

May 10, 2021

WETLAND DELINEATION REPORT

**Veterans Park Campground
Sec 17, T 35 North, R 13 East**

Prepared for:
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COLEMAN ENGINEERING COMPANY

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1.0 Introduction

Coleman Engineering Company (CEC) completed a wetland delineation on May 4, 2021 at the request of Forest County on a 16.8-acre subject property at Veterans Park Campground, Forest County, Wisconsin (Project Area). Figure 1 in Appendix A details the project location. The purpose of the delineation was to determine site conditions and as a means to limit or avoid impact to wetlands for future re-development. Until recently, the Project Area served as a functioning campground. The aerial imagery in Figures 2 and 3 in Appendix A display the locations of the site features, buildings, parking lot, and road that were installed as early as the 1970s.

Prior to any earthwork, nine soil borings were drilled across the site in November 2020. A boring map and soil logs are included in Appendix E. In December 2020, approximately 30% of the Project Area, mainly the interior campsites, were scraped of existing top soil to expose the historic fill material used to create the campground substrate and confirmed the lack of hydric wetland soil. Fill material was also deposited along the road for future use. Photos of this earthwork, taken on March 31, 2021, are included in Appendix C. The delineation on May 4, 2021 was completed around all existing structures and materials.

The delineation was completed by Molly Gardner, an Environmental Specialist who has been with CEC for more than four years. She has completed 16 Continuing Education Units in Wetland Delineation, along with a B.S. in Geoscience and a Certificate in GIS.

2.0 Desktop Review

2.1 Site Conditions

The topography of the Project Area slopes gradually from the Lake Metonga embankment at the northern Project Area boundary to the south and out of the Project Area. There are small pockets of lower elevation scattered throughout the Project Area. Overall, the elevation change is approximately 4 feet from north to south. Additionally, two culverts in the southwest quadrant of the Project Area aid in moving excess water off the site and into a larger wetland complex to the south. The topographic data was collected by the CEC survey department in October 2020. Contour lines and culvert locations are included on Figures 2 and 3 in Appendix A.

Long-term weather information is recorded by the National Weather Service to calculate the current climatic conditions. The nearest station with compiled historic data is in Rhinelander, Wisconsin which is approximately 30 miles west of the Project Area. Table 1 in Appendix B shows the average May temperature in Rhinelander over the past 50 years was 53.9 degrees Fahrenheit with an annual average of 3.52 inches of precipitation.

Table 2 in Appendix B is the Natural Resource Conservation Service (NRCS) Rainfall Documentation Worksheet which compares long-term rainfall statistics from the Rhinelander weather station data to current precipitation data. The prior 3 month period from February through April was calculated to have 'wetter than normal' conditions. The estimated growing season dates, where the temperature would be warm enough to support wetland vegetation,

are calculated to be May 3 to October 11, 2021. Therefore, CEC performed this delineation approximately 1 day into the growing season.

2.2 Wisconsin Wetland Inventory

The Wisconsin Wetland Inventory (WWI) is a compilation of predicted and confirmed wetlands compiled by the Wisconsin Department of Natural Resources (WDNR). These wetland maps can be useful for general, large scale interpretation; however, the actual location and size of wetlands must be determined by field visits.

The WWI descriptions of the wetland types found in the Project Area are classified consistent with the Cowardin Classification of Wetlands and Deepwater Habitats of the United States, 1979. Figure 2 in Appendix A shows a large, WWI mapped, mixed forest wetland across the entire southern boundary of the Project Area and continuing south to and across East Lakeview Street.

2.3 Mapped Soils

The NRCS database classifies and defines soil associations nationwide based upon geology, landform, relief, climate, and natural vegetation of the area. Figure 2 in Appendix A displays the main four soil complexes within the Project Area.

NRCS Soil Classes across the Project Area from west to east and north to south:

- PsB – Pence Vilas complex, 0 to 6 percent slopes
- PsC – Pence Vilas complex, 6 to 15 percent slopes
- WhA – Whisklake silt loam, 0 to 3 percent slopes
- Lu – Lupton and Cathro soils, 0 to 1 percent slopes

3.0 Methods

Methodology used to identify and delineate wetland boundaries in the Project Area was done in accordance with the U.S. Army Corps of Engineers (USACE) Delineation Manual, Northcentral and Northeast Region 2012 (Version 2.0). First, historic photos were reviewed for signatures, the entire parcel was visually surveyed, and prior soil borings were examined for the initial wetland determination. Areas that exhibited a dominance of wetland hydrology, wetland vegetation, and wetland soils were identified and the wetland boundaries were estimated.

To determine if an area met the wetland criteria, a wetland determination plot within the wetland was selected and an upland determination plot was selected in a nearby upland area. Within each of the plots, data was gathered and recorded on the USACE Automated Wetland Determination Data Form (Northcentral/Northeast Region Version 2.0) describing the hydrology, vegetation, and soil. If all three of these characteristics contained appropriate wetland indicators, the estimated boundary line was supported. Appendix C includes the data sheet sets for the determination plots completed in the Project Area. The locations of the plots were surveyed in the field are displayed on the wetland delineation map in Appendix A.

4.0 Results

4.1 Site Observations

The Project Area is bordered by County Park Road to the west, Lake Metonga to the north, a chain link fence to the east, and a coniferous swamp to the south. Due to the proximity to Lake Metonga, the Project Area has a highwater table within 1-4 feet of the soil surface. This hydrologic influence has likely aided in the presence of lacustrine soil horizons that were observed at depth in the 10-foot soil borings. Historic construction activity and property maintenance has altered the natural layering of the soil and the vegetative communities, as well.

Site preparation and construction activities have the potential to introduce and exasperate the existence of invasive and exotic species. Although the sample plots in the Project Area were primarily native species, construction activities may introduce and exasperate any non-native plants observed near the Project Area, along with invasive species. If located, measures may be taken by the property owner to limit the spread. Threatened or endangered species were not encountered, but may exist, in the Project Area.

4.2 Wetlands

The Project Area contained two wetlands. Wetland A is pocket wetland in a slight depression located in the northwest quadrant of the Project Area and is located on the Wetland Map in Appendix A. Wetland A was determined to be a persistent, emergent wetland classified by the Wetlands and Deepwater Habitats Classification system as PEM1. It was first identified by a slightly wet signature on aerial imagery and wetland soil on nearby boring log B-3 that met the hydric indicator S3. The vegetation in Wetland A has been categorized as significantly disturbed since its alteration to maintained lawn. The soils examined in Wetland A were comprised of a sandy topsoil underlain by mucky peat. Data Sheets detailing this information are located in Appendix C.

Wetland B is a larger wetland complex located across the southern boundary and along the eastern chain link fence just east of the Project Area. Wetland B is a hummocky northern white cedar and balsam fir dominated wetland. The topography continues to gradually grade downward off site to the south to East Lakeview Street. The soils in Wetland B were observed to be unaltered by historic construction activities. They were very wet and comprised of muck which is typical of the Lupton and Cathro soil series. The culverts in the southwest quadrant of the Project Area aid in concentrating the runoff from the parking lot on the western portion of the site to the southwest of the Project Area.

4.3 Jurisdiction

The wetlands identified for this report may be subject to Federal regulation under the jurisdiction of the USACE, State regulation under the jurisdiction of the WDNR, and local jurisdiction under the local County, Town, City, or Village. Be advised that any future site activities or construction may require the acquisition of wetland permits for any unavoidable disturbances or impacts.

The information contained herein represents the findings of CEC during wetland evaluation activities conducted on May 4, 2021 at the referenced site.

Respectfully,
COLEMAN ENGINEERING COMPANY

Molly C. Gardner

5/10/2021

Molly C. Gardner
Environmental Specialist
Wetland Project Manager

Date

Enclosures

APPENDIX A

Figure 1: Project Location Map

Figure 2: Feature Map

Figure 3: Wetland Delineation Map

VETERANS PARK CAMPGROUND

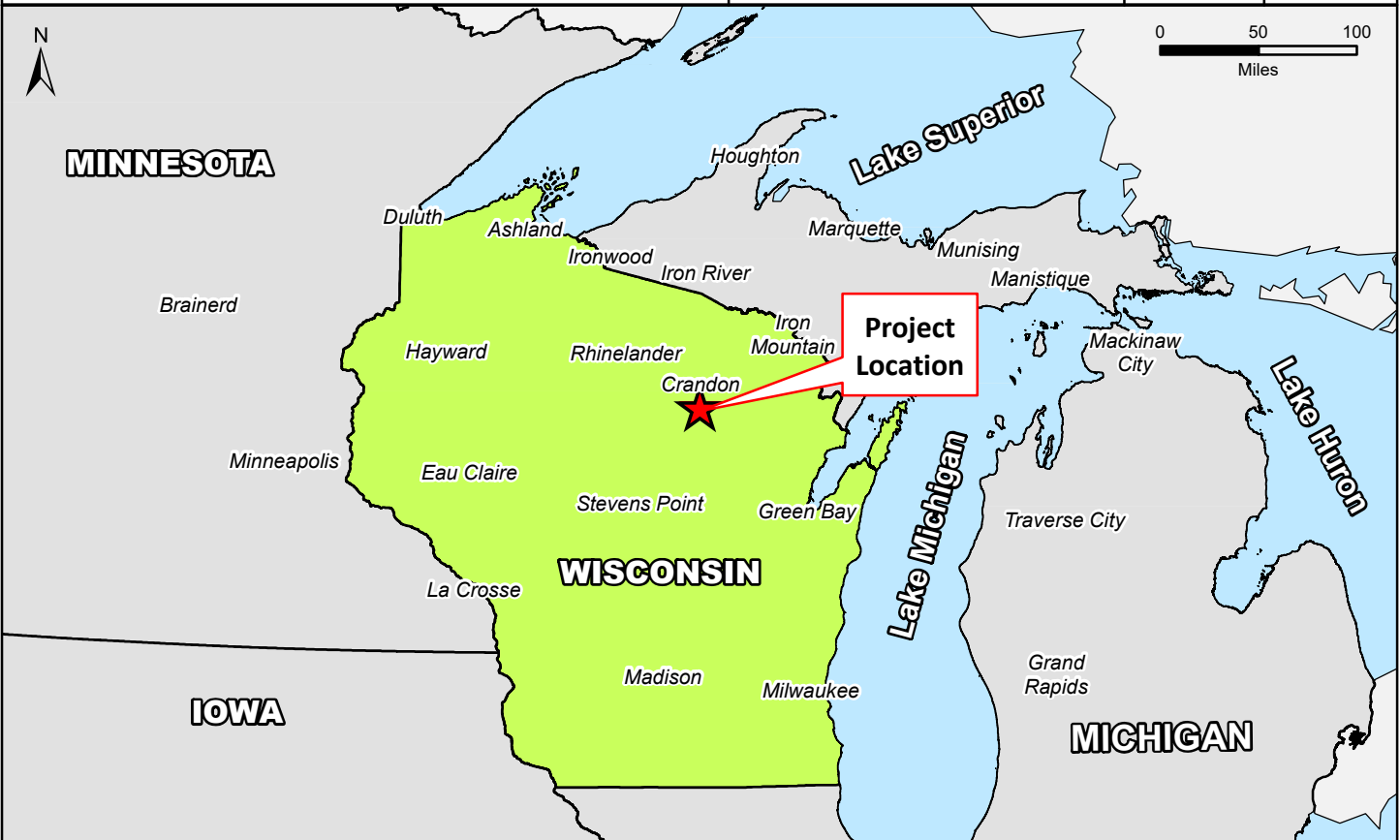
Crandon, Forest County, Wisconsin

Location Map



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Project No: 200677	Figure No: Fig 1
Map Date: 5/4/2021	Drawn By: MCG



VETERANS PARK CAMPGROUND

Crandon, Forest County, Wisconsin

Feature Map



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Project No:
200677
Map Date:
5/4/2021

Figure No:
Fig 2
Drawn By:
MCG



2017 ESRI World Imagery Basemap

VETERANS PARK CAMPGROUND

Crandon, Forest County, Wisconsin

Wetland Delineation Map



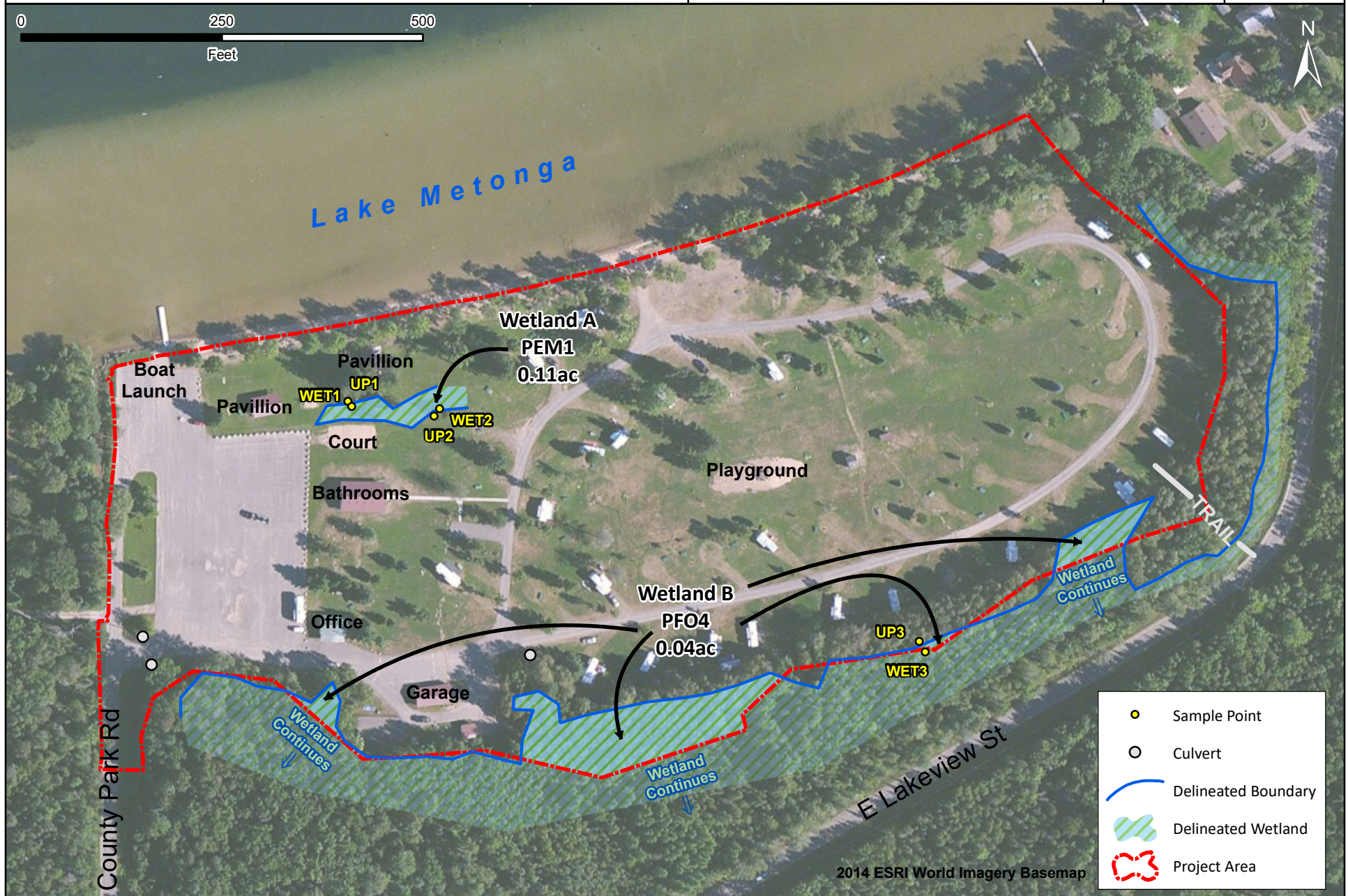
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Project No:
200677

Figure No:
Fig 3

Map Date:
5/4/2021

Drawn By:
MCG



- Sample Point
- Culvert
- Delineated Boundary
- ▨ Delineated Wetland
- ⬢ Project Area

2014 ESRI World Imagery Basemap

APPENDIX B

Table 1: NRCS Wetlands (WETS) Climate Table

Table 2: NRCS Method for Rainfall Documentation

Figure 1:

WETS Table

WETS Station: RHINELANDER, WI								
Requested years: 1971 - 2020								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	22.1	0.8	11.5	1.16	0.76	1.40	4	11.1
Feb	27.1	3.8	15.5	1.04	0.54	1.27	3	9.0
Mar	38.5	15.4	27.0	1.69	1.02	2.05	5	8.0
Apr	52.4	28.7	40.6	2.74	1.85	3.27	7	4.5
May	66.5	41.3	53.9	3.52	2.43	4.19	8	0.2
Jun	74.8	51.1	62.9	4.22	2.92	5.02	8	0.0
Jul	79.3	55.9	67.6	4.01	2.69	4.81	7	0.0
Aug	76.6	54.0	65.3	4.03	2.80	4.79	7	0.0
Sep	68.1	45.8	57.0	4.15	2.66	5.00	7	0.0
Oct	54.7	34.2	44.5	3.07	2.11	3.66	7	0.8
Nov	38.9	22.3	30.6	1.93	1.18	2.34	5	5.3
Dec	26.2	8.4	17.3	1.52	1.00	1.83	5	12.3
Annual:					30.09	36.54		
Average	52.1	30.1	41.1	-	-	-	-	-
Total	-	-	-	33.08			73	51.2

GROWING SEASON DATES

Years with missing data:	24 deg = 6	28 deg = 5	32 deg = 3
Years with no occurrence:	24 deg = 0	28 deg = 0	32 deg = 0
Data years used:	24 deg = 44	28 deg = 45	32 deg = 47
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	4/23 to 10/23: 183 days	5/6 to 10/7: 154 days	5/22 to 9/26: 127 days
70 percent *	4/18 to 10/28: 193 days	5/3 to 10/11: 161 days	5/19 to 9/30: 134 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

STATS TABLE - total precipitation (inches)

Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1895	0.14	M0.30	MT	M0.29				2.26	M3.04	MT			6.03
1896													
1897													
1898													
1899													
1900													
1901													
1902													
1903													
1904													
1905													
1906													
1907													
1908	0.34	1.46	1.48	3.38	2.44	4.12	3.76	1.35	4.	M0.	1.37	M0.	25.

										49	95	71	85
1909	0.49	0.76	0.76	M3.12	2.43	4.01	M3.46	3.83	2.90	1.15	5.32	1.27	29.50
1910	M0.48	M0.54	0.38	2.82	2.46	0.53	1.44	3.40	2.49	M1.74	M1.03	M0.52	17.83
1911	0.66	1.17	M1.46	1.18	M5.25	2.45	M8.32	3.29	4.45	8.87	M1.72	1.97	40.79
1912	0.36	0.17	0.58	3.28	M7.31	1.28	4.09	8.32	4.58	2.23	0.85	2.02	35.07
1913	0.42	0.64	2.62	1.60	4.68	3.66	6.47	M1.83	5.17	3.76	1.23	0.03	32.11
1914	1.26	M0.35	1.30	3.48	2.12	6.84	7.03	5.91	2.70	1.06	1.08	0.23	33.36
1915	1.39	0.98	0.32	M1.48	3.79	3.43	4.52	4.17	3.06	2.37	4.39	M0.97	30.87
1916	2.47	0.46	2.38	3.46	3.56	7.55	4.40	2.13	7.79	2.99	1.97	0.63	39.79
1917	0.55	0.72	M1.16	1.84	0.98	4.87	0.99	3.86	1.87	3.56	0.37	0.71	21.48
1918	1.26	1.59	1.24	1.65	7.30	1.82	3.22	7.91	2.54	2.16	2.48	1.46	34.63
1919	M0.41	M1.53	1.32	2.64	1.91	8.88	5.34	2.83	2.94	M3.35	3.13	M0.22	34.50
1920	M1.47	M0.73	3.43	1.70	1.52	6.54	2.97	1.83	1.61	3.05	M0.95	1.76	27.56
1921	0.84	M0.84	3.53	5.13	1.93	2.07	3.46	4.26	3.81	1.18	0.87	1.37	29.29
1922	M0.57	2.94	0.82	2.17	2.65	3.46	4.20	1.42	4.04	1.58	2.24	0.77	26.86
1923	1.37	0.30	1.57	2.60	2.09	9.06	4.13	2.88	2.02	0.76	M0.71	0.80	28.29
1924	0.86	0.49	0.82	3.54	3.64	4.63	2.97	6.27	2.65	0.74	0.94	0.85	28.40
1925	0.49	M0.98	0.60	1.74	1.27	6.02	2.88	3.02	3.81	1.85	M1.19	M0.74	24.59
1926	M0.59	1.31	1.31	1.90	3.22	3.82	4.27	7.91	M5.21	3.32	M2.59	1.20	36.65
1927	0.67	0.61	1.88	1.77	3.42	3.70	8.16	0.99	3.33	3.74	2.21	M2.04	32.52
1928	0.78	1.10	0.97	2.62	2.22	2.93	6.28	4.41	7.26	4.87	0.57	0.18	34.19
1929	1.19	0.90	0.85	3.05	3.80	7.93	8.83	2.71	3.04	0.84	1.33	0.37	34.84
1930	0.56	0.97	0.57	1.47	3.12	5.45	2.03	3.10	4.01	1.93	1.63	0.14	24.98
1931	0.50	0.50	0.64	0.57	1.07	8.84	3.90	4.24	5.50	3.41	4.59	1.03	34.79
1932	1.67	2.27	0.75	1.82	2.36	2.00	3.53	4.34	1.49	0.92	1.43	2.21	24.79
1933	1.09	1.66	0.50	2.70	4.63	4.93	1.50	1.41	2.47	2.03	M0.14	M1.10	24.16
1934		0.32	2.14	2.39	2.11	3.51	2.04	4.21	8.90	2.86	5.71	1.25	35.44
1935	M3.28	0.83	0.79	1.55	2.12	M5.02	4.63	5.84	4.59	3.25	0.61	0.43	32.94
1936	1.47	1.43	1.74	0.97	3.71	1.67	2.14	8.51	2.55	2.54	0.73	1.18	28.64
1937	M1.40	3.36	0.17	1.87	3.63	1.13	3.65	2.38	3.17	3.18	1.65	0.64	26.23
1938	2.09	1.75	2.73	3.65	5.85	4.46	5.93	4.53	3.88	2.34	2.63	1.67	41.51
1939	3.04	2.48	2.48	2.61	3.91	8.22	1.39	1.94	1.80	1.66	0.12	1.91	31.56
1940	0.67	2.40	1.06	2.09	3.74	7.65	4.76	4.49	1.49	2.04	3.25	1.90	35.54
1941	0.77	M0.45	0.58	1.89	3.22	2.18	4.36	6.99	6.12	5.94	1.23	0.91	34.64
1942	0.89	0.45	5.75	M1.83	M5.51	2.67	4.68	2.37	8.88	2.88	1.88	1.62	38.88

										54	26		45
1943	1.06	0.30	1.95	1.37	3.96	8.56	1.11	M4.85	1.74	2.04	2.34	0.03	29.31
1944	1.06	0.59	2.13	1.33	3.96	6.49	1.82	1.88	3.46	0.70	2.00	0.46	25.88
1945	0.61	2.78	2.06	4.37	4.00	3.22	4.33	4.24	2.19	1.54	3.30	M1.56	34.20
1946	2.18	0.69	0.65	0.33	2.59	11.72	2.49	M2.48	4.14	2.98	2.48	1.34	34.07
1947	0.41	0.46	0.75	3.50	2.83	4.00	2.29	4.15	1.81	1.47	M2.37	0.93	24.97
1948	0.46	1.32	0.94	M1.58	0.73	3.00	4.38	2.00	2.91	0.97	3.60	0.53	22.42
1949	1.35	0.65	1.35	0.87	3.00	5.28	6.36	1.58	4.52	2.67	1.33	1.07	30.03
1950	3.54	0.69	2.45	2.62	3.60	2.32	4.69	3.07	1.52	2.48	1.59	1.95	30.52
1951	0.52	2.10	3.03	2.85	4.39	3.92	8.62	4.83	4.26	3.45	1.28	1.11	40.36
1952	1.64	0.49	1.58	1.95	3.28	3.87	5.75	4.88	0.70	0.23	1.47	1.33	27.17
1953	0.69	2.09	M1.43	2.42	3.17	8.87	3.80	2.10	M1.41	0.29	1.10	1.69	29.06
1954	0.67	0.65	1.24	4.79	3.09	4.04	2.79	1.56	6.02	3.66	0.90	0.42	29.83
1955	0.58	0.72	1.72	2.35	3.50	2.61	4.09	4.89	2.35	3.58	1.40	1.14	28.93
1956	0.58	0.21	1.00	1.31	2.47	6.05	3.88	5.55	1.61	0.58	3.25	0.45	26.94
1957	0.31	0.70	0.99	1.33	3.04	3.19	2.13	M4.66	M2.72	0.93	2.26	0.41	22.67
1958	0.49	0.03	0.68	1.30	5.52	3.11	4.81	4.56	3.62	2.34	1.89	0.33	28.68
1959	0.42	0.43	0.80	1.99	3.37	2.99	4.83	8.89	7.32	3.71	0.58	2.40	37.73
1960	1.05	0.33	0.18	3.06	5.62	4.91	2.24	5.80	3.22	2.67	1.33	0.40	30.81
1961	0.21	1.27	2.07	1.70	2.67	3.54	4.47	3.50	4.34	3.17	2.66	0.95	30.55
1962	0.67	1.69	0.40	M2.11	4.59	2.93	M2.69	M3.12	3.20	1.55	M0.68	M0.52	24.15
1963	M0.28	0.46	1.09	M1.35	2.86	2.49	2.10	3.43	3.81	0.74	0.72	0.82	20.15
1964	0.72	0.22	0.83	3.58	3.29	2.60	3.36	5.87	3.62	0.44	3.02	1.65	29.20
1965	0.44	0.82	1.64	2.91	4.50	3.25	2.99	2.82	4.73	1.68	3.55	1.40	30.73
1966	0.87	0.43	3.14	1.24	0.77	M2.22	1.50	6.86	2.63	3.29	1.28	1.13	25.36
1967	2.68	0.60	1.39	4.32	1.67	5.70	2.68	3.48	3.13	3.27	0.72	0.39	30.03
1968	0.99	0.19	1.25	2.49	5.10	9.89	4.67	1.94	7.47	2.34	0.52	2.74	39.59
1969	2.79	0.12	0.60	1.30	3.58	4.76	2.44	0.82	2.40	4.27	1.56	2.00	26.64
1970	0.92	0.35	0.87	1.04	4.90	2.05	3.63	0.69	8.38	3.44	2.95	1.90	31.12
1971	2.50	2.82	1.04	0.65	4.05	5.27	3.32	3.36	5.71	3.14	2.05	2.27	36.18
1972	1.13	1.12	2.39	3.11	2.13	2.86	3.22	6.69	4.96	2.69	2.76	2.62	35.68
1973	0.92	0.72	4.09	3.25	6.86	2.29	4.41	7.42	3.20	2.05	1.29	1.55	38.05
1974	0.50	0.83	0.61	3.41	2.59	3.03	2.97	6.33	3.21	1.18	2.72	0.79	28.17
1975	1.90	1.35	1.21	3.33	2.22	4.33	1.05	4.06	4.44	1.25	4.21	1.12	30.47
1976	1.70	0.98	2.54	2.63	1.55	1.71	1.53	3.43	0.00	0.00	0.28	0.45	17.00

										40	43		63
1977	0.58	0.44	3.28	3.81	2.87	4.21	2.97	7.01	5.41	2.49	4.09	1.85	39.01
1978	0.55	0.38	0.15	2.75	4.66	4.48	7.70	9.15	5.70	1.42	1.54	1.44	39.92
1979	1.65	1.57	3.11	M0.82	3.25	3.19	3.98	4.54	0.84	5.90	1.90	0.59	31.34
1980	1.81	0.23	0.37	1.49	1.93	4.58		8.58	5.03	1.62	0.74	1.03	27.41
1981	0.43	1.95	0.62	3.49	4.01	10.22	1.18	0.82	2.24	2.19	0.27	1.16	28.58
1982	M1.40	0.23	1.03	4.09	3.15	2.13	5.57	2.86	6.10	3.45	2.44	3.32	35.77
1983	1.49	0.81	M1.57	1.39	4.36	3.86	1.95	3.12	4.72	3.81	3.81	1.13	32.02
1984	0.51	1.39	1.26	3.59	1.07		2.55	3.24	4.32	4.65	0.38	2.33	25.29
1985	0.14	0.88	2.21	1.57	4.85	2.39	4.73	4.80	6.42	4.31	3.70	1.05	37.05
1986	0.89	0.44	0.86	2.28	0.56	3.01	8.88	2.79	7.73	3.03	0.87	0.47	31.81
1987	M0.85	0.10	0.63	1.02	2.81	1.70	3.76	1.65	2.59	1.79	2.45	3.46	22.81
1988	1.18	0.24	1.50	1.28	1.19	2.32	2.99	4.14	3.78	1.83	1.30	1.01	22.76
1989	1.26	0.41	1.41	M0.79		2.27	0.63	4.25	0.57	1.45	0.46	0.61	14.11
1990	0.37	0.32	0.73	3.10	4.97	7.06	4.69	7.91	6.43	3.72	1.35	0.77	41.42
1991	0.70	1.04	3.04	4.33	7.50	4.27	4.99	2.32	3.46	3.03	4.87	M1.16	40.71
1992	0.70	1.39	1.76	2.87	2.66	2.52	2.23	3.17	6.71	2.17	3.49	1.80	31.47
1993	1.45	0.04	M0.43	2.60	4.53	5.81	2.77	3.42	3.62	2.17	1.76	0.59	29.19
1994	0.90	0.94	0.75	2.91	1.71	4.40	3.94	4.76	8.51	1.77	1.49	0.35	32.43
1995	0.39	0.51	1.41	1.94	4.07	0.85	5.40	5.74	2.58	5.44	2.03	1.35	31.71
1996	2.53	0.56	2.16	2.16	0.97	4.42	5.43	3.45	2.60	4.23	2.57	2.03	33.11
1997	3.15	0.11	1.78	1.04	2.53	6.31	4.58	3.79	4.23	3.91	0.73	0.59	32.75
1998	1.84	1.06	3.24	1.16	4.43	5.25	1.04	1.82	1.87	1.57	2.09	0.84	26.21
1999	2.30	1.46	0.46	1.87	7.25	2.99	7.88	2.79	1.78	1.94	1.55	0.76	33.03
2000	1.57	1.86	2.30	2.51	2.46	5.00	10.24	3.24	4.10	0.73	M2.19	1.15	37.35
2001	0.89	1.14	0.69	4.69	4.49	M4.01	4.65	2.13	6.38	2.73	2.79	1.93	36.52
2002	0.61	1.88	2.42	6.33	2.86	4.18	5.69	3.66	6.54	3.94	0.43	0.65	39.19
2003	0.28	1.20	2.23	4.32	2.92	2.46	4.21	1.34	3.30	1.37	2.38	1.13	27.14
2004	1.47	2.21	3.70	2.32	4.85	3.26	2.11	3.38	3.04	3.49	M1.39	2.11	33.33
2005	1.27	1.53	1.82	2.02	1.98	3.68	1.99	2.16	3.15	3.90	2.71	1.29	27.50
2006	1.12	0.81	2.75	0.55	6.68	0.50	M3.55	3.95	3.06	2.08	1.65	2.11	28.81
2007	0.91	0.85	1.71	1.90	3.10	4.30	M2.68	1.95	3.50	6.10	0.71	1.92	29.63
2008	1.12	1.16	0.81	4.01	4.25	3.62	3.43	1.41	2.40	1.82	1.18	2.19	27.40
2009	0.64	0.91	1.22	3.66	2.64	2.14	1.68	5.04	0.61	5.59	0.37	2.02	26.52
2010	0.72	M0.58	0.69	0.95	2.28	8.19	5.47	3.64	9.00	2.00	M1.00	1.80	38.00

										63	78	66	39
2011	0.89	0.40	2.70	2.72	4.00	4.95	2.74	M2.52	3.04	1.83	1.26	1.86	28.91
2012	1.42	2.03	1.41	2.02	5.67	3.94	6.33	1.84	1.87	3.88	1.44	0.82	32.67
2013	1.23	1.53	1.94	4.44	4.50	5.49	2.87	5.43	2.71	4.47	2.09	1.68	38.38
2014	1.39	1.36	0.87	4.28	3.00	8.01	4.80	6.74	7.26	4.25	3.52	1.78	47.26
2015	0.70	0.31	0.68	3.24	4.16	3.42	4.19	3.59	3.37	3.68	2.66	4.68	34.68
2016	0.70	0.72	3.47	3.16	3.09	6.99	3.95	8.13	5.91	5.19	2.12	1.92	45.35
2017	1.87	1.17	1.38	6.17	5.88	7.38	2.32	4.74	2.11	4.89	1.09	1.62	40.62
2018	1.18	1.18	1.92	2.34	1.76	7.92	3.75	2.12	5.30	6.42	2.02	1.44	37.35
2019	0.85	4.44	0.99	3.55	5.37	4.29	4.96	3.40	5.81	3.16	1.57	2.96	41.35
2020	1.68	0.36	3.12	2.86	1.59	5.13	8.77	2.19	5.17	2.74	2.30	0.60	36.51
2021	0.53	1.45	1.72	M4.56	M0.07								8.33

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2016-07-22

Table 2:

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination NRCS Engineering Field Handbook Chapter 19			
Date	5/10/2021	Landowner/Project	Forest Co / Veterans Park
Weather Station	Rhinelanders	State	Wisconsin
County	Forest	Growing Season	5/3/2021 - 10/11/2021
Photo/obs Date	5/4/2021	Soil Name	WhA - Whisklake silt loam

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)								
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns	
	1st Prior Month*	April	1.85	3.27	4.18	W	3	3	9
	2nd Prior Month*	March	1.02	2.05	1.37	N	2	2	4
	3rd Prior Month*	February	0.54	1.27	0.99	N	2	1	2
							Sum	15	

*compared to photo/observation date

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions: prior period has been wetter than normal

APPENDIX C

Wetland Determination Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Veterans Park Campground City/County: Forest County Sampling Date: 5/4/21
 Applicant/Owner: Forest County State: WI Sampling Point: WET1
 Investigator(s): Molly Gardner; CEC Section, Township, Range: Sec 17 T35N R13E
 Landform (hillside, terrace, etc.): Slight depression Local relief (concave, convex, none): Concave Slope %: 0-1
 Subregion (LRR or MLRA): LRR K, MLRA 90A Lat: 45.521656 Long: -88.901283 Datum: WISCRS Forest Co
 Soil Map Unit Name: PsB - Pence-Vilas complex, 0 to 6 percent slopes NWI classification: None [PEM1]

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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> If yes, optional Wetland Site ID: <u>Wetland A</u>
Hydric Soil Present?	Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present?	Yes <u>X</u> No <u> </u>	

Remarks: (Explain alternative procedures here or in a separate report.)
 Sample point is located ~5ft southwest of wetland flag A3 within Wetland A. Wetland A is located ~75ft north of the bathroom building in the northwest quadrant of the project area. The wetland consists of a slight depression within the maintained lawn which has significantly disturbed the vegetative community. In 2020 a large load of fill material was dumped on the eastern end of Wetland A, therefore, the eastern boundary was estimated based on topography and previous photos which are included with this report. South of wetland A is a sport court and abundant gravel beneath the maintained lawn leading to the eastward campsites. There was likely a gravel road or path oriented east/west to the south of Wetland A which is now creating the wetland boundary.

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u> </u> Surface Soil Cracks (B6)
<u> </u> Surface Water (A1)	<u> </u> Drainage Patterns (B10)
<u> X</u> High Water Table (A2)	<u> </u> Moss Trim Lines (B16)
<u> X</u> Saturation (A3)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> X</u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> X</u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> Shallow Aquitard (D3)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Microtopographic Relief (D4)
<u> </u> Sparsely Vegetated Concave Surface (B8)	<u> X</u> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u>	
Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>8</u>	
Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u>	
(includes capillary fringe)	

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

Remarks:
 The close proximity to Lake Metonga (~115 feet to the north) along with the boring logs indicate a water table within 4ft from the soil surface throughout the site.

VEGETATION – Use scientific names of plants.

Sampling Point: WET1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30</u>)				
1. <u>Picea mariana</u>	15	Yes	FACW	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>15</u>	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15</u>)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
		=Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Spagnum sp.</u>	50	Yes		
2. <u>Lemna minor</u>	10	No	OBL	
3. <u>Poa palustris</u>	5	No	FACW	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>65</u>	=Total Cover		
Woody Vine Stratum (Plot size: <u>n/a</u>)				
1. _____				
2. _____				
3. _____				
4. _____				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	<u>10</u>	x 1 =	<u>10</u>	
FACW species	<u>20</u>	x 2 =	<u>40</u>	
FAC species	<u>0</u>	x 3 =	<u>0</u>	
FACU species	<u>0</u>	x 4 =	<u>0</u>	
UPL species	<u>0</u>	x 5 =	<u>0</u>	
Column Totals:	<u>30</u>	(A)	<u>50</u>	(B)
Prevalence Index = B/A =			<u>1.67</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

 2 - Dominance Test is >50%

 X 3 - Prevalence Index is ≤3.0¹

 4 - 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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)
 Vegetation has been regularly mowed and maintained as lawn but approximately 20% of Wetland A has bare soil and the inability to sustain lawn type grasses likely due to inundation.

SOIL

Sampling Point WET1

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		
0-2	10YR 3/2	100					Sandy	Topsoil
2-9	10YR 2/2	100					Mucky Peat	Lacustrine, organic peat
9-20	10YR 5/3	100					Sandy	Well sorted

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):		Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Type: _____	Depth (inches): _____		

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Soil directly south of Wetland A have been historically overlain with gravel and topsoil with a buried peat layer. At the time of delineation, the wetland boundary is at the this contact.

VEGETATION – Use scientific names of plants.

Sampling Point: UP1

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u>Picea mariana</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</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>60.0%</u> (A/B) Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>40</u></td> <td>x 4 = <u>160</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>265</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.12</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>40</u>	x 4 = <u>160</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>265</u> (B)	Prevalence Index = B/A = <u>3.12</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>30</u>	x 2 = <u>60</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>40</u>	x 4 = <u>160</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>85</u> (A)	<u>265</u> (B)																			
Prevalence Index = B/A = <u>3.12</u>																				
2. <u>Populus tremuloides</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>40</u> =Total Cover																			
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Populus tremuloides</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - 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. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>5</u> =Total Cover																			
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Poa pratensis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																
2. <u>Trifolium pratense</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>40</u> =Total Cover																			
Woody Vine Stratum (Plot size: <u>n/a</u>)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
	=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)
 Although the vegetation passes dominance test for hydrophytic vegetation it does not meet the criteria due to failing the prevalence index parameter. Additionally, the vegetation has been categorized as significantly disturbed through regular alteration by maintaining the area as a lawn.

SOIL

Sampling Point UP1

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		
0-11	10YR 2/2	100					Loamy/Clayey	Sandy loam
11-20	10YR 5/3	100					Sandy	Poorly sorted sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, **MLRA 149B**)
- Thin Dark Surface (S9) (LRR R, **MLRA 149B**)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, **MLRA 149B**)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Veterans Park Campground City/County: Forest County Sampling Date: 5/4/21
 Applicant/Owner: Forest County State: WI Sampling Point: WET2
 Investigator(s): Molly Gardner; CEC Section, Township, Range: Sec 17 T35N R13E
 Landform (hillside, terrace, etc.): Slight depression Local relief (concave, convex, none): Concave Slope %: 0-1
 Subregion (LRR or MLRA): LRR K, MLRA 90A Lat: 45.521650 Long: -88.900855 Datum: WISCRS Forest Co
 Soil Map Unit Name: PsB - Pence-Vilas complex, 0 to 6 percent slopes NWI classification: None [PEM1]

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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> If yes, optional Wetland Site ID: <u>Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sample point is located ~5ft east of wetland flag A9 within Wetland A. Wetland A is located ~75ft north of the bathroom building in the northwest quadrant of the project area. The wetland consists of a slight depression within the maintained lawn which has significantly disturbed the vegetative community. In 2020 a large load of fill material was dumped on the eastern end of Wetland A, therefore, the eastern boundary was estimated based on topography and previous photos which are included with this report. South of wetland A is a sport court and abundant gravel beneath the maintained lawn leading to the eastward campsites. There was likely a gravel road or path oriented east/west to the south of Wetland A which is now creating the wetland boundary.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) ___ Aquatic Fauna (B13) <u>X</u> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
--	---

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>9</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
--	---

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

Remarks:
 The close proximity to Lake Metonga (~115 feet to the north) along with the boring logs indicate a water table within 4ft from the soil surface throughout the site.

VEGETATION – Use scientific names of plants.

Sampling Point: WET2

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or 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>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>1</u></td><td>x 1 = <u>1</u></td></tr> <tr><td>FACW species <u>7</u></td><td>x 2 = <u>14</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>0</u></td><td>x 4 = <u>0</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>8</u></td><td>(A) <u>15</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>1.88</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>1</u>	x 1 = <u>1</u>	FACW species <u>7</u>	x 2 = <u>14</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>8</u>	(A) <u>15</u> (B)	Prevalence Index = B/A = <u>1.88</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>1</u>	x 1 = <u>1</u>																			
FACW species <u>7</u>	x 2 = <u>14</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>8</u>	(A) <u>15</u> (B)																			
Prevalence Index = B/A = <u>1.88</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Carex sp.</u>	10	Yes	_____																	
2. <u>Poa palustris</u>	5	Yes	FACW																	
3. <u>Fraxinus pennsylvanica</u>	2	No	FACW																	
4. <u>Lemna minor</u>	1	No	OBL																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u>n/a</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - 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.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)
 Vegetation has been regularly mowed and maintained as lawn but approximately 20% of Wetland A and approximately 80% of this sample plot has bare soil and the inability to sustain lawn type grasses likely due to inundation.

SOIL

Sampling Point WET2

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		
0-1	10YR 2/2	100					Peat	Peat with organics
1-2	10YR 5/4	100					Sandy	Uniform sand
2-12	10YR 2/2	100					Mucky Peat	Mucky sandy peat
12-20	10YR 5/2	100					Sandy	Poorly sorted sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, **MLRA 149B**)
- Thin Dark Surface (S9) (LRR R, **MLRA 149B**)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, **MLRA 149B**)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

The sample point likely had historic alteration with the addition of a layer of surficial sandy fill as evidenced by repeating peat layers.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Veterans Park Campground City/County: Forest County Sampling Date: 5/4/21
 Applicant/Owner: Forest County State: WI Sampling Point: UP2
 Investigator(s): Molly Gardner; CEC Section, Township, Range: Sec 17 T35N R13E
 Landform (hillside, terrace, etc.): Slight hillside Local relief (concave, convex, none): Convex Slope %: 0-1
 Subregion (LRR or MLRA): LRR K, MLRA 90A Lat: 45.521625 Long: -88.900882 Datum: WISCRS Forest Co
 Soil Map Unit Name: WhA - Whisklake silt loam, 0 to 3 percent 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 Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: (Explain alternative procedures here or in a separate report.) Sample point is located ~5ft south of wetland flag A9 south of Wetland A. Wetland A is located ~75ft north of the bathroom building in the northwest quadrant of the project area. The sample point is within a maintained lawn which has significantly disturbed the vegetative community.	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u> </u> Surface Water (A1)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Drainage Patterns (B10)
<u>X</u> Saturation (A3)	<u> </u> Moss Trim Lines (B16)
<u> </u> Water Marks (B1)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Sediment Deposits (B2)	<u> </u> Crayfish Burrows (C8)
<u> </u> Drift Deposits (B3)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Iron Deposits (B5)	<u> </u> Geomorphic Position (D2)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Shallow Aquitard (D3)
<u> </u> Sparsely Vegetated Concave Surface (B8)	<u> </u> Microtopographic Relief (D4)
<u> </u> Water-Stained Leaves (B9)	<u> </u> FAC-Neutral Test (D5)
<u> </u> Aquatic Fauna (B13)	
<u> </u> Marl Deposits (B15)	
<u> </u> Hydrogen Sulfide Odor (C1)	
<u> </u> Oxidized Rhizospheres on Living Roots (C3)	
<u> </u> Presence of Reduced Iron (C4)	
<u> </u> Recent Iron Reduction in Tilled Soils (C6)	
<u> </u> Thin Muck Surface (C7)	
<u> </u> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>13</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 The close proximity to Lake Metonga (~115 feet to the north) along with the boring logs indicate a water table within 4ft from the soil surface throughout the site. The sample point meets the criteria for A3 with saturation within 12 inches of the soil surface but the soil and geomorphic position due to historic land alteration from the construction of the campground preclude it from being currently classified as wetland.

VEGETATION – Use scientific names of plants.

Sampling Point: UP2

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30</u>)																				
1. <u>Populus tremuloides</u>	<u>10</u>	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or 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>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>10</u>	=Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>75</u></td> <td>x 4 = <u>300</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u></td> <td>(A) <u>330</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.88</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>75</u>	x 4 = <u>300</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u>	(A) <u>330</u> (B)	Prevalence Index = B/A = <u>3.88</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
FACU species <u>75</u>	x 4 = <u>300</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>85</u>	(A) <u>330</u> (B)																			
Prevalence Index = B/A = <u>3.88</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	=Total Cover																			
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Poa pratensis</u>	<u>50</u>	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 ¹ <u>4</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>Trifolium pratense</u>	<u>10</u>	No	FACU																	
3. <u>Taraxacum officinale</u>	<u>10</u>	No	FACU																	
4. <u>Plantago major</u>	<u>5</u>	No	FACU																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>75</u>	=Total Cover																		
Woody Vine Stratum (Plot size: <u>n/a</u>)																				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)

The vegetation has been categorized as significantly disturbed through regular alteration by maintaining the area as a lawn.

SOIL

Sampling Point UP2

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		
0-11	10YR 2/1	100					Loamy/Clayey	Sandy loam w/ cobbles on top
11-20	10YR 5/3	100					Sandy	Sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> High Chroma Sands (S11) (LRR K, L) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR K, L)	<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (F22) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> Type: _____ Depth (inches): _____	<p>Hydric Soil Present? Yes _____ No <u>X</u></p>
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Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Veterans Park Campground City/County: Forest County Sampling Date: 5/4/21
 Applicant/Owner: Forest County State: WI Sampling Point: WET3
 Investigator(s): Molly Gardner; CEC Section, Township, Range: Sec 17 T35N R13E
 Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none): Concave Slope %: 2-3
 Subregion (LRR or MLRA): LRR K, MLRA 90A Lat: 45.520825 Long: -88.898493 Datum: WISCRS Forest Co
 Soil Map Unit Name: Lu - Lupton and Cathro soils, 0 to 1 percent slopes NWI classification: T3/5K [PF04]

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation N, Soil N, or Hydrology N 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> If yes, optional Wetland Site ID: <u>Wetland B</u>
Remarks: (Explain alternative procedures here or in a separate report.) Sample point is located ~15ft southeast of wetland flag B37 within Wetland B. Wetland B is located along the southern boundary of the project area and continues south toward E Lakeview Street.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) ___ Aquatic Fauna (B13) <u>X</u> Saturation (A3) ___ Marl Deposits (B15) ___ Water Marks (B1) ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3) ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5) ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
--	---

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

Remarks:
 The close proximity to Lake Metonga (~600 feet to the north) along with the boring logs indicate a water table within 4ft from the soil surface throughout the site.

VEGETATION – Use scientific names of plants.

Sampling Point: WET3

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Thuja occidentalis</u>	80	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</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>83.3%</u> (A/B)																
2. <u>Abies balsamea</u>	20	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	100	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>95</u></td> <td>x 2 = <u>190</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>325</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.17</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>95</u>	x 2 = <u>190</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>325</u> (B)	Prevalence Index = B/A = <u>2.17</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>15</u>	x 1 = <u>15</u>																			
FACW species <u>95</u>	x 2 = <u>190</u>																			
FAC species <u>40</u>	x 3 = <u>120</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>150</u> (A)	<u>325</u> (B)																			
Prevalence Index = B/A = <u>2.17</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Abies balsamea</u>	15	Yes	FAC																	
2. <u>Cornus sericea</u>	15	Yes	FACW																	
3. <u>Populus tremuloides</u>	5	No	FAC																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	35	=Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
<u>Herb Stratum</u> (Plot size: <u>5</u>)																				
1. <u>Juncus effusus</u>	15	Yes	OBL																	
2. <u>Geum sp.</u>	5	Yes																		
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	20	=Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>n/a</u>)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
			=Total Cover																	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point WET3

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 2/2	100					Peat	Organics
3-15	10YR 2/1	100					Mucky Sand	Wet

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Veterans Park Campground City/County: Forest County Sampling Date: 5/4/21
 Applicant/Owner: Forest County State: WI Sampling Point: UP3
 Investigator(s): Molly Gardner; CEC Section, Township, Range: Sec 17 T35N R13E
 Landform (hillside, terrace, etc.): Slight hillside Local relief (concave, convex, none): Convex Slope %: 2-5
 Subregion (LRR or MLRA): LRR K, MLRA 90A Lat: 45.520861 Long: -88.898523 Datum: WISCRS Forest Co
 Soil Map Unit Name: WhA - Whisklake silt loam, 0 to 3 percent slopes NWI classification: T3/5K [None]

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation N, Soil N, or Hydrology N 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> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Sample point is located ~10ft northeast of wetland flag B37 and north of Wetland B. The sample point is within a maintained lawn which has significantly disturbed the vegetative community.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
---	---

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>16</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

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

Remarks:
 The close proximity to Lake Metonga (~600 feet to the north) along with the boring logs indicate a water table within 4ft from the soil surface throughout the site.

VEGETATION – Use scientific names of plants.

Sampling Point: UP3

<u>Tree Stratum</u> (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				=Total Cover
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u>)				
1. <u>Abies balsamea</u>	10	Yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				=Total Cover
<u>Herb Stratum</u> (Plot size: <u>5</u>)				
1. <u>Phalaris arundinacea</u>	10	Yes	FACW	
2. <u>Poa pratensis</u>	10	Yes	FACU	
3. <u>Rumex crispus</u>	10	Yes	FAC	
4. <u>Medicago lupulina</u>	25	Yes	FACU	
5. <u>Rubus strigosus</u>	2	No	FAC	
6. <u>Plantago major</u>	2	No	FACU	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				=Total Cover
<u>Woody Vine Stratum</u> (Plot size: <u>n/a</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				=Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>22</u>	x 3 = <u>66</u>
FACU species <u>37</u>	x 4 = <u>148</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>69</u> (A)	<u>234</u> (B)
Prevalence Index = B/A = <u>3.39</u>	

Hydrophytic Vegetation Indicators:

 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

 3 - Prevalence Index is ≤3.0¹

 4 - 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.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)
 Although the vegetation passes dominance test for hydrophytic vegetation it does not meet the criteria due to failing the prevalence index parameter. Additionally, the vegetation has been categorized as significantly disturbed through regular alteration by maintaining the area as a lawn.

SOIL

Sampling Point UP3

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 2/2	100					Loamy/Clayey	Silty loam w/ org
3-14	10YR 5/3	100					Loamy/Clayey	Silty loam
14-20	10YR 5/3	90	10YR 4/2	10	C	M	Loamy/Clayey	Faint redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____	Yes _____ No <u>X</u>
Depth (inches): _____	

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

APPENDIX D

Photo Documentation



Photo 1 – Wetland A from eastern end facing west



Photo 2 – Wetland A from center facing east



Photo 3 – Wetland B from northern boundary facing south - east end of project area
Note: E Lakeview St in background



Photo 4 – Wetland B from northern boundary facing south – western side of project area



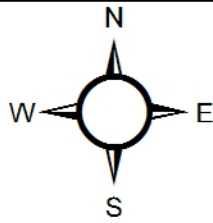
Photo 5 – Topsoil scraped central campsites and road (under fill material)
from southeast of Project Area facing northwest



Photo 6 – Topsoil scraped east central campsites and road (under fill material)
from southeast of Project Area facing north

APPENDIX E

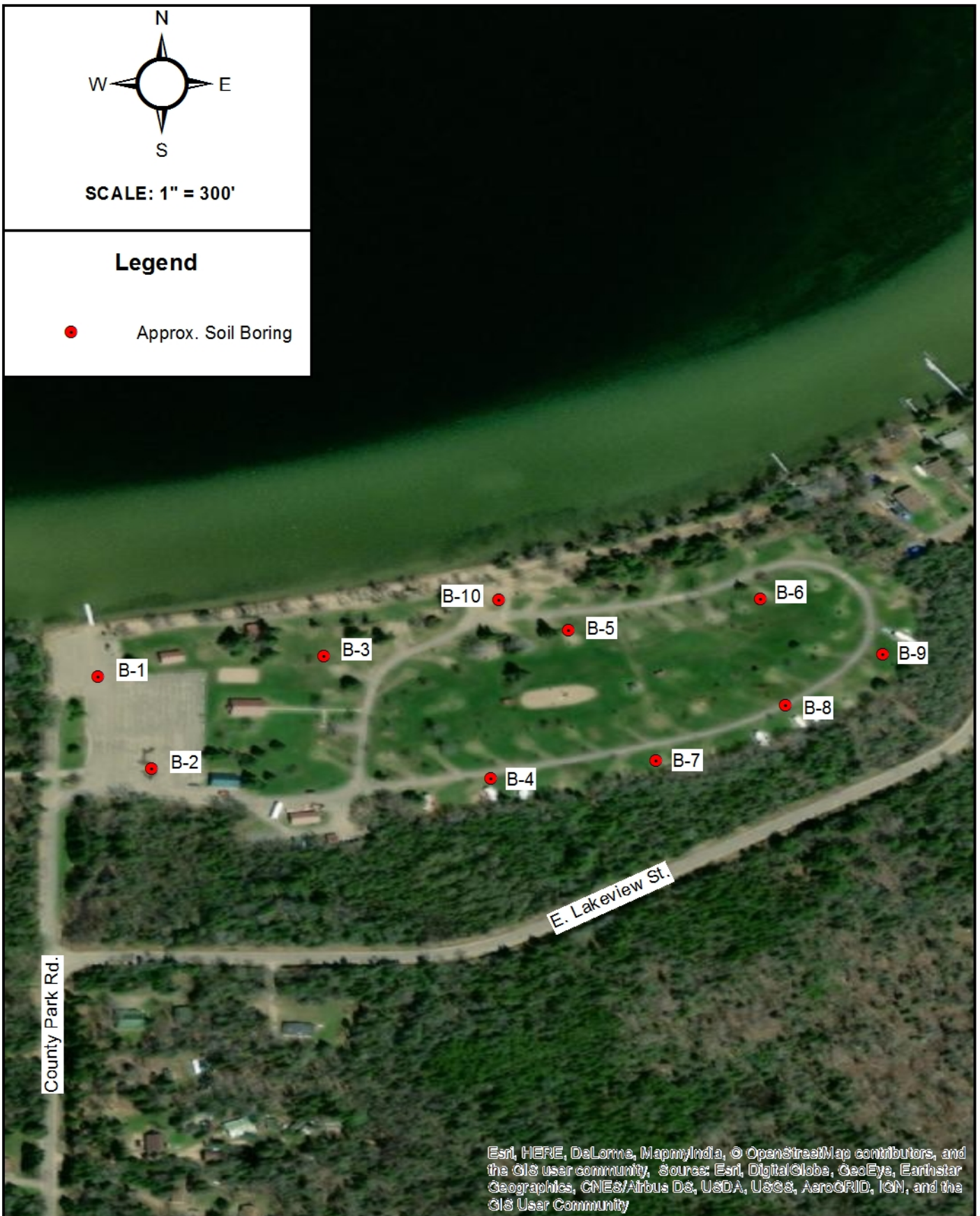
CEC Boring Map & Logs



SCALE: 1" = 300'

Legend

● Approx. Soil Boring



SOIL BORING LOCATION MAP



FOREST COUNTY FORESTRY & PARKS
Veterans Park Campground
Crandon, Wisconsin

Project No:	GIS File:
200677	BORELOC.mxd
Map Date:	Figure No:
12/3/20	Fig 2



COLEMAN ENGINEERING COMPANY

635 CIRCLE DRIVE
 IRON MOUNTAIN, MICHIGAN 49801
 Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-1

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52155233° N., -88.90216537° W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips and Asphalt Patch

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS							
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4	-4	-200	MOISTURE CONTENT (%)	LL	PL	T (tsf)	q _a (tsf)
1		3.9	M	0	ASPHALT PAVEMENT - 2.4"			Driller's note: Samples wet 1.2' to 10.0'								
					0.2'											
				1	AGGREGATE BASE COURSE - 12"									1.2'		
				2	(PT) SANDY PEAT, black, amorphous, with 1/2" to 1/4" thick partially decomposed wood fragments, wet (Swamp Deposits) ± 1.7'											
				3	(SP) POORLY GRADED SAND, brown, fine to coarse, silty from ± 2.4' to ± 3.5' and from ± 7.2' to ± 7.7', with gravel from ± 6.2' to ± 9.1', wet											
				4												
				5												
				6												
				7												
				8												
2		4.6	M	9												
				10	(Lacustrine) 10.0'											
					End of Boring											
				11												
				12												
				13												
				14												
				15												
				16												
				17												
18																
19																
20																

- AS-Auger Sample
- BS-Bag Sample
- RC-Rock-Core
- MC-Macrocore
- PS-Piston Tube
- 2SS-2" Split Spoon
- 3SS-3" Split Spoon
- 2ST-2" Shelby Tube
- 3ST-3" Shelby Tube
- while drilling 3.0
- after drilling 3.5

after hours

BORING NO.: **B-1**



COLEMAN ENGINEERING COMPANY

635 CIRCLE DRIVE
 IRON MOUNTAIN, MICHIGAN 49801
 Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-2

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52099042° N., -88.90183739° W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips and Asphalt Patch

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS					
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q _a (tsf) q _u (tsf)	
1		2.7	M	0	ASPHALT PAVEMENT - 3.6"	▼		Driller's note: Samples wet 1.5' to 10.0'						
				0.3'	AGGREGATE BASE COURSE - 14.4"									
				1										
				1.5'	(PT) PEAT WITH SAND, brownish black to black, amorphous, with thin (1 to 4 mm) partially decomposed wood fragments, wet (Swamp Deposits)									
				± 2.4'	(SP) POORLY GRADED SAND, brown, fine to coarse, silty from ± 5.6' to ± 6.1', with gravel from ± 5.5' to ± 6.8', black peat layer from ± 6.8' to ± 7.1', wet									
				2										
				3										
				4										
				5										
				4.2										
2		4.2	M	5		▼								
				7	(Lacustrine) ± 7.5'									
				8	(PT) PEAT, black, amorphous, with 1/4" to 1/8" thick partially decomposed wood fragments, wet (Swamp Deposits) ± 8.4'									
				8.4'	(SP) POORLY GRADED SAND, brown, silty from ± 8.4' to ± 8.9', some gravel, wet									
				9										
				10	(Lacustrine) 10.0'									
10	End of Boring													
				11										
				12										
				13										
				14										
				15										
				16										
				17										
				18										
				19										
				20										

<input type="checkbox"/> -AS-Auger Sample	<input checked="" type="checkbox"/> -MC-Macrocore	<input checked="" type="checkbox"/> -3SS-3" Split Spoon	<input checked="" type="checkbox"/> while drilling 3.5	<input checked="" type="checkbox"/> after drilling 3.5	<input checked="" type="checkbox"/> after _____ hours	BORING NO.: B-2
<input type="checkbox"/> -BS-Bag Sample	<input type="checkbox"/> -PS-Piston Tube	<input type="checkbox"/> -2ST-2" Shelby Tube				
<input type="checkbox"/> -RC-Rock-Core	<input type="checkbox"/> -2SS-2" Split Spoon	<input type="checkbox"/> -3ST-3" Shelby Tube				



COLEMAN ENGINEERING COMPANY

635 CIRCLE DRIVE
 IRON MOUNTAIN, MICHIGAN 49801
 Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-3

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52168253° N., -88.90077880° W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS						
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q _a (tsf) q _u (tsf)		
1		3.6	M	0	TOPSOIL - 4.8"	▽		Driller's note: Samples wet 0.5' to 10.0'							
				1	(PT) PEAT, black, amorphous, with thin (1 to 3 mm) partially decomposed wood fragments, wet (Swamp Deposits) ± 0.4'										
2		4.8	M	2	(SP) POORLY GRADED SAND, brown, fine to coarse, some gravel, black peat layer from ± 6.5' to 6.8', wet	▽									
				3											
				4											
				5											
				6											
				7	(Lacustrine) ± 7.3'										
				8	(PT) PEAT, black, amorphous, with thin (1 to 4 mm) partially decomposed wood fragments, wet (Swamp Deposits) ± 8.3'										
				9	(SP) POORLY GRADED SAND, brown, fine to coarse, some gravel, wet										
10	(Lacustrine) 10.0'														
				10	End of Boring										
				11											
				12											
				13											
				14											
				15											
				16											
				17											
				18											
				19											
				20											

- AS-Auger Sample
- BS-Bag Sample
- RC-Rock-Core
- MC-Macrocore
- PS-Piston Tube
- 2SS-2" Split Spoon
- 3SS-3" Split Spoon
- 2ST-2" Shelby Tube
- 3ST-3" Shelby Tube
- ▽ while drilling 2.0
- ▽ after drilling 2.5

▽ after hours

BORING NO.:
B-3



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JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-4

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52092933° N., -88.89975240° W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS					
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q _a (tsf) q _u (tsf)	
1		3.5	M	0	TOPSOIL - 2.4"	▼		Driller's note: Samples wet 2.1' to 10.0'						
				0.2'	(SP) POORLY GRADED SAND WITH GRAVEL, brown, fine to coarse, silty from 0.2' to ± 0.5', moist									
				2	(Lacustrine) ± 2.1'									
				3	(PT) PEAT, black, amorphous, with thin (1 to 5 mm) partially decomposed wood fragments, wet (Swamp Deposits) ± 2.5'	▽								
				4	(SP) POORLY GRADED SAND, brown, fine to coarse, wet ± 3.1'									
				5	(PT) PEAT, black to dark brown, amorphous, with 1/2" to 1/8" partially decomposed wood fragments, fine to coarse sand layers from ± 5.8' to ± 6.0' and from ± 8.0' to ± 8.2', sandy from ± 8.6' to 10.0', wet									
				6										
				7										
				8										
				9										
2		4.1	M	10	(Swamp Deposits) 10.0'									
				11	End of Boring									
				12										
				13										
				14										
				15										
				16										
				17										
				18										
				19										
20														

- AS-Auger Sample
- BS-Bag Sample
- RC-Rock-Core
- MC-Macrocore
- PS-Piston Tube
- 2SS-2" Split Spoon
- 3SS-3" Split Spoon
- 2ST-2" Shelby Tube
- 3ST-3" Shelby Tube
- ▽ while drilling 3.0
- ▼ after drilling 0.5

▼ after hours

BORING NO.:
B-4



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JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-5

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52183911° N., -88.89927597° W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS									
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q _a (tsf) q _u (tsf)					
1		3.4		0	TOPSOIL - 1.2"													
				0.1'	(POSSIBLE FILL) SILTY SAND WITH GRAVEL, brown, fine to coarse, moist													
				± 0.5'	(SP) POORLY GRADED SAND WITH GRAVEL, brown, fine to coarse, silty from ± 0.5' to ± 0.8', occasional 1/4" thick black peat layers, moist (Lacustrine)													
				± 1.8'	(PT) SANDY PEAT, black, amorphous, trace thin (1 to 3 mm) partially decomposed wood fragments, wet (Swamp Deposits)													
				± 2.3'	(SP) POORLY GRADED SAND, brown, fine to coarse, silty from ± 5.5' to ± 5.9', with gravel from ± 9.4' to 10.0', wet													
2		4.7		5														
				6														
				7														
				8														
				9														
				10	(Lacustrine)													
				10.0'	End of Boring													
				11														
				12														
				13														
				14														
				15														
				16														
				17														
				18														
				19														
				20														

-AS-Auger Sample -MC-Macrocore -3SS-3" Split Spoon while drilling 1.5 after drilling 1.5
 -BS-Bag Sample -PS-Piston Tube -2ST-2" Shelby Tube after hours
 -RC-Rock-Core -2SS-2" Split Spoon -3ST-3" Shelby Tube

BORING NO.: **B-5**



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JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-6

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52203156° N., -88.89809321° W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS					
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q _a (tsf) q _u (tsf)	
1		2.6	M	0	TOPSOIL - 6"			Driller's note: Samples wet 1.0' to 10.0'						
				0.5'	(SM) SILTY SAND, brown, fine to medium, some fine gravel, moist	▽								
				± 1.2'	(Lacustrine)	▽								
				2	(SP) POORLY GRADED SAND, brown, fine to coarse, some fine gravel, 1" to 3/4" thick dark brown peat layers at ± 2.3' and ± 2.6', wet									
				3										
				4										
				5	(Lacustrine) ± 5.2'									
				6	(PT) PEAT, black to dark brown, amorphous to fibrous, with 1/2" to 1/8" partially decomposed wood fragments, fine to medium sand layer from ± 6.5' to ± 6.8' and from ± 7.2' to ± 7.3', wet									
				7										
				8										
2		4.3	M	10	(Swamp Deposits) 10.0'									
				11	End of Boring									
				12										
				13										
				14										
				15										
				16										
				17										
				18										
				19										
20														

- AS-Auger Sample
- BS-Bag Sample
- RC-Rock-Core
- MC-Macrocore
- PS-Piston Tube
- 2SS-2" Split Spoon
- 3SS-3" Split Spoon
- 2ST-2" Shelby Tube
- 3ST-3" Shelby Tube
- ▽ while drilling 1.0
- ▽ after drilling 1.5

▽ after hours

BORING NO.:
B-6



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JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-7

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52103709° N., -88.89873715° W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS				
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4	-4	-200	MOISTURE CONTENT (%)	LL
1		3.1	M	0	TOPSOIL - 6"	▼		Driller's note: Samples wet 1.7' to 10.0'					
				0.5'	(SM) SILTY SAND, brown to grayish brown, fine to coarse, some fine gravel, moist								
				2.0'	(Lacustrine)								
				2.7'	(PT) PEAT, black to dark brown, amorphous, with thin (1 to 4 mm) partially decomposed wood fragments, wet								
				2.7'	(Swamp Deposits)								
				3.0'	(SC) CLAYEY SAND, brownish gray to brown, fine to medium, wet								
				5.0'	(Lacustrine)								
				5.9'	(SP) POORLY GRADED SAND, brown, fine to medium, trace coarse sand and fine gravel, wet								
				10.0'	(Lacustrine)								
				10.0'	End of Boring								
2		4.8	M	11									
				12									
				13									
				14									
				15									
				16									
				17									
				18									
				19									
				20									

<input type="checkbox"/> -AS-Auger Sample	<input checked="" type="checkbox"/> -MC-Macrocore	<input checked="" type="checkbox"/> -3SS-3" Split Spoon	<input checked="" type="checkbox"/> while drilling 3.0	<input checked="" type="checkbox"/> after drilling 3.0	<input checked="" type="checkbox"/> after hours	BORING NO.: B-7
<input type="checkbox"/> -BS-Bag Sample	<input type="checkbox"/> -PS-Piston Tube	<input type="checkbox"/> -2ST-2" Shelby Tube				
<input type="checkbox"/> -RC-Rock-Core	<input type="checkbox"/> -2SS-2" Split Spoon	<input type="checkbox"/> -3ST-3" Shelby Tube				



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JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-8

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52137723° N., -88.89794209 W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS											
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q _a (tsf) q _u (tsf)							
1		3.0	M	0	TOPSOIL - 1.2"			Driller's note: Samples wet 1.4' to 10.0'												
				0.1'	(POSSIBLE FILL) POORLY GRADED SAND WITH GRAVEL, brown, fine to coarse, moist															
				± 1.2'	(PT) PEAT, black, amorphous, with 1/2" to 1/8" thick partially decomposed wood fragments, wet (Swamp Deposits)															
				± 1.4'	(SC) CLAYEY SAND, gray to brown, fine to medium, trace fine gravel, wet															
				5.0'	(Lacustrine)															
				5.0'	(SM) SILTY SAND, brown, fine to coarse, some gravel, wet															
				7.5'	(Lacustrine)															
				7.5'	(SP) POORLY GRADED SAND, brown, fine to coarse, wet															
				10.0'	(Lacustrine)															
				10.0'	End of Boring															

- AS-Auger Sample
- BS-Bag Sample
- RC-Rock-Core
- MC-Macrocore
- PS-Piston Tube
- 2SS-2" Split Spoon
- 3SS-3" Split Spoon
- 2ST-2" Shelby Tube
- 3ST-3" Shelby Tube

while drilling 3.0
 after drilling 3.5

after hours

BORING NO.:
B-8



COLEMAN ENGINEERING COMPANY

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 Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-9

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52168947° N., -88.89734378 W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS					
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4	-4	-200	MOISTURE CONTENT (%)	LL	PL
1		3.4	M	0	(POSSIBLE FILL) POORLY GRADED SAND WITH GRAVEL, brown, fine to coarse, moist	▽		Driller's note: Samples wet 1.3' to 10.0'						
				1	± 1.3'									
				2	(PT) PEAT, black, amorphous, with thin (1 to 4 mm) partially decomposed wood fragments, wet (Swamp Deposits) ± 1.6'									
				3	(CL) SANDY LEAN CLAY, gray to orangish brown, wet (Lacustrine) ± 2.9'									
				4	(SP) POORLY GRADED SAND, brown, fine to coarse, some gravel, wet									
				5										
				6										
				7										
				8										
				9										
2		4.5	M	10	(Lacustrine) 10.0'									
				11	End of Boring									
				12										
				13										
				14										
				15										
				16										
				17										
				18										
				19										
20														

- AS-Auger Sample -MC-Macrocore -3SS-3" Split Spoon while drilling 4.0
- BS-Bag Sample -PS-Piston Tube -2ST-2" Shelby Tube after drilling 4.5
- RC-Rock-Core -2SS-2" Split Spoon -3ST-3" Shelby Tube

BORING NO.: **B-9**



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JOB NO.: 200677.GPJ

PROJECT: Veterans Park Campground BORING NO.: B-10

CLIENT: Forest County Forestry & Parks 1 OF 1

BORING LOCATION: As-marked by GPS (45.52202668° N., -88.89970369 W.) - See soil boring location dwg ELEV.: _____

RIG TYPE: Geoprobe 7822 DT DRILL CREW: W. Lake

DRILLING METHOD: 2" O.D. x 5.0' Macrocore BORING DEPTH: 10.0

DATE STARTED: 11/25/20 DATE COMPLETED: 11/25/20 REVIEWED BY: E. Shepeck DATE: 12/4/20

HOLE CLOSURE: Bentonite Chips

SAMPLE				DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV. (FT)	COMMENTS	TEST RESULTS										
NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND						+4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q _a (tsf) q _u (tsf)						
1		2.6	M	0	TOPSOIL - 2.4"	▼		Driller's note: Samples wet 1.4' to 10.0'											
				0.2'	(POSSIBLE FILL) SILTY SAND WITH GRAVEL, brown, fine to medium, moist														
				± 1.4'	(SP) POORLY GRADED SAND WITH GRAVEL, brown, fine to coarse, 1" thick sandy peat layer at ± 1.4', sandy gravel layer from ± 8.4' to ± 8.8', wet														
				1															
				2															
				3															
				4															
				5															
				6															
				7															
2		3.9	M	8															
				9															
				10	(Lacustrine)														
				10.0'	End of Boring														
				11															
				12															
				13															
				14															
				15															
				16															
17																			
18																			
19																			
20																			

- AS-Auger Sample
- BS-Bag Sample
- RC-Rock-Core
- MC-Macrocore
- PS-Piston Tube
- 2ST-2" Split Spoon
- 3SS-3" Split Spoon
- 2ST-2" Shelby Tube
- 3ST-3" Shelby Tube

▼ while drilling 4.0
 ▼ after drilling 4.0

▼ after hours

BORING NO.:
B-10