\_ cm

pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_

Average Depth to Bedrock: \_\_\_\_\_ cm

Exposed Rock: \_\_\_\_\_ %

Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)iliceous quartzite (O)ther \_\_\_\_\_

Rock Type: \_\_\_\_\_

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Remarks: Wet meadow community associated with a meandering creek system. Component of interest is depression and not tied to a water body feature with major fluctuations. Feature is physically separated by a natural berm.

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	1:	0 cm (>)		_____ cm	_____
2:	_____ cm (>)	_____ cm	_____	_____	
3:	_____ cm (>)	_____ cm	_____	_____	
4:	_____ cm (>)	_____ cm	_____	_____	
5:	_____ cm (>)	_____ cm	_____	_____	
6:	_____ cm (>)	_____ cm	_____	_____	
7:	_____ cm (>)	_____ cm	_____	_____	
8:	_____ cm (>)	_____ cm	_____	_____	

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILCL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck

If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge

<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders

<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Basal Area & Tree Diameters

DBH List: (C)omplete (P)artial

Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes: 4852-4854

No discharge or seepage observed, ground well compacted soils (minim)

Prism Factor: \_\_\_\_\_

Relève-Wide DBH Statistics

Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o





Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_  
Surveyor(s): S. Milbrund  
Surveyor's Relève #: SM110-80C Surveyor's Place Name: BE13  
Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNR  
Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther Documentation  
Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_  
Date: 30 Month: JUN Year: 2016 (e.g. 09 JUL 2004)  
MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland  
NPC Code (Name): WM 8.3  
NPC Ranking in Relève: \_\_\_\_\_  
Stand Typical of NPC: (Y)es (N)o (U)ncertain  
If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
Relève Typical of Stand: (Y)es (N)o  
If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_  
Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 707275 E } (record in NAD83, Zone 15) 14 Permanent Marker: (N)o (Y)es  
4949627 N Marker Type / Placement: \_\_\_\_\_  
UTM Accuracy: \_\_\_\_\_ meters  
Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_  
County: Yellow Medicine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QURT: \_\_\_\_\_ of QRT: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 20 m x 50 m = 1000 m<sup>2</sup>  
Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)  
Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm  
Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
Humus Thickness: \_\_\_\_\_ cm  
Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull  
Earthworms Present: (Y)es (N)o  
Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well (S)omewhat poorly (P)oorly (V)ery poorly drained  
Height of Moss Hummocks: \_\_\_\_\_ cm  
Sphagnum Cover: \_\_\_\_\_ %  
Depth of Standing Water: (>) \_\_\_\_\_ cm  
pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
Average Depth to Bedrock: \_\_\_\_\_ cm  
Exposed Rock: \_\_\_\_\_ %  
Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)oux quartzite (O)ther  
Rock Type: \_\_\_\_\_  
General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	1:	0 cm (>) _____ cm		_____	_____
2:	_____ cm (>) _____ cm	_____	_____	_____	
3:	_____ cm (>) _____ cm	_____	_____	_____	
4:	_____ cm (>) _____ cm	_____	_____	_____	
5:	_____ cm (>) _____ cm	_____	_____	_____	
6:	_____ cm (>) _____ cm	_____	_____	_____	
7:	_____ cm (>) _____ cm	_____	_____	_____	
8:	_____ cm (>) _____ cm	_____	_____	_____	

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SICL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Remarks: Drainage swale positioned between two steep hillslopes and future drains surface water towards meandering waterway. Corynephorus is abundant in patches but less than 50% covered by grass.

Basal Area & Tree Diameters			DBH List: (C)omplete (P)artial		
Species	L/D	BA-1	BA-2	Ave. DBH (cm)	

Notes: Mucky mineral soils  
4862-4865

Prism Factor: \_\_\_\_\_  
Releve-Wide DBH Statistics  
Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o

**VEGETATION DATA SHEET**

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. M. Ibburn

Surveyor's Relieve #: SNM16-01C Date: 6/30/01

County: Yellow Medicine

Surveyor's Place Name: B213

ID	C.S	SPECIES NAME	REMARKS
		<u>D1-3c</u>	
		<u>2 Anemopa fruiticosa</u>	
		<u>+ R. CANADICA</u>	
		<u>+ P. VIRGINICUM</u>	

ID	C.S	SPECIES NAME	REMARKS
		<u>H1-3b</u>	
		<u>1. E. MARCULUM</u>	
		<u>+ T. CRISPUS</u>	
		<u>1. S. CALABRIGENSIS</u>	
		<u>1. C. ESCULA</u>	
		<u>+ V. HIRSHII</u>	
		<u>1 E. ADGENSIS</u>	
		<u>1 V. NEBRASKA</u>	
		<u>+ L. CILIATUS</u>	
		<u>r B. HYEMIS</u>	
		<u>1 S. GUDIKARPUM</u>	
		<u>+ S. GIGANTIA</u>	
		<u>+ H. GOSSE-SICUTUS</u>	
		<u>+ C. MACULATA</u>	
		<u>S. LANGOLATUS</u>	<u>OP</u>
		<u>P. AUREUS</u>	<u>OP</u>
		<u>D. AMERICANA</u>	<u>OP</u>

ID	C.S	SPECIES NAME	REMARKS
		<u>G1-8c</u>	
		<u>3 C. HYSTERICINA</u>	
		<u>3 S. AFRICANA</u>	
		<u>2 A. GIGANTIA</u>	
		<u>2 C. ALBY-SECTATA</u>	
		<u>2 S. RECTINATA</u>	
		<u>1 B. INERMIS</u>	
		<u>1 J. DUDLEYI</u>	
		<u>+ P. PUNCTATUS</u>	
		<u>+ C. SPINATA</u>	
		<u>+ C. GRANULATUS</u>	
		<u>+ C. PELLITA</u>	
		<u>1 E. CRATHGEORODA</u>	

**Life Form**  
 B = broadleaf evergreen  
 D = broadleaf deciduous  
 E = needleleaf evergreen  
 G = graminoids  
 H = forbs  
 L = lichens  
 M = mosses & liverworts  
 C = climbers  
 K = stem succulents  
 F = floating-leaved  
 S = submerged  
 X = epiphytes

**Height**  
 8 > 35m  
 7 = 20-35m  
 6 = 10-20m  
 5 = 5-10m  
 4 = 2-5m  
 3 = 0.5-2m  
 2 = 0.1-0.5m  
 1 = 0-0.1m

**Cover**  
 Group Species  
 c 5 75-100%  
 i 4 50-75%  
 p 3 25-50%  
 r 2 5-25%  
 b 1-5%  
 a <1%  
Abundance  
 1 <5% cover, many individuals  
 + <5% cover, few (2-20) individuals  
 r <5% cover, single

**Sociability**  
 5 = extensive mat  
 4 = small colonies, broken mat  
 3 = large group, many plants  
 2 = small dense clumps  
 1 = growing singly

**Reliability Code**  
 0 = variety certain  
 1 = cf. var./subsp.  
 2 = species certain  
 3 = species complex  
 4 = cf. species  
 5 = genus certain  
 6 = cf. genus  
 7 = unknown

**Selected Remark Codes**  
 DD = dead  
 DY = dying  
 GE = germinating  
 SD = seedling  
 SP = sprout (coppice)  
 FR = fruiting  
 OP = outside plot (<2m)  
 ## = specimen collection #

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan	_____
Entered	_____
QC'd	_____
Edited	_____
Final Scan	_____

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_  
 Surveyor(s): S. Milgrom  
 Surveyor's Relève #: SAM16-01 Surveyor's Place Name: BR20  
 Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther: MNHS  
 Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther: DOCUMENTATION  
 Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_  
 Date: 01 Month: JUL Year: 2016 (e.g. 09 JUL 2004)  
 MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland  
 NPC Code (Name): WMS83  
 NPC Ranking in Relève: \_\_\_\_\_  
 Stand Typical of NPC: (Y)es (N)o (U)ncertain  
 If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
 Relève Typical of Stand: (Y)es (N)o  
 If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_  
 Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 704402 E } (record in NAD83, Zone 15)  
4954505 N }  
 UTM Accuracy: \_\_\_\_\_ meters  
 Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_  
 County: Yellow Pine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QART: \_\_\_\_\_ of QRT: \_\_\_\_\_  
 Permanent Marker: (N)o (Y)es  
 Marker Type / Placement: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>  
 Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)  
 Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm  
 Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
 Humus Thickness: \_\_\_\_\_ cm  
 Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull  
 Earthworms Present: (Y)es (N)o  
 Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
 Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
 Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
 Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well (S)omewhat poorly (P)oorly (V)ery poorly drained  
 Height of Moss Hummocks: \_\_\_\_\_ cm  
 Sphagnum Cover: \_\_\_\_\_ %  
 Depth of Standing Water: (>) \_\_\_\_\_ cm  
 pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
 Average Depth to Bedrock: \_\_\_\_\_ cm  
 Exposed Rock: \_\_\_\_\_ %  
 Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)oux quartzite (O)ther \_\_\_\_\_  
 Rock Type: \_\_\_\_\_

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	1:	0 cm (>) _____ cm		_____ cm	_____
2:	_____ cm (>) _____ cm	_____ cm	_____	_____	
3:	_____ cm (>) _____ cm	_____ cm	_____	_____	
4:	_____ cm (>) _____ cm	_____ cm	_____	_____	
5:	_____ cm (>) _____ cm	_____ cm	_____	_____	
6:	_____ cm (>) _____ cm	_____ cm	_____	_____	
7:	_____ cm (>) _____ cm	_____ cm	_____	_____	
8:	_____ cm (>) _____ cm	_____ cm	_____	_____	

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SILCL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
 If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat  
 Remarks: Sloped wetland features, feeding into a basin of cattails; emergent

Basal Area & Tree Diameters					DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)	

Notes: \_\_\_\_\_

Prism Factor: \_\_\_\_\_  
 Relève-Wide DBH Statistics  
 Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o

VEGETATION DATA SHEET

DNR RELEVE # \_\_\_\_\_

Surveyor(s): S. Milburn Surveyor's Releve #: 8M116-001 Date: 07/01/2016  
 County: Yellow Medicine Surveyor's Place Name: B220

ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS	ID	C.S	SPECIES NAME	REMARKS
		<u>D1-3b</u>				<u>H1-3L</u>				<u>G1-3p</u>	
	F	<u>C. STOLONIFERA</u>		1		<u>P. AQUILONIS</u>		3		<u>D. gigantea</u>	
				2		<u>S. ARKANSIS</u>		3		<u>C. pellita</u>	
				1		<u>Z. AUREA</u>		2		<u>EMANIPROCTIS STRICTA</u>	
				2		<u>H. GROSSEBRATUS</u>		1		<u>B. INERMIS</u>	
				1		<u>F. VIRGINIANA</u>		1		<u>C. PROCARINELLIS</u>	
				2		<u>E. MACULATUM</u>		+		<u>S. MICROCLADUS</u>	
				+		<u>SILANCOLATUM</u>		+		<u>G. STRIATA</u>	
				1		<u>S. GIGANTEA</u>					
				1		<u>E. LANCEOLATUM</u>					
				4		<u>E. ARKANSIS</u>					
				+		<u>S. NOVAE-ANGLAE</u>					

Life Form

- B = broadleaf evergreen
- D = broadleaf deciduous
- E = needleleaf evergreen
- G = graminoids
- H = forbs
- L = lichens
- M = mosses & liverworts
- C = climbers
- K = stem succulents
- F = floating-leaved
- S = submerged
- X = epiphytes

Height

- 8 >35m
- 7 = 20-35m
- 6 = 10-20m
- 5 = 5-10m
- 4 = 2-5m
- 3 = 0.5-2m
- 2 = 0.1-0.5m
- 1 = 0-0.1m

Cover

- | Group | Species   |
|-------|-----------|
| c     | 5 75-100% |
| i     | 4 50-75%  |
| p     | 3 25-50%  |
| r     | 2 5-25%   |
| b     | 1-5%      |
| a     | <1%       |

Abundance

- 1 <5% cover, many individuals
- + <5% cover, few (2-20) individuals
- r <5% cover, single

Sociability

- 5 = extensive mat
- 4 = small colonies, broken mat
- 3 = large group, many plants
- 2 = small dense clumps
- 1 = growing singly

Reliability Code

- 0 = variety certain
- 1 = cf. var./subsp.
- 2 = species certain
- 3 = species complex
- 4 = cf. species
- 5 = genus certain
- 6 = cf. genus
- 7 = unknown

Selected Remark Codes

- DD = dead
- DY = dying
- GE = germinating
- SD = seedling
- SP = sprout (coppice)
- FR = fruiting
- OP = outside plot (<2m)
- ## = specimen collection #

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")



Initial Scan \_\_\_\_\_  
Entered \_\_\_\_\_  
QC'd \_\_\_\_\_  
Edited \_\_\_\_\_  
Final Scan \_\_\_\_\_

DNR RELEVE # \_\_\_\_\_

GENERAL INFORMATION

SITE DATA SHEET

DNR RELEVE # \_\_\_\_\_  
Surveyor(s): SM, J, J, J  
Surveyor's Relève #: SM116-002 Surveyor's Place Name: 212  
Institution: (M)BS (E)CS (N)HP (U)SFS (U) of M (O)ther MNP  
Purpose of Relève: (C)lassification (R)are species habitat (M)onitoring (O)ther Documentation  
Revisit: (Y)es (N)o Original DNR Relève #: \_\_\_\_\_  
Date: 15 Month: Aug Year: 2016 (e.g. 09 JUL 2004)  
MBS Site #: \_\_\_\_\_ Ownership: \_\_\_\_\_

VEGETATION INFORMATION

Vegetation Group: (WU) wooded upland (OU) open upland (WW) wooded wetland (OW) open wetland  
NPC Code (Name): WMs 83  
NPC Ranking in Relève: \_\_\_\_\_  
Stand Typical of NPC: (Y)es (N)o (U)ncertain  
If No, identify appropriate modifier: (N)atural disturbance (H)uman disturbance (Y)oung stand (<40 yrs) (O)ther \_\_\_\_\_  
Relève Typical of Stand: (Y)es (N)o  
If No, identify appropriate modifier: (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther \_\_\_\_\_  
Plot Location in NPC: (F)ar from community boundary (M)oderately far from boundary (C)lose to boundary (E)cotonal

LOCATION INFORMATION

UTM: 707312E (record in NAD83, Zone 15)  
4949644N  
UTM Accuracy: \_\_\_\_\_ meters  
Location Source: (G)PS (A)ir photo (T)opo map (L)IDAR (O)ther \_\_\_\_\_  
County: Yellow Medicine Township: \_\_\_\_\_ N Range: \_\_\_\_\_ Section: \_\_\_\_\_ QART: \_\_\_\_\_ of QRT: \_\_\_\_\_  
Permanent Marker: (N)o (Y)es  
Marker Type / Placement: \_\_\_\_\_

PLOT INFORMATION

Plot Size: 10 m x 10 m = 100 m<sup>2</sup>  
Elevation: \_\_\_\_\_ ft. Slope: \_\_\_\_\_ (°) or \_\_\_\_\_ (%) Aspect: \_\_\_\_\_ (e.g., N, NE, etc.; LV for level)  
Topographic Context: (C)rest (U)pper (M)iddle (L)ower (T)oe (F)lat (D)epression (?)uncertain

SOIL INFORMATION

Litter Thickness: \_\_\_\_\_ cm  
Litter Type: (L)eaves (N)eedles (G)rass (O)ther \_\_\_\_\_  
Humus Thickness: \_\_\_\_\_ cm  
Humus Type: (M)or (M)oder (P)rairie mull (W)ormed mull  
Earthworms Present: (Y)es (N)o  
Earthworm Rapid Assessment Rank (low → heavy): (1) (2) (3) (4) (5)  
Depth to Semi-Permeable Layer: \_\_\_\_\_ cm  
Depth to Gray Colors or Redox Features: \_\_\_\_\_ cm  
Drainage Class: (E)xcessively/Somewhat excessively (W)ell (M)oderately well (S)omewhat poorly (P)oorly (V)ery poorly drained  
Height of Moss Hummocks: \_\_\_\_\_ cm  
Sphagnum Cover: \_\_\_\_\_ %  
Depth of Standing Water: (>) \_\_\_\_\_ cm  
pH of Surface Water: \_\_\_\_\_ ± \_\_\_\_\_  
Average Depth to Bedrock: \_\_\_\_\_ cm  
Exposed Rock: \_\_\_\_\_ %  
Rock Group: (F)elsic (M)afic (C)alcareous (S)andstone (S)ioux quartzite (O)ther  
Rock Type: \_\_\_\_\_  
General Soil Texture: (C)lay (L)oam (S)and (S)ilt (R)ock (M)uck (P)eat

Soil Layers	Depth of Layer		Texture <sup>A</sup>	Coarse Fragments	
	Top	Bottom		Type <sup>B</sup>	Volume <sup>C</sup>
	1:	0 cm (>) _____ cm	_____ cm	_____	_____
2:	_____ cm (>) _____ cm	_____ cm	_____	_____	_____
3:	_____ cm (>) _____ cm	_____ cm	_____	_____	_____
4:	_____ cm (>) _____ cm	_____ cm	_____	_____	_____
5:	_____ cm (>) _____ cm	_____ cm	_____	_____	_____
6:	_____ cm (>) _____ cm	_____ cm	_____	_____	_____
7:	_____ cm (>) _____ cm	_____ cm	_____	_____	_____
8:	_____ cm (>) _____ cm	_____ cm	_____	_____	_____

<sup>A</sup> S = sand, LS = loamy sand, SL = sandy loam, L = loam, SIL = silt loam, SCL = sandy clay loam, CL = clay loam, SICL = silty clay loam, SC = sandy clay, SIC = silty clay, C = clay, RO = rock, PE = peat, MP = mucky peat, MU = muck  
If origin of peat or mucky peat is known, add suffix to two-letter code: -m = moss, -s = sedge  
<sup>B</sup> Gr = gravel, Co = cobbles, St = stones, Bo = boulders  
<sup>C</sup> 0 = <15%, 1 = 15-35%, 2 = 35-60%, 3 = 60-90%, 4 = >90%, ? = unknown

Remarks: Side sloped seepage with limited discharge; Amorphum fruticosum abundant further downslope and the remainder is graminoid dominated

Basal Area & Tree Diameters				DBH List: (C)omplete (P)artial	
Species	L/D	BA-1	BA-2	Ave.	DBH (cm)

Notes: \_\_\_\_\_

Prism Factor: \_\_\_\_\_  
Relève-Wide DBH Statistics  
Min: \_\_\_\_\_ Max: \_\_\_\_\_ Median: \_\_\_\_\_

Photos Taken: (Y)es (N)o



VEGETATION DATA SHEET

DNR RELEVÉ # \_\_\_\_\_

Surveyor(s): S. Millburn

Surveyor's Relevé #: SAMIL-002 Date: 8/15/2016

County: Yellow Medicine

Surveyor's Place Name: BR12

ID	C.S	SPECIES NAME	REMARKS
		<u>D3-4p</u>	
<u>3</u>		<u>A. fruticosum</u>	
		<u>D1-2a</u>	
<u>r</u>		<u>C. STOLONIFERA</u>	

ID	C.S	SPECIES NAME	REMARKS
		<u>H1-3r</u>	
<u>1</u>		<u>S. GIGANTEA</u>	
<u>1</u>		<u>E. MACULOSUM</u>	
<u>1</u>		<u>V. MASTATA</u>	
<u>+</u>		<u>P. LANCEOLATUS</u>	
<u>+</u>		<u>F. VIRGINIANA</u>	
<u>+</u>		<u>E. ADENSE</u>	
<u>1</u>		<u>V. NEPROSTIVILLA</u>	
<u>1</u>		<u>P. AUREA</u>	
<u>1</u>		<u>B. LEPTOPHYLLUM</u>	
<u>1</u>		<u>L. SIMILITICA</u>	
<u>+</u>		<u>S. ERICOIDES</u>	
<u>1</u>		<u>S. CHAMBERSIS</u>	
<u>+</u>		<u>H. AUTUMNALIS</u>	
<u>+</u>		<u>L. ASPER</u>	

ID	C.S	SPECIES NAME	REMARKS
		<u>G1-3i</u>	
<u>1</u>		<u>J. DURLEYI</u>	
<u>3</u>		<u>C. AMERICANA</u>	
<u>+</u>		<u>S. PALLIDUS</u>	
<u>2</u>		<u>A. GERARDII</u>	
<u>2</u>		<u>A. GILBERTII</u>	
<u>2</u>		<u>C. PALLIDA</u>	
<u>1</u>		<u>G. STRIATA</u>	
<u>+</u>		<u>S. PECTINATA</u>	

**Life Form**  
 B = broadleaf evergreen  
 D = broadleaf deciduous  
 E = needleleaf evergreen  
 G = graminoids  
 H = forbs  
 L = lichens  
 M = mosses & liverworts  
 C = climbers  
 K = stem succulents  
 F = floating-leaved  
 S = submerged  
 X = epiphytes

**Height**  
 8 >35m  
 7 = 20-35m  
 6 = 10-20m  
 5 = 5-10m  
 4 = 2-5m  
 3 = 0.5-2m  
 2 = 0.1-0.5m  
 1 = 0-0.1m

**Cover**  
 Group Species  
 c 5 75-100%  
 i 4 50-75%  
 j 3 25-50%  
 p 2 5-25%  
 r 1-5%  
 b <1%  
 a

**Sociability**  
 5 = extensive mat  
 4 = small colonies, broken mat  
 3 = large group, many plants  
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 1 = growing singly

**Reliability Code**  
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**Selected Remark Codes**  
 DD = dead  
 DY = dying  
 GE = germinating  
 SD = seedling  
 SP = sprout (coppice)  
 FR = fruiting  
 OP = outside plot (<2m)  
 ## = specimen collection #

**Abundance**  
 1 <5% cover, many individuals  
 + <5% cover, few (2-20) individuals  
 r <5% cover, single

Note: indicate tree canopy by recording "Ca" to right of canopy layer life form/height code (ex: "D6-9p, Ca")