# 300-3000
# ITEM 3

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June 9, 2020

Mr. Lloyd S. Cole
Village Administrator
Village of Bloomfield
P.O. Box 609
Pell Lake, WI 53157

Re: SEWRPC No. CA-501-43

Dear Mr. Cole:

This will respond to your email message of October 16, 2019, requesting that the Commission staff conduct a field inspection of the McKay Park property. The subject property is located southwest of the intersection of Lake Geneva Highway and Manor Terrace in parts of the Southeast one-quarter of U.S. Public Land Survey Section 16, Township 1 North, Range 18 East, Village of Bloomfield, Walworth County, Wisconsin. The purpose of the field inspection was to determine if the wetland boundaries originally field-staked by Commission staff on May 9, 2002, and subsequently revised on November 7, 2013, are still valid.

Pursuant to your request, Commission staff conducted a field inspection of the subject property on October 28, 2019. Comparing the 2013 wetland boundary survey with current conditions, Commission staff determined that the extent of wetland on the property was mostly unchanged. However, the extent of wetland on the northeast portion of the property was slightly different. Accordingly, Commission staff re-staked the wetland boundaries in that area. A copy of the wetland delineation report is attached for your reference.

Should you have any questions regarding this information, please do not hesitate to contact Mr. Christopher J. Jors, Principal Specialist-Biologist (cjors@sewrpc.org or 262-953-3246).

Sincerely,

Kevin J. Muhs, PE, AICP
Executive Director

KJM/TMS/CJJ/md
#253859 – CA501-43 McKay Park Improvements 2019 Visit Letter

Enclosure (#254047)

cc: Ms. Naomi Rauch, Kapur, Inc. (w/enclosure by email)
Mr. Greg Governatori, PE, Kapur, Inc. (w/enclosure by email)
Atty. Brian Schuk, Schuk Law, LLC (w/enclosure by email)
Mr. Marty Dillenburg, Wisconsin Department of Natural Resources (w/enclosure by email)
Ms. Kara Brooks, Wisconsin Department of Natural Resources (w/enclosure by email)
Ms. Rachel Nuetzel, U.S. Army Corps of Engineers (w/enclosure)

# WETLAND DELINEATION REPORT

## MCKAY PARK
## PROPOSED PARK IMPROVEMENTS

**SE Quarter, Section 16, T1N, R18E**
**VILLAGE OF BLOOMFIELD**
**WALWORTH COUNTY,**
**WISCONSIN**

**Lead Investigator:**
**Christopher J. Jors**
**Principal Specialist-Biologist**
**Southeastern Wisconsin Regional Planning Commission**
**W239 N1812 Rockwood Drive**
**P.O. Box 1607**
**Waukesha, WI 53187-1607**
**(262)547-6721**
**cjors@sewrpc.org**

Report Completion: May 21, 2020

# WETLAND DELINEATION REPORT OVERVIEW

(Based upon WDNR WETLAND Delineation Confirmation Request Check List)

## INTRODUCTION

- Who requested the delineation – **Lloyd Cole, Village Administrator, Village of Bloomfield**
- Why the delineation was undertaken – **Proposed Park Improvements**
- Date the field work was completed – **October 28, 2019**
- Who conducted field work – **Christopher Jors, Jennifer Dietl, and Shane Heyel**
- Statement of Qualifications
- GIS Support – **Bradley Subotnik**

## METHODS

- Description of Methods
- Sources Reviewed
  - Walworth County Topographic Mapping – **Exhibit 1**
  - Wisconsin Department of Natural Resources (WDNR) Surface Water Data Viewer – Wisconsin Wetland Inventory (WWI) Mapping – **Exhibit 2**
  - Natural Resources Conservation Service (NRCS) Soil Survey and Federal Emergency Management Agency (FEMA) Floodplain Mapping – **Exhibit 3**
  - National Agriculture Imagery Program & SEWRPC Historical Aerial Photographs – **Exhibits 4A to 4K** (2017, 2015, 2010, 2005, 2000, 1990, 1980, 1975, 1963, 1956, and 1940)
  - SEWRPC Sanitary Sewer Service Area Mapping – **Exhibit 5**
  - Advance Identification (ADID) Wetland Mapping – **Not applicable (N/A)**
  - NRCS Draft Wetland Inventory Map – **Exhibit 6**
  - NAIP & Farm Service Agency (FSA) Images – **N/A**
- Description of any site specific agency guidance (site meetings, etc.) – **None**

## RESULTS AND DISCUSSION

- Antecedent hydrologic condition analysis – **Wetter than normal**
- Previous wetland delineation mapping – **SEWRPC: 2013 and 2002**
- Existing environmental mapping (WWI mapping, Soil survey, etc.)
- Amount and types of wetland in the project area
- Wetland/upland boundary explanation
- Disturbed and problematic areas encountered
- Other Considerations

## LITERATURE CITED

Wetland Delineation Map – **Exhibit 7**

Vegetation Survey, Wetland Delineation Data Forms, and Site Photos

- Preliminary Vegetation Survey – **Exhibit 8**
- Wetland Determination Data Forms – NC/NE Region – **Exhibit 9**
- Site Photos – **Exhibit 10**

## INTRODUCTION

This wetland delineation report responds to an October 16, 2019, email request from Lloyd Cole, Village Administrator with the Village of Bloomfield, to determine if any changes have occurred to the wetland boundaries at McKay Park that were field-staked by SEWRPC in 2002 and 2013. McKay Park, bordered by Lake Geneva Highway to the north, Manor Terrace to the east, and Sunset Drive to the south, is located in the Southeast one-quarter of U.S. Public Land Survey Section 16, Township 1 North, Range 18 East, Village of Bloomfield, Walworth County, Wisconsin.

### Statement of Qualifications

***Lead Investigator: Christopher Jors***, Principal Specialist-Biologist, has worked at SEWRPC since 1993, and has been part of the wetland delineation team since 1994. He received a Bachelor's degree in Biological Aspects of Conservation from the University of Wisconsin – Milwaukee in 1992. Prior to working at SEWRPC, Chris worked at the UWM Field Station at the Cedarburg Bog in Saukville, WI, where he learned methods of sampling wetland plant communities within the Bog. Chris has attended various wetland training workshops including the UW-La Crosse Critical Methods Workshop on February 19, 2019; the UW-La Crosse Basic and Advanced Wetland Delineation Workshops on August 10-15, 2015; a Wisconsin Department of Natural Resources Wetland Delineation & Wetland Rapid Assessment Methodology Workshop on April 23, 2014; and a U.S. Army Corps of Engineers Workshop on the Midwest Supplement to the 1987 Wetland Delineation Manual on February 3, 2009.

***Jennifer Dietl***, Senior Specialist-Biologist, earned Bachelor's degrees in Biology and Environmental Science from Carroll University in 1992. Jennifer has worked at SEWRPC from 1992 to 1997 and from 2006 to the present conducting wetland delineations, primary environmental corridor delineations, and vegetation surveys. In between years of service at SEWRPC, she worked for the Wisconsin Department of Transportation – Green Bay as an LTE Environmental Analysis and Review Specialist and the WDNR – Green Bay as an LTE Hydrologist. Jennifer attended the UW-La Crosse Critical Methods Workshop on February 19, 2019; the UW-La Crosse Hydric Soils Workshop on July 19-21, 2017; the UW-La Crosse Basic and Advanced Wetland Delineation Workshops on August 10-15, 2015; and a WDNR Wetland Delineation & Wetland Rapid Assessment Methodology Workshop on April 23, 2014.

***Shane Heyel***, Specialist-Biologist, joined the wetland delineation team at SEWRPC in June 2016. He holds a Bachelor's degree in Land Use Planning from the University of Wisconsin-Stevens Point and a Master's degree in Hydrology & Water Quality from Lancaster University (United Kingdom). Shane worked for the Wisconsin Department of Natural Resources for seven years, including four years regulating waterways and wetlands. With Atkins Limited, U.K. from 2005-2009, he delivered pollution and flood risk assessments to the English Highways Agency and modeled sewer networks to report flood solution options for major British water companies. As an independent consultant in Wisconsin, Shane helped develop a site restoration plan for a proposed wetland mitigation bank. His recent wetland training includes UW-La Crosse Workshops in Basic Wetland Delineation (August 2015), Advanced Wetland Delineation (August (2016), Basic Plant ID (July 2017), Hydric Soils (July 2018), and Critical Methods (February 2019).

## METHODS

### Description of Methods

The wetland boundary determinations were based upon the criteria and methodologies set forth in the 1987 *Corps of Engineers Wetlands Delineation Manual*; the January, 2012, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0); the March 4, 2015, *Guidance for Submittal of Delineation Reports to the St. Paul District Army Corps of Engineers and the Wisconsin Department of Natural Resources*; and the State of Wisconsin 2016 Wetland Plant List.

### Sources Reviewed

Prior to conducting the field inspection, Commission staff reviewed the following data sources that were available and applicable to the subject property:

- Walworth County's topographic mapping (Exhibit 1)
- WDNR Surface Water Data Viewer - WWI mapping (Exhibit 2)
- NRCS soil survey and FEMA floodplain mapping (Exhibit 3)
- NAIP Images and SEWRPC Historical Aerial Photography (Exhibit 4A-4J)
- SEWRPC Sanitary Sewer Service Area mapping (Exhibit 5)
- NRCS Draft Wetland Inventory mapping (Exhibit 6)
- Precipitation data from the NRCS "WETS" tables

## RESULTS AND DISCUSSION

Christopher Jors, as lead field investigator and report author, supervised and approved all aspects of the wetland delineation in the field, data compilation and analysis, and preparation of this report. Wetland boundaries originally staked by SEWRPC on May 9, 2002, and subsequently revised on November 7, 2013, were reviewed for changes on October 28, 2019. This involved walking the surveyed wetland boundary that was overlaid onto aerial photography on a Samsung Tablet with Global Positioning System (GPS) capabilities. Soils, vegetation, and hydrology were recorded at fourteen sample sites within the project area. It was determined that the 2013 wetland boundaries were still valid in the western and southern portions of the project area. However, the extent of wetland in the northeastern part of the project area had changed somewhat. The changes appear to be related to park improvements conducted by the Village. This included areas of filling and grading observed during the late 2013 field inspection. The areal extent of the filled areas was approximated in the wetland delineation report for the 2013 visit, but not field-staked at that time. In addition, Kapur, Inc., an engineering consultant for the Village, indicated that a drain tile was installed at McKay Park in 2016. The drain tile begins at a pair of catch basins located in the northcentral part of the park and then drains in a southwesterly direction. It eventually terminates about three-quarters of a mile southwest of the park in a wetland that drains into the West Branch of Nippersink Creek. Village staff indicated that they conducted these park improvements in the wetland under the Wisconsin Department of Natural Resources Wetland General Permit for Recreational Development (Permit Number WDNR-GP4-2013) issued on July 19, 2013, and in effect until July 19, 2018. An aerial image from the National Agriculture Imagery Program (see Exhibit 4A) dated September 23, 2017, shows the activity at McKay Park at that time. These activities included staging of construction equipment and materials on and adjacent to a gravel pad in the northeastern portion of the park, recent grading in northcentral part, mowing in the north part of the park, and the location of the drain tile, which is especially apparent through the southwest part of the project area where trees were removed.

Sample sites in the area of disturbance indicated that a portion of the gravel parking lot and access driveway no longer met the parameters for wetland. An "island" of upland in the parking lot area and the eastern wetland boundary near the driveway access from Manor Terrace were marked with orange wire flags and ribbon to reflect changes to the wetland. Kapur, Inc., surveyed the new wetland boundary markers and prepared a wetland delineation survey exhibit showing the still-valid wetland boundaries from 2013 as well as the changed wetland boundaries staked in 2019 in the northeastern portion of the property. Commission staff utilized a sub-meter-accuracy GPS device to record the sample site locations. The results of the wetland delineation field inspection for the project area are shown on Exhibit 7, which includes the surveyed 2013 and 2019 wetland boundaries and the GPS-located sample sites.

### Antecedent Hydrologic Conditions

Climatological data presented in the following table were taken from the nearest WETS station(s) with relevant data for the 1981-2010 climate period and the monthly precipitation summaries for the antecedent

90-day period. In this case, the closest station providing the historical data set was the Burlington, WI, Station, while the 90-day observed data were available from the Pell Lake, WI, Station.

| October 28, 2019 | Month | 3 years in 10 Less Than | Normal | 3 years in 10 More Than | Observed Precip. | Condition (dry, wet, normal) | Condition Value | Month Weight Value | Product of Previous Two Columns |
|---|---|---|---|---|---|---|---|---|---|
| 1st prior month | Oct. | 1.39 | 2.54 | 3.08 | 6.39 | Wet | 3 | 3 | 9 |
| 2nd prior month | Sept. | 2.07 | 3.23 | 3.85 | 9.93 | Wet | 3 | 2 | 6 |
| 3rd prior month | August | 2.67 | 3.89 | 4.58 | 4.09 | Normal | 2 | 1 | 2 |
| | | | | | | | | | **Sum** = 17 |

| If Sum is | |
|---|---|
| 6 - 9 | drier than normal |
| 10 - 14 | normal |
| 15 - 18 | wetter than normal |

**Conclusion: Wetter-than-Normal**

## Previous Wetland Delineation Mapping

At the request of the Kenneth Monroe, former Town Chairman with Town of Bloomfield, SEWRPC originally delineated the wetland boundaries at McKay Park on May 9, 2002. Jeffrey Kimps, RLS, subsequently surveyed the SEWRPC wetland boundary markers. SEWRPC staff returned to McKay Park on November 7, 2013, for the purpose of reviewing the wetland boundary delineated in 2002. It was determined that the wetland boundary had changed in several areas. Those changed areas were re-staked by SEWRPC staff and subsequently surveyed by Mr. Kimps. Mr. Kimps prepared a revised wetland boundary survey to reflect still-valid 2002 wetland boundaries and re-staked 2013 wetland boundary segments. This revised wetland boundary survey from 2013 was used to determine if changes had occurred as of 2019.

## Existing Environmental Mapping

The Walworth County topographic mapping (Exhibit 1) depicts a project area that is relatively level, with slightly higher elevations to the west and south. Fill piles are evident in the northcentral part of the project area. Elevations immediately north of Lake Geneva Highway are similar to elevations within the project area, indicating that these lowlands on both sides of Lake Geneva Highway were part of the same wetland basin prior to construction of the roadway. Natural elevations within the project area range from a high of 879 feet above the National Geodetic Vertical Datum of 1929 (NGVD 29) along the western edge to a low of 875 feet in the northcentral, northeast, and east-central parts. One of the temporary fill piles in the northcentral part of the project area had an elevation of 883 feet when these contour lines were mapped in 2015.

The WDNR Surface Water Data Viewer (WWI) mapping (Exhibit 2) reflects the SEWRPC wetland delineation findings from 2013. Most of the wetland consists of emergent-wet meadow (E2K) wetland, with small pockets of forested/scrub-shrub (T3/S3K) wetland in the northwest corner and forested/emergent-wet meadow (T3/E2K) in the center of the project area. WWI mapping also includes the two areas of filled emergent-wet meadow wetland ($E2K) in the northeast and north-central parts of the project area that were approximated in the wetland delineation report for the 2013 fieldwork. Wetland indicators, shown as NRCS-mapped Drummer silt loam (Dt) and Matherton silt loam (MmA) soils, cover a substantial portion of the project area.

The NRCS Soil Survey map (Exhibit 3) shows the following soils in the project area:

| Map Unit Name and Symbol | Slope (%) | Hydric Category | Hydric Percent of Map Unit | Hydric Minor Component, Percent, and Landform | Project Area (%) |
|---|---|---|---|---|---|
| Drummer silt loam, gravelly substratum (Dt) | 0-2 | Predominantly Hydric | 95 | Not applicable (N/A) | 33.0 |
| Fox silt loam (FsA) | 0-2 | Non-hydric | 0 | N/A | 0.1 |
| Matherton silt loam (MmA) | 1-3 | Predominantly Non-hydric | 5 | Sebewa, 3%, depressions; and Drummer – gravelly substratum, 2%, depressions | 47.5 |
| St. Charles silt loam, gravelly substratrum (SeA) | 0-2 | Non-hydric | 0 | N/A | 19.4 |

Exhibit 3 also indicates that no FEMA-mapped one-percent-annual-probability floodplain is present within, or in close proximity to, the project area.

Historical aerial photos were reviewed going back to 1956. A National Agriculture Imagery Program image (2017), and SEWRPC Orthophotographs (2015, 2010, 2005, and 2000) and aerial photographs (1990, 1980, 1975, 1963, and 1956), were reviewed. While other images were available, they were of poor quality. The image review is summarized in the following table, and the images are attached (Exhibits 4A to 4J).

| Year | Changes in Land Use Observed on Aerial Photography from 1956 to 2017 |
|---|---|
| 1940 | The dominant land use in the general area is agriculture. The project area is comprised of cropland, part of a larger farm with cropland outside of the project area. Lake Geneva Highway is present but Manor Terrace and Sunset Drive have yet to be constructed. |
| 1956 | No significant changes noted. |
| 1963 | Residential subdivisions are under construction including new roads Manor Terrace and Sunset Drive to the east and south, respectively. A single residential lot has been built upon immediately west of the project area. The project area appears to be idle when this photo was taken. |
| 1975 | The project area continues to be idle. Wetness signatures are apparent in the north and east parts of the project area. |
| 1980 | A new residence has been built immediately southeast of the project area. Woody vegetation is occupying the west side of the project area. |
| 1990 | No significant changes noted. |
| 2000 | Trails have been established across the project area. A berm of fill material has been placed along the eastern edge of the project area. |
| 2005 | A boardwalk and two small shelters have been built in the eastern portion of the project area. The berm of fill noted in 2000 appears to have been spread out and trees planted in that area. The property immediately north of the project area is inundated. Three residential lots have been built upon just east of the project area. |
| 2010 | The extent of inundation has greatly increased on the property immediately north of the project area. Inundation is also apparent on the north end of the project area, particularly where mowing has occurred. |
| 2015 | Disturbances are apparent in the north part of the project area. These include extensive mowing, a driveway access from Manor Terrace and multiple fill piles placed in the northcentral part. |
| 2017 | Extensive grading has occurred in the northeastern part of the park where a staging area is apparent for construction equipment and materials. Mowing continues over much of northern part of the park. Installation of a drain tile is apparent in the western part of the park and is especially apparent where a corridor has been cleared of trees to the southwest. |

SEWRPC Sanitary Sewer Service Area mapping (Exhibit 5) indicates the project area is entirely contained within the gross sanitary sewer service area for the Pell Lake Area. However, the northern portion of the project area is not identified as part of the "planned" sanitary sewer service area due to its designation as an isolated natural resource area primarily comprised of wetlands. Although such areas are isolated, they are at least five acres in size, and contain a variety of resource functions that include facilitating surface water drainage, maintaining pockets of natural resource features, and enhancing the movement of wildlife and protection of plant and animal diversity. INRAs are valuable ecological resources and relatively rare in Walworth County (comprise less than three percent of the land area within the County), and such sites are recommended to

be protected to the extent practicable pursuant to the 2019 Multi-Jurisdictional Comprehensive Plan Update for Walworth County.

NRCS draft wetland inventory mapping (Exhibit 6) indicates almost the entire parcel is not inventoried (NI), which is a typical designation for properties where farming ceased long ago. Land immediately north of the parcel, which lies at the approximately the same elevation, is labeled wetland (W).

### Amount and Types of Wetland in the Project Area

One wetland plant community area (PCA) was identified and inventoried within the project area (Exhibit 7). A list of vascular plant species observed during the all three field inspections (2002, 2013, and 2019) was prepared for the PCA as well as plant community type(s), dominant plant species, disturbances, and any critical plant and animal species (Exhibit 8). The following table summarizes characteristics of the PCA:

| PCA Number | Acreage | PCA Type(s) | Dominant Species | Critical Species |
|---|---|---|---|---|
| 1 | 6.5 | Fresh (wet) meadow (partly degraded), shrub-carr, hardwood swamp, and atypical (mowed) wetland | *Cornus racemosa*--Gray dogwood<br>*Phalaris arundinacea*--Reed canary grass<br>*Populus tremuloides*--Quaking aspen | None |

### Wetland/Upland Boundary Explanation

Fourteen representative sample sites were identified within the project area. The Wetland Determination Data Forms, describing the findings at each sample site, are attached as Exhibit 9. The locations of the sample sites are shown on Exhibit 7. The wetland boundary was determined using breaks in topography, changes in vegetation composition, visual identification of wetland hydrology, and presence of hydric soils.

### Disturbed and Problematic Areas Encountered

Sample site numbers 7, 8, and 12 were all determined to have "significantly disturbed" vegetation due to ongoing disturbance on that part of the property. Fill piles were evident on historical aerial photography and picked up on topography maps that were generated in 2015 (see Exhibit 1). Filled and graded areas were noted during the 2013 and 2019 field inspections. Finally, ongoing mowing was observed on historical aerial photography and during field inspections. All three sample sites (7, 8, and 12) were found to have both hydric soils and wetland hydrology. Therefore, while the vegetation at all three sample sites did not pass the dominance test or prevalence index indicators, problematic hydrophytic vegetation was determined to be present, leading to a finding that all three sample sites were in wetland.

### Other Considerations

The nonagricultural performance standards set forth in Section NR 151.125 of the *Wisconsin Administrative Code* require establishment of a 75-foot impervious surface protective area to protect "highly susceptible" wetlands (fens, sedge meadows, ephemeral ponds, etc.). "Moderately susceptible" wetland types (USGS-mapped waterways and waterbodies, shrub-carr, floodplain forests, forested wetlands with early successional species, shallow marsh, and fresh (wet) meadow) should have a 50-foot impervious surface protective area. Degraded portions of wetlands with 90 percent or greater cover by non-native species (Reed canary grass, Narrow-leaved cattail, etc.) and farmed wetlands are considered "less susceptible," requiring establishment of a 10- to 30-foot setback depending on average width of the wetland. Stormwater management facilities that are designed, constructed, and maintained for conveyance or treatment purposes are not subject to protective area performance standards as indicated in the WDNR *Guidance for the Establishment of Protective Areas for Wetlands in Runoff Management Rules, Wisconsin Administrative Code NR 151*.

The portions of the wetland that consist of moderately susceptible fresh (wet) meadow, shrub-carr, or early successional hardwood swamp (See Sample Sites 1, 3, 5, 9, and 13) would typically be assigned a 50-foot

protective area setback. The disturbed portions of the wetland consisting of less susceptible degraded fresh (wet) meadow and atypical (mowed) wetland (See Sample Sites 7, 8, 10, and 12) are typically assigned a 10- to 30-foot protective area setback.

The designated protective area boundary is measured horizontally from the delineated wetland boundary to the closest impervious surface. The protective area requirements should be taken into consideration for any planned improvements within the project area. It is suggested that the property owner or their representative contact WDNR regarding approaches to meet the requirements.

Finally, it is noted that no Federal or State regulatory jurisdiction determinations relative to any wetland permits or certifications are made under this report.

## LITERATURE CITED

Southeastern Wisconsin Regional Planning Commission website at maps.sewrpc.org/regionallandinfo/regionalmapping

SEWRPC CAPR No. 288, *A Multi-Jurisdictional Comprehensive Plan Update for Walworth County,* June 2019. (https://www.co.walworth.wi.us/DocumentCenter/View/1941/Walworth-County-Multi-Jurisdictional-Comprehensive-Plan-Update-PDF)

U.S. Army Corps of Engineers, 2016, State of Wisconsin Wetland Plant List.

U.S. Army Corps of Engineers, 2016, *Guidance for Offsite Hydrology/Wetland Determinations,* U.S. Army Corps of Engineers – St. Paul District, July 1, 2016.

U.S. Army Corps of Engineers, 2015, Special Public Notice: *Guidance for Submittal of Delineation Reports to the St. Paul District Corps of Engineers and the Wisconsin Department of Natural Resources*, U.S. Army Corps of Engineers – St. Paul District, March 2015.

U.S. Army Corps of Engineers, 2012, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0). U.S. Army Engineer Research and Development Center, January, 2012.

U.S. Army Corps of Engineers, 1987, U.S. Army Corps of Engineers wetlands delineation manual. Wetlands Research Program Technical Report Y-87-1.

USDA, Natural Resources Conservation Service, Soil Survey Staff, Web Soil Survey. Available online at websoilsurvey.sc.egov.usda.gov/

USDA, Natural Resources Conservation Service, 2016. *Field Indicators of Hydric Soils in the United States*, Version 8.0. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Committee for Hydric Soils. 2016.

USDA, Natural Resources Conservation Service, 2010. *National Food Security Act Manual, Fifth Edition, Part 514.60*, November 2010.

WDNR, Surface Water Data Viewer, website at dnrmaps.wi.gov/sl/?Viewer=SWDV

WDNR, 2015, *Guidance for the Establishment of Protective Areas for Wetlands in Runoff Management Rules, Wisconsin Administrative Code NR 151,* WDNR Bureau of Watershed Management Program Guidance, Storm Water Management Program, April 2015.

TMS/CJJ/JLD/STH/mid
CA501-43 McKay Park Proposed Park Improvements 2019 - WD Report (00253836).DOCX
300-3000


Exhibit 1. Topographic Map
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
875
Lake Geneva Highway
Manor Terrace
Sunset Drive
Legend
Project Area
0
75
150
Feet
Contour Interval: 1 foot
Date of Contour Lines: 2015
NGVD 29
Source: SEWRPC
Date of Photography: 2015
CA#501-43

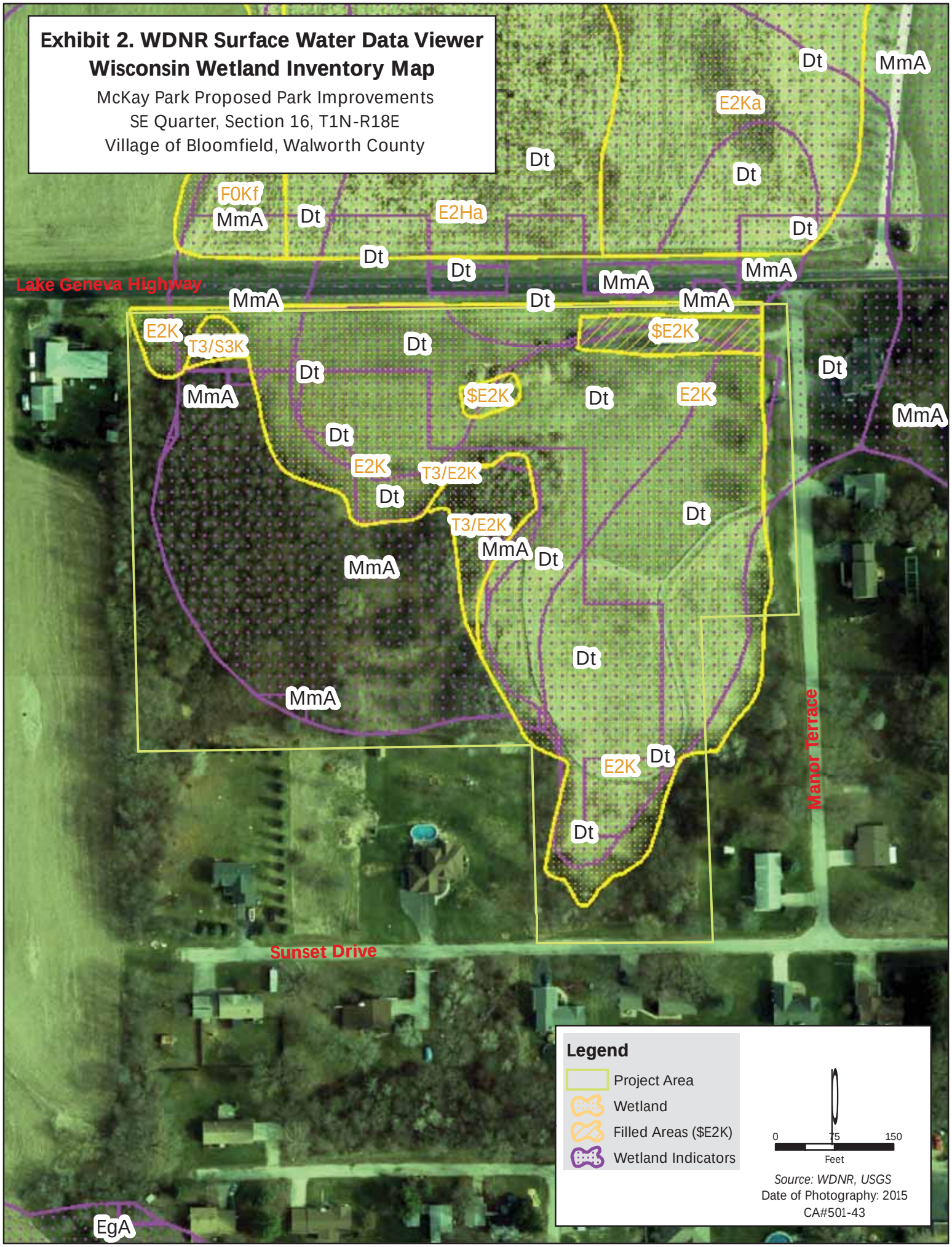


Exhibit 2. WDNR Surface Water Data Viewer
Wisconsin Wetland Inventory Map
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Lake Geneva Highway
Sunset Drive
Manor Terrace
F0Kf
E2Ha
E2Ka
E2K
$E2K
T3/S3K
T3/E2K
MmA
Dt
EgA
Legend
Project Area
Wetland
Filled Areas ($E2K)
Wetland Indicators
0
75
150
Feet
Source: WDNR, USGS
Date of Photography: 2015
CA#501-43


Exhibit 3. Soils Map
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Dt
MmA
Lake Geneva Highway
MmA
Manor Terrace
FsA
SeA
Sunset Drive
EgA
Legend
Project Area
Non Hydric
Predominantly Hydric
Predominantly Non Hydric
0
75
150
Feet
Source: SEWRPC
Date of Photography: 2015
CA#501-43


Exhibit 4A. 2017 Orthophotography
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Lake Geneva Highway
Manor Terrace
Sunset Drive
Legend
Project Area
0
75
150
Feet
Source: NAIP
CA#501-43


Exhibit 4B. 2015 Orthophotography
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Lake Geneva Highway
Manor Terrace
Sunset Drive
Legend
Project Area
0
75
150
Feet
Source: SEWRPC
CA#501-43

# Exhibit 4C. 2010 Orthophotography

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County


Exhibit 4D. 2005 Orthophotography
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Lake Geneva Highway
Manor Terrace
Sunset Drive
Legend
Project Area
0
75
150
Feet
Source: SEWRPC
CA#501-43

# Exhibit 4E. 2000 Orthophotography

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County


**Legend**

Project Area

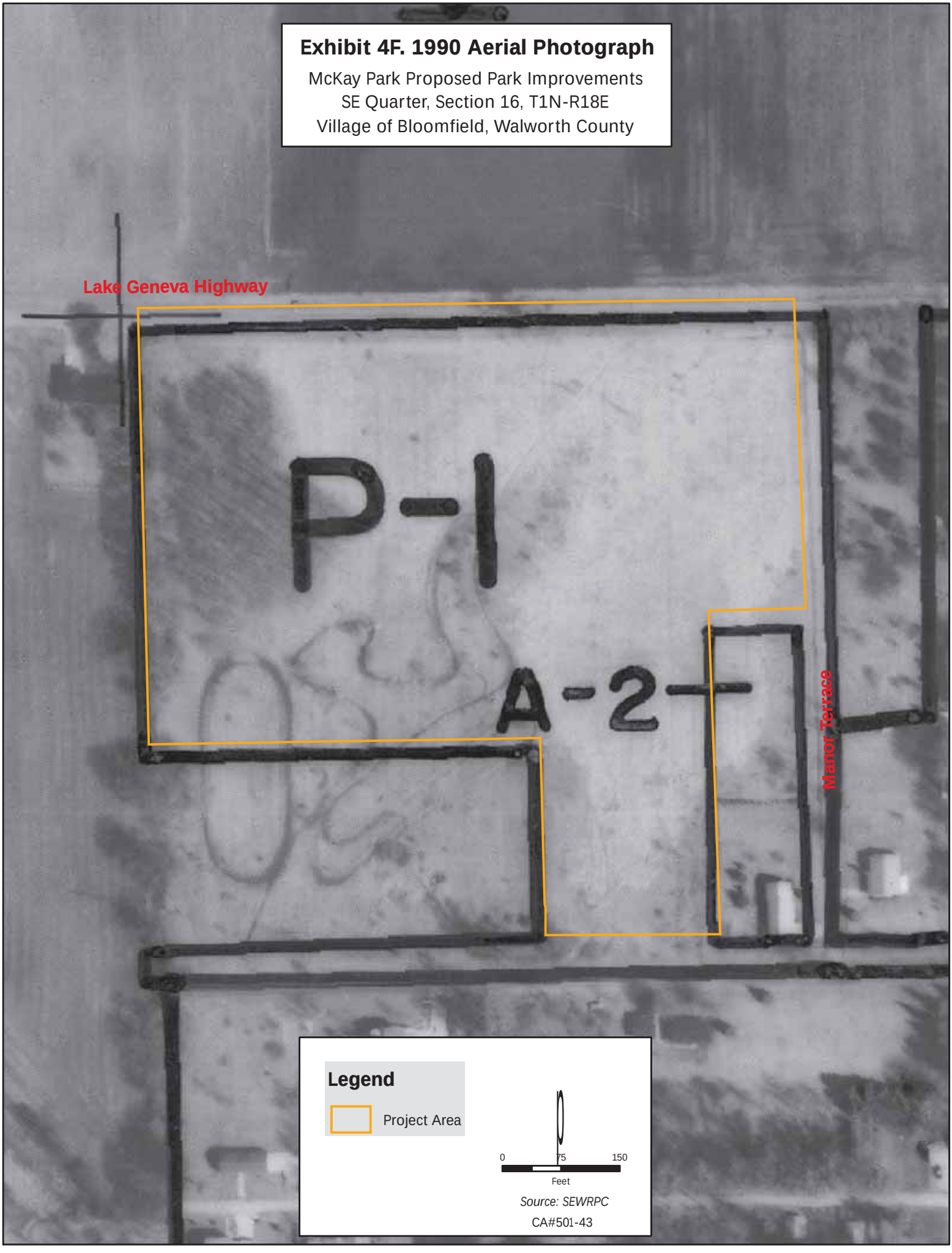
0 75 150
Feet

*Source: SEWRPC*

CA#501-43

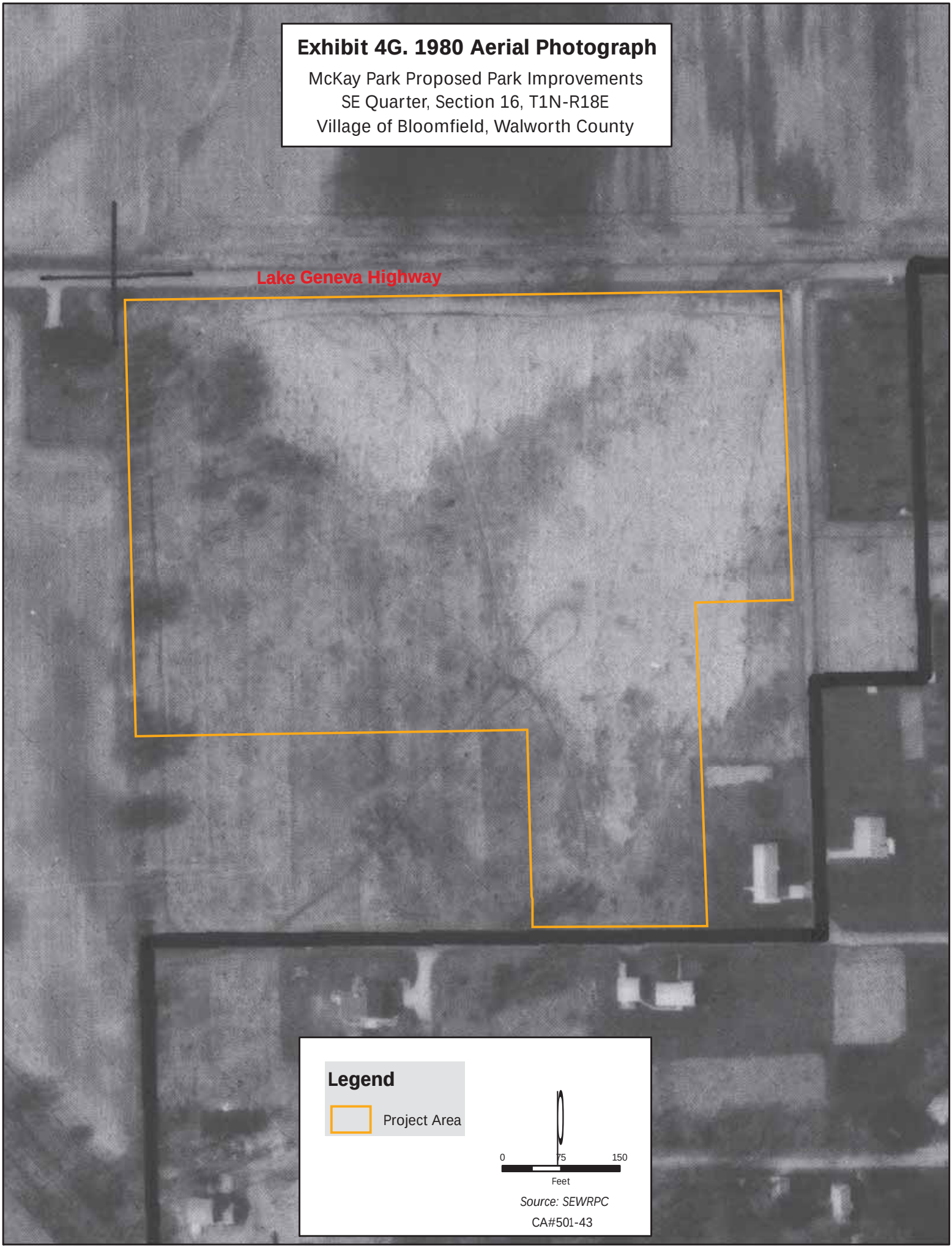
# Exhibit 4F. 1990 Aerial Photograph

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County



# Exhibit 4G. 1980 Aerial Photograph

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County




**Legend**

Project Area

0 75 150
Feet

*Source: SEWRPC*

CA#501-43

# Exhibit 4H. 1975 Aerial Photograph

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County


Exhibit 4I. 1963 Aerial Photograph
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Lake Geneva Highway
Legend
Project Area
0
75
150
Feet
Source: SEWRPC
CA#501-43

# Exhibit 4J. 1956 Aerial Photograph

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County

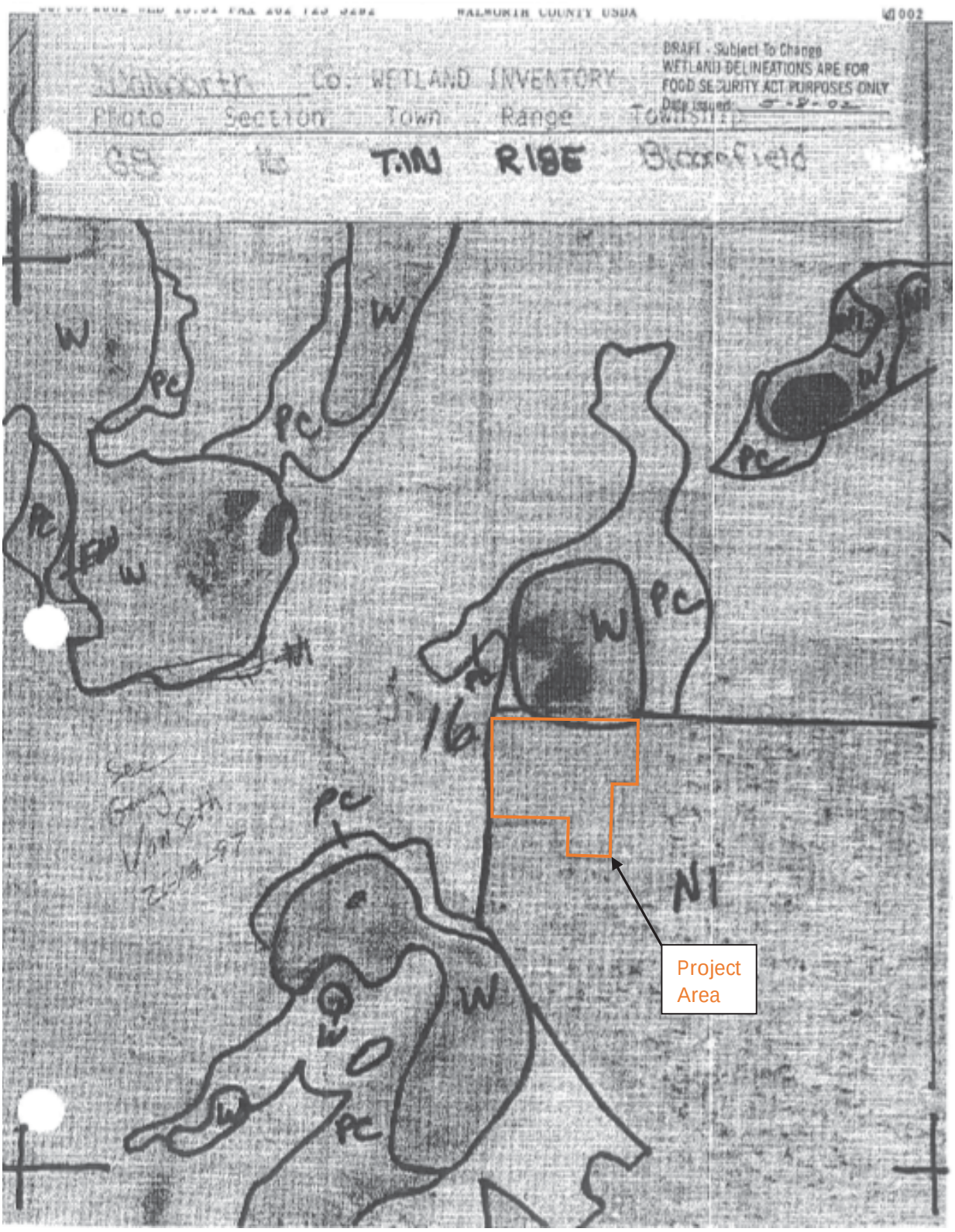

Exhibit 4K. 1940 Aerial Photograph
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Lake Geneva Highway
Legend
Project Area
0
75
150
Feet
Source: SEWRPC
CA#501-43

# Exhibit 5. Sanitary Sewer Service Map

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County

## Exhibit 6. NRCS Draft Wetland Inventory Map

McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County



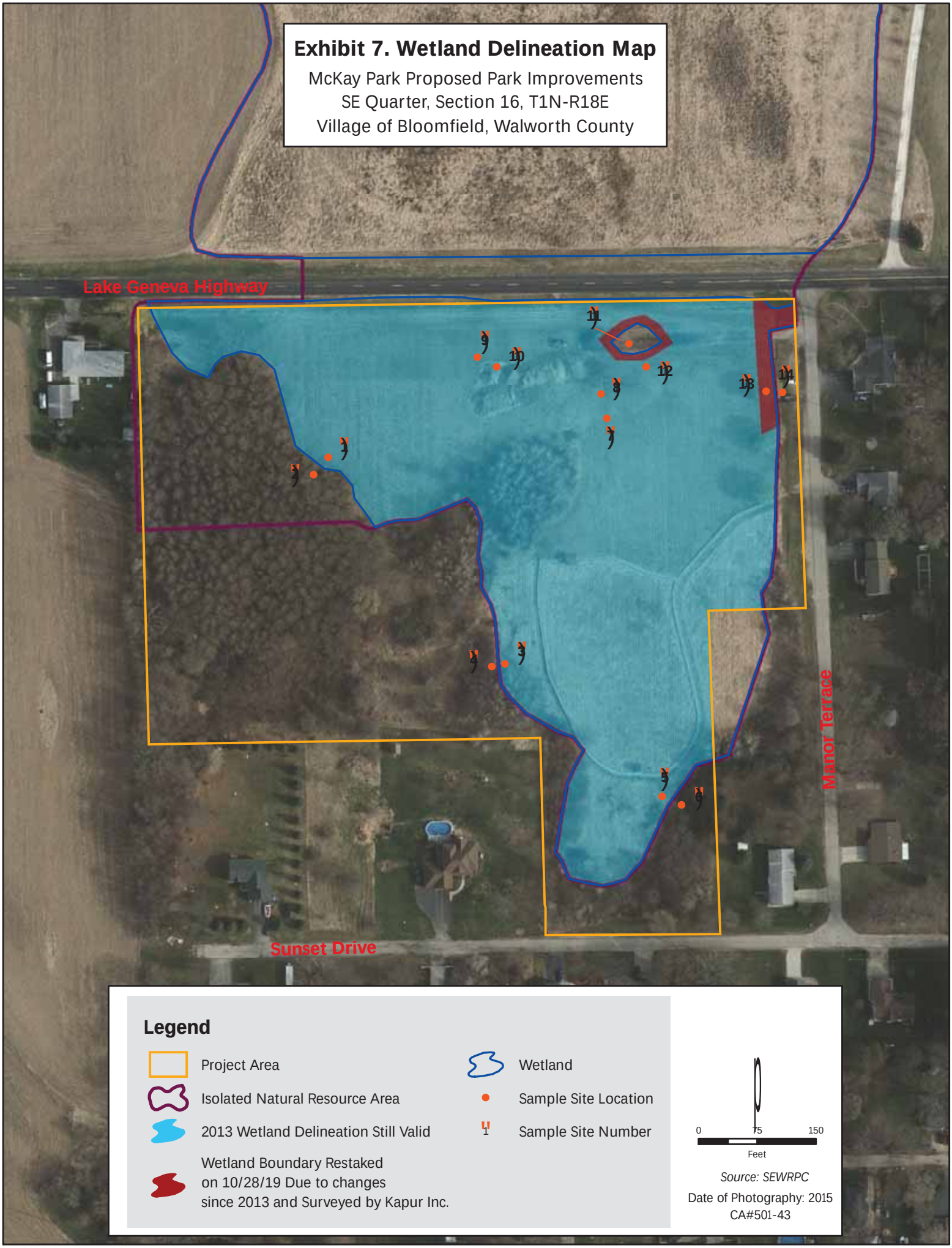


Exhibit 7. Wetland Delineation Map
McKay Park Proposed Park Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County
Lake Geneva Highway
Manor Terrace
Sunset Drive
Legend
Project Area
Isolated Natural Resource Area
2013 Wetland Delineation Still Valid
Wetland Boundary Restaked on 10/28/19 Due to changes since 2013 and Surveyed by Kapur Inc.
Wetland
Sample Site Location
Sample Site Number
0
75
150
Feet
Source: SEWRPC
Date of Photography: 2015
CA#501-43

# Exhibit 8. Preliminary Vegetation Survey

McKay Park Proposed Park Improvements

Dates: October 28, 2019
November 7, 2013
May 9, 2002

Observers: Christopher J. Jors, Principal Biologist (2019, 2013, 2002)
Jennifer L. Dietl, Senior Biologist (2019)
Shane T. Heyel, Biologist (2019)
Donald M. Reed, PhD., Retired Chief Biologist (2002, 2013)
Lawrence A. Leitner, Retired Principle Biologist (2002, 2013)
Daniel L. Carter, Former Principal Biologist (2013)
Southeastern Wisconsin Regional Planning Commission

Location: Village of Bloomfield in parts of the Southeast one-quarter of U.S. Public Land Survey Section 16, Township 1 North, Range 18 East, Walworth County, Wisconsin.

Species List: Native Species

**Co-dominant species**

*Acer negundo*--Boxelder
*Acer saccharinum*--Silver maple
*Calamagrostis canadensis*--Canada bluejoint
*Carex pellita*--Woolly sedge
*Carex stricta*--Tussock sedge
*Carex* sp.--Sedge
*Cornus alba*--Red-osier dogwood
*Cornus obliqua*--Silky dogwood
***Cornus racemosa*--Gray dogwood**
*Epilobium coloratum*--Willow-herb
*Euthamia graminifolia*--Grass-leaved goldenrod
*Fragaria virginiana*--Wild strawberry
*Geum canadense*--White avens
*Juglans nigra*--Black walnut
*Juncus dudleyi*--Dudley's rush
*Juncus tenuis*--Path rush
*Monarda fistulosa*--Wild bergamot
*Panicum dichotomiflorum*--Knee grass
*Persicaria amphibia*--Water smartweed
*Persicaria lapathifolia*--Heart's-ease
*Persicaria pensylvanica*--Pinkweed
*Plantago rugelii*--Red-stalked plantain
*Populus deltoides*--Cottonwood
***Populus tremuloides*--Quaking aspen**
*Quercus macrocarpa*--Bur oak
*Quercus rubra*--Northern red oak
*Quercus* x *palustris*--Hybrid oak

Native Species cont.

*Rubus allegheniensis*--Common blackberry
*Rubus occidentalis*--Black raspberry
*Rudbeckia hirta*--Black-eyed Susan
*Salix amygdaloides*--Peach-leaved willow
*Salix discolor*--Pussy willow
*Sambucus nigra*--Elderberry
*Senecio hieracifolius*--Fireweed
*Solidago altissima*--Tall goldenrod
*Solidago gigantea*--Giant goldenrod
*Symphyotrichum pilosum*--Frost aster
*Urtica dioica*--Stinging nettle
*Viburnum rafinesquianum*--Downy arrowwood
*Vitis riparia*--Riverbank grape

NON-Native species

*Alliaria petiolata*--Garlic-mustard
*Barbarea vulgaris*--Yellow rocket
*Catalpa speciosa*--Catalpa
*Cirsium arvense*--Canada thistle
*Cirsium vulgare*--Bull thistle
*Daucus carota*--Queen Anne's lace
*Echinochloa crusgalli*--Barnyard grass
*Frangula alnus*--Glossy buckthorn
*Hypericum perforatum*--Common St. John's wort
*Lonicera* X *bella*--Hybrid honeysuckle
***Phalaris arundinacea*--Reed canary grass**
*Picea* sp.--Spruce (planted)
*Plantago major*--Common plantain
*Poa compressa*--Canada bluegrass
*Poa pratensis*--Kentucky bluegrass
*Rhamnus cathartica*--Common buckthorn
*Robinia pseudoacacia*--Black locust
*Rosa multiflora*--Multiflora rose
*Rumex crispus*--Curly dock
*Salix* x *pendulina*--Willow
*Schedonorus arundinaceus*--Tall fescue
*Setaria pumila*--Yellow foxtail
*Solanum dulcamara*--Deadly nightshade
*Taraxacum officinale*--Common dandelion
*Taxus cuspidata*--Japanese yew (planted)
*Trifolium pratense*--Red clover
*Ulmus pumila*--Siberian elm
*Viburnum opulus*--European highbush-cranberry

Total number of plant species: 68
Number of alien, or non-native, plant species: 28 (41 percent)

This approximately 6.5-acre wetland plant community area consists of fresh (wet) meadow (partly degraded), shrub-carr, hardwood swamp, and atypical (mowed) wetland. Disturbances to the plant community area include dumping, filling, mowing, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to ditching and draining. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

SVY4589
CA501-43

# Exhibit 9.

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 1
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 28
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: 1

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| 1. Rhamnus cathartica | 2 | ☐ | FAC |
| 2. Cornus racemosa | 1 | ☐ | FAC |
| 3. Rosa multiflora | 1 | ☐ | FACU |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 4 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Phalaris arundinacea** | **60** | ☒ | **FACW** |
| 2. Solanum dulcamara | 20 | ☐ | FAC |
| 3. Alliaria petiolata | 15 | ☐ | FACU |
| 4. Geum canadense | 8 | ☐ | FAC |
| 5. Sambucus nigra | 6 | ☐ | FAC |
| 6. Urtica dioica | 5 | ☐ | FAC |
| 7. Cirsium arvense | 3 | ☐ | FACU |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 117 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = 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: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ **Dominance Test is >50%**
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Fresh (wet) meadow.

## SOIL

Sampling Point: 1

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/1 | 100 | | | | | Silty clay loam | |
| 3-14 | 10YR 3/1 | 93 | 7.5YR 3/4 | 7 | C | PL M | Silty clay loam | |
| 14-16 | 10YR 5/1 | 85 | 7.5YR 3/4 | 15 | C | PL M | Silty clay loam | |
| 16-25 | 2.5Y 6/2 | 60 | 10YR 3/6 | 10 | C | PL M | Clay loam | |
| | 10YR 5/2 | 20 | 7.5YR 3/4 | 10 | C | PL M | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 2
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☐Yes | ☒**No** | **Is the Sampled Area within a Wetland?** | ☐ Yes | ☒**No** |
| Hydric Soils Present? | ☒**Yes** | ☐No | | | |
| Wetland Hydrology Present? | ☐Yes | ☒**No** | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (surface) to 3, and at 14

**Wetland Hydrology Present?** Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation at the surface is due to wetter than normal antecedent precipitation. No wetland hydrology indicators observed.

**VEGETATION –** Use scientific names of plants. Sampling Point: 2

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| **1. Robinia pseudoacacia** | **60** | ☒ | **FACU** |
| 2. Acer negundo | 15 | ☐ | FAC |
| 3. Rhamnus cathartica | 10 | ☐ | FAC |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 85 | = Total Cover | |

| Sapling/Shrub Stratum (Plot size: 30' radius) | | | |
|---|---|---|---|
| **1. Rhamnus cathartica** | **20** | ☒ | **FAC** |
| **2. Rosa multiflora** | **15** | ☒ | **FACU** |
| **3. Viburnum opulus** | **15** | ☒ | **FACW** |
| 4. Lonicera x bella | 8 | ☐ | FACU |
| 5. Cornus racemosa | 5 | ☐ | FAC |
| 6. Rubus occidentalis | 5 | ☐ | NI (UPL) |
| 7. | | ☐ | |
| | 68 | = Total Cover | |

| Herb Stratum (Plot size: 5' radius) | | | |
|---|---|---|---|
| **1. Alliaria petiolata** | **25** | ☒ | **FACU** |
| **2. Geum canadense** | **20** | ☒ | **FAC** |
| 3. Symphyotrichum lateriflorum | 8 | ☐ | FAC |
| 4. Rosa multiflora | 5 | ☐ | FACU |
| 5. Phalaris arundinacea | 5 | ☐ | FACW |
| 6. | | ☐ | |
| 7. | | ☐ | |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 63 | = Total Cover | |

| Woody Vine Stratum (Plot size: 30' radius) | | | |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Hardwoods.

## SOIL

Sampling Point: 2

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/2 | 100 | | | | | Silt loam | |
| 3-14 | 10YR 3/1 | 85 | 5YR 3/4 | 15 | C | PL M | Silt loam | |
| 14-27 | 10YR 6/2 | 60 | 7.5YR 3/4 | 30 | C | PL M | Clay loam | |
| | 10YR 3/1 | 10 | | | | | | |
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[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains

[2]Location: 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) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 3
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): depression/toeslope Local relief (concave, convex, none): concave Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 25.5
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: 3

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| **1. Populus tremuloides** | **60** | ☒ | **FAC** |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 60 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| **1. Frangula alnus** | **25** | ☒ | **FAC** |
| **2. Populus tremuloides** | **20** | ☒ | **FAC** |
| **3. Cornus racemosa** | **15** | ☒ | **FAC** |
| 4. Lonicera x bella | 5 | ☐ | FACU |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 65 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Epilobium coloratum** | **20** | ☒ | **OBL** |
| **2. Geum canadense** | **20** | ☒ | **FAC** |
| **3. Phalaris arundinacea** | **18** | ☒ | **FACW** |
| 4. Solidago gigantea | 15 | ☐ | FACW |
| 5. Frangula alnus | 10 | ☐ | FAC |
| 6. Cornus racemosa | 5 | ☐ | FAC |
| 7. Juncus dudleyi | 3 | ☐ | FACW |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 91 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. Vitis riparia | 3 | ☐ | FAC |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 3 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ **Dominance Test is >50%**
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Hardwood swamp.

## SOIL

Sampling Point: 3

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-9 | 10YR 4/1 | 97 | 10YR 4/4 | 3 | C | PL M | Silt loam | |
| 9-26 | 10YR 5/1 | 75 | 10YR 4/6 | 25 | C | PL M | Clay loam | with gravel |
| | | | | | | | | |
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[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains

[2]Location: 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) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 4
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): hilllslope Local relief (concave, convex, none): linear Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒**Yes** | ☐No | **Is the Sampled Area within a Wetland?** | ☐ Yes | ☒**No** |
| Hydric Soils Present? | ☐Yes | ☒**No** | | | |
| Wetland Hydrology Present? | ☐Yes | ☒**No** | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (surface) to 4, and at 13

**Wetland Hydrology Present?** Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation at the surface is due to wetter than normal antecedent precipitation. No wetland hydrology indicators observed.

**VEGETATION –** Use scientific names of plants. Sampling Point: 4

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| **1. Populus tremuloides** | **45** | ☒ | **FAC** |
| **2. Prunus serotina** | **30** | ☒ | **FACU** |
| 3. ____ | ____ | ☐ | ____ |
| 4. ____ | ____ | ☐ | ____ |
| 5. ____ | ____ | ☐ | ____ |
| 6. ____ | ____ | ☐ | ____ |
| 7. ____ | ____ | ☐ | ____ |
| | 75 | = Total Cover | |
| Sapling/Shrub Stratum (Plot size: 30' radius) | | | |
| **1. Cornus raceosa** | **35** | ☒ | **FAC** |
| **2. Populus tremuloides** | **25** | ☒ | **FAC** |
| **3. Rhamnus cathartica** | **25** | ☒ | **FAC** |
| 4. Lonicera x bella | 20 | ☐ | FACU |
| 5. Viburnum opulus | 15 | ☐ | FACW |
| 6. Viburnum rafinesqueanum | 5 | ☐ | NI (UPL) |
| 7. ____ | ____ | ☐ | ____ |
| | 125 | = Total Cover | |
| Herb Stratum (Plot size: 5' radius) | | | |
| **1. Geum canadense** | **25** | ☒ | **FAC** |
| **2. Rhamnus cathartica** | **15** | ☒ | **FAC** |
| 3. Alliaria petiolata | 10 | ☐ | FACU |
| 4. Rudbeckia hirta | 5 | ☐ | FACU |
| 5. Solanum dulcamara | 5 | ☐ | FAC |
| 6. ____ | ____ | ☐ | ____ |
| 7. ____ | ____ | ☐ | ____ |
| 8. ____ | ____ | ☐ | ____ |
| 9. ____ | ____ | ☐ | ____ |
| 10. ____ | ____ | ☐ | ____ |
| 11. ____ | ____ | ☐ | ____ |
| 12. ____ | ____ | ☐ | ____ |
| | 60 | = Total Cover | |
| Woody Vine Stratum (Plot size: 30' radius) | | | |
| 1. ____ | ____ | ☐ | ____ |
| 2. ____ | ____ | ☐ | ____ |
| 3. ____ | ____ | ☐ | ____ |
| 4. ____ | ____ | ☐ | ____ |
| | 0 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | ____ x 1 = | ____ | |
| FACW species | ____ x 2 = | ____ | |
| FAC species | ____ x 3 = | ____ | |
| FACU species | ____ x 4 = | ____ | |
| UPL species | ____ x 5 = | ____ | |
| Column Totals: | ____ (A) | ____ | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ **Dominance Test is >50%**
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Undifferentiated woodland/thicket.

## SOIL

Sampling Point: 4

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-13 | 10YR 3/2 | 100 | | | | | Silt loam | |
| 13-18 | 10YR 5/2 | 50 | 10YR 4/6 | 15 | C | PL M | Clay loam | with gravel |
| | 10YR 4/2 | 35 | | | | | | |
| 18+ | | | | | | | | Refusal: Rocks |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

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

**Restrictive Layer (if observed):**

Type: Rocks

Depth (inches): 18

**Hydric Soil Present?** Yes ☐ **No** ☒

Remarks: Several attempts were made to dig further. No hydric soil indicators observed.

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 5
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Drummer silt loam, gravelly substratum (Dt) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 28.5
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: 5

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| **1. Cornus racemosa** | **50** | ☒ | **FAC** |
| **2. Cornus alba** | **15** | ☒ | **FACW** |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 65 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Phalaris arundinacea** | **80** | ☒ | **FACW** |
| 2. Epilobium coloratum | 12 | ☐ | OBL |
| 3. Poa pratensis | 10 | ☐ | FACU |
| 4. Geum canadense | 5 | ☐ | FAC |
| 5. Taraxacum officinale | 3 | ☐ | FACU |
| 6. | | ☐ | |
| 7. | | ☐ | |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 110 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ **Dominance Test is >50%**
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Fresh (wet) meadow with shrub-carr along the edge.

## SOIL

Sampling Point: 5

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-6 | 10YR 3/1 | 100 | | | | | Silt loam | |
| 6-13 | 10YR 3/1 | 95 | 10YR 3/3 | 5 | C | PL M | Silt loam | |
| 13-18 | 10YR 2/1 | 95 | 10YR 3/3 | 5 | C | PL M | Silt loam | |
| 18-25 | 10YR 4/1 | 80 | 10YR 5/6 | 10 | C | PL M | Sandy clay loam | |
| | 10YR 3/1 | 10 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 6
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: St. Charles silt loam, gravelly substratum (SeA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☐Yes | ☒**No** | **Is the Sampled Area within a Wetland?** | ☐ Yes | ☒**No** |
| Hydric Soils Present? | ☐Yes | ☒**No** | | | |
| Wetland Hydrology Present? | ☐Yes | ☒**No** | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (surface) to 7

**Wetland Hydrology Present?** Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation near the surface is due to wetter than normal antecedent precipitation. No wetland hydrology indicators observed.

**VEGETATION –** Use scientific names of plants. Sampling Point: 6

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| **1. Prunus serotina** | **35** | ☒ | **FACU** |
| **2. Rhamnus cathartica** | **10** | ☒ | **FAC** |
| 3. ____ | ____ | ☐ | ____ |
| 4. ____ | ____ | ☐ | ____ |
| 5. ____ | ____ | ☐ | ____ |
| 6. ____ | ____ | ☐ | ____ |
| 7. ____ | ____ | ☐ | ____ |
| | 45 | = Total Cover | |
| Sapling/Shrub Stratum (Plot size: 30' radius) | | | |
| **1. Lonicera x bella** | **40** | ☒ | **FACU** |
| **2. Rosa multiflora** | **35** | ☒ | **FACU** |
| **3. Cornus racemosa** | **30** | ☒ | **FAC** |
| 4. Rhamnus cathartica | 15 | ☐ | FAC |
| 5. ____ | ____ | ☐ | ____ |
| 6. ____ | ____ | ☐ | ____ |
| 7. ____ | ____ | ☐ | ____ |
| | 120 | = Total Cover | |
| Herb Stratum (Plot size: 5' radius) | | | |
| **1. Rosa multiflora** | **12** | ☒ | **FACU** |
| **2. Geum canadense** | **10** | ☒ | **FAC** |
| 3. Erigeron annuus | 3 | ☐ | FACU |
| 4. ____ | ____ | ☐ | ____ |
| 5. ____ | ____ | ☐ | ____ |
| 6. ____ | ____ | ☐ | ____ |
| 7. ____ | ____ | ☐ | ____ |
| 8. ____ | ____ | ☐ | ____ |
| 9. ____ | ____ | ☐ | ____ |
| 10. ____ | ____ | ☐ | ____ |
| 11. ____ | ____ | ☐ | ____ |
| 12. ____ | ____ | ☐ | ____ |
| | 25 | = Total Cover | |
| Woody Vine Stratum (Plot size: 30' radius) | | | |
| 1. ____ | ____ | ☐ | ____ |
| 2. ____ | ____ | ☐ | ____ |
| 3. ____ | ____ | ☐ | ____ |
| 4. ____ | ____ | ☐ | ____ |
| | 0 | = 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 43% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | ____ | x 1 = | ____ |
| FACW species | ____ | x 2 = | ____ |
| FAC species | ____ | x 3 = | ____ |
| FACU species | ____ | x 4 = | ____ |
| UPL species | ____ | x 5 = | ____ |
| Column Totals: | ____ (A) | | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Shrub thicket.

## SOIL

Sampling Point: 6

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-9 | 10YR 3/2 | 100 | | | | | Silt loam | |
| 9-17 | 10YR 4/2 | 45 | 10YR 4/6 | 25 | C | PL M | Silty clay loam | |
| | 10YR 3/1 | 30 | | | | | | |
| 17-25 | 10YR 4/2 | 65 | 10YR 4/6 | 10 | C | PL M | Clay loam | |
| | 10YR 3/1 | 25 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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: No hydric soil indicators observed.

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 7
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): terrace (level ground) Local relief (concave, convex, none): none Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation **X**, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ **No** ☒
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal. The sample site has significantly disturbed vegetation due to a history of mowing (managed plant community). In addition, the 2015 aerial photo shows several soil fill piles in the area. Subsequent aerial imagery, and 2019 on-site observations, indicate apparent spreading of this fill material in the sample site area. (This fill material is different than the sand/gravel material placed for the purpose of creating a driveway/parking area that encompasses sample site 11.)

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 14
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 at surface)

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Geomorphic position (D2) is not checked due to an apparently graded, level landscape in the sample site area.

**VEGETATION –** Use scientific names of plants. Sampling Point: 7

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Poa pratensis** | **55** | ☒ | **FACU** |
| **2. Daucus carota** | **50** | ☒ | **UPL** |
| 3. Solidago altissima | 10 | ☐ | FACU |
| 4. Phalaris arundinacea | 8 | ☐ | FACW |
| 5. Rudbeckia hirta | 5 | ☐ | FACU |
| 6. Hypericum perforatum | 3 | ☐ | UPL |
| 7. Plantago rugelii | 3 | ☐ | FAC |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 134 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: | |
|---|---|---|---|---|
| OBL species | 0 | x 1 = | 0 | |
| FACW species | 8 | x 2 = | 16 | |
| FAC species | 3 | x 3 = | 9 | |
| FACU species | 70 | x 4 = | 280 | |
| UPL species | 53 | x 5 = | 265 | |
| Column Totals: | 134 | (A) | 570 | (B) |

Prevalence Index = B/A = 4.3

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☒ **Problematic Hydrophytic Vegetation[1] (Explain)**

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) The sample site has disturbed vegetation due to a history of mowing. The site exhibits wetland hydrology indicators and has a hydric soil despite apparent grading/spreading of fill material in recent years. Thus, the site is determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (mowed) wetland.

## SOIL

Sampling Point: 7

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 4/2 | 100 | | | | | Silt loam | |
| 4-8 | 10YR 4/2 | 94 | 10YR 4/6 | 6 | C | PL M | Silt loam | |
| 8-12 | 10YR 4/1 | 80 | 10YR 4/6 | 13 | C | PL M | Silt loam | |
| | | | 7.5YR 3/4 | 7 | C | PL M | | |
| 12-27 | 5Y 6/2 | 55 | 10YR 5/6 | 20 | C | PL M | Clay loam | |
| | 5Y 6/1 | 25 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 8
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): terrace (level ground) Local relief (concave, convex, none): none Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation **X**, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ **No** ☒
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal. The sample site has significantly disturbed vegetation due to a history of mowing (managed plant community). In addition, the 2015 aerial photo shows several soil fill piles in the area. Subsequent aerial imagery, and 2019 on-site observations, indicate apparent spreading of this fill material in the sample site area. (This fill material is different than the sand/gravel material placed for the purpose of creating a driveway/parking area that encompasses sample site 11.)

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 17.5
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (surface) to 3, and at 9

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Geomorphic position (D2) is not checked due to an apparently graded, level landscape in the sample site area.

**VEGETATION –** Use scientific names of plants. Sampling Point: 8

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Poa pratensis** | **40** | ☒ | **FACU** |
| **2. Daucus carota** | **30** | ☒ | **UPL** |
| **3. Plantago lanceolata** | **25** | ☒ | **FACU** |
| 4. Alliaria petiolata | 8 | ☐ | FACU |
| 5. Erigeron annuus | 7 | ☐ | FACU |
| 6. Rudbeckia hirta | 5 | ☐ | FACU |
| 7. Taraxacum officinale | 5 | ☐ | FACU |
| 8. Symphyotrichum pilosum | 3 | ☐ | FACU |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 123 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: | |
|---|---|---|---|---|
| OBL species | 0 | x 1 = | 0 | |
| FACW species | 0 | x 2 = | 0 | |
| FAC species | 0 | x 3 = | 0 | |
| FACU species | 93 | x 4 = | 372 | |
| UPL species | 30 | x 5 = | 150 | |
| Column Totals: | 123 | (A) | 522 | (B) |

Prevalence Index = B/A = 4.2

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☒ **Problematic Hydrophytic Vegetation[1] (Explain)**

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) The sample site has disturbed vegetation due to a history of mowing. The site exhibits wetland hydrology indicators and has a hydric soil despite apparent grading/spreading of fill material in recent years. Thus, the site is determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (mowed) wetland.

## SOIL

Sampling Point: 8

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 3/1 | 100 | | | | | Silt loam | |
| 4-13 | 10YR 3/1 | 87 | 10YR 4/6 | 10 | C | PL M | Silt loam | |
| | | | 7.5YR 3/4 | 3 | C | PL M | | |
| 13-21 | 10YR 4/2 | 70 | 10YR 5/6 | 30 | C | PL M | Clay loam | |
| 21-25 | 5Y 6/2 | 80 | 10YR 5/6 | 20 | C | PL M | Clay loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: ____ State: WI Sampling Point: 9
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: ____ Long: ____ Datum: ____
Soil Map Unit Name: Drummer silt loam, gravelly substratum (Dt) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation____, Soil____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation____, Soil____, or Hydrology ____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: ____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☒ **High Water Table (A2)**
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ **Water-Stained Leaves (B9)**
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): ____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 7
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: 9

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Phalaris arundinacea** | **90** | ☒ | **FACW** |
| 2. Poa pratensis | 20 | ☐ | FACU |
| 3. Carex pellita | 15 | ☐ | OBL |
| 4. Juncus dudleyi | 10 | ☐ | FACW |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 135 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = 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: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ **Dominance Test is >50%**
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Fresh (wet) meadow.

## SOIL

Sampling Point: 9

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 3/1 | 95 | 7.5YR 3/4 | 5 | C | PL M | Silt loam | |
| 5-10 | 10YR 3/1 | 85 | 7.5YR 3/4 | 15 | C | PL M | Silt loam | |
| 10-20 | 10YR 4/2 | 70 | 10YR 4/6 | 10 | C | PL M | Clay loam | |
| | 5GY 5/1 | 15 | 10YR 6/8 | 5 | C | PL M | | |
| 20-25 | 10YR 4/2 | 40 | 10YR 5/6 | 20 | C | PL M | Clay loam | |
| | 10YR 6/1 | 30 | | | | | | |
| | 5GY 5/1 | 10 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 10
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): slight hillslope (*fill pile) Local relief (concave, convex, none): convex Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Drummer silt loam, gravelly substratum (Dt) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal. *The sample site is on the remainder of one of several soil fill piles that first appeared on the 2015 aerial photo. Most of this fill material appears to have been spread on-site, between this point and the area including sample sites 7 and 8. See Exhibit 10, Photo 11.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 21
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (surface) to 3, and at 17

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: While the sample site lies within a large depression, geomorphic position (D2) is not checked due to the presence of fill material that forms a raised, slightly convex surface. As observed at nearby sample site 9, the high-water table (A2) and saturation (A3) indicators might also be met at this location in the absence of fill material.

**VEGETATION –** Use scientific names of plants. Sampling Point: 10

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Panicum dichotomiflorum** | **50** | ☒ | **FACW** |
| **2. Echinochloa crus-galli** | **20** | ☒ | **FAC** |
| 3. Setaria pumila | 15 | ☐ | FAC |
| 4. Daucus carota | 3 | ☐ | UPL |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 88 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

☐ Rapid Test for Hydrophytic Vegetation
☒ **Dominance Test is >50%**
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Disturbed fresh (wet) meadow on the remainder of an old fill pile.

## SOIL

Sampling Point: 10

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-3 | 10YR 3/1 - 3/2 | 90 | 10YR 5/4 | 10 | C | M | Sandy clay loam | fill material |
| 3-5 | 10YR 4/4 | 100 | | | | | Clay loam | fill material |
| 5-12 | 5Y 4/1 | 75 | 5YR 4/4 | 25 | C | PL M | Clay loam | fill material with gravel |
| 12-17 | 10YR 4/1 | 85 | 10YR 5/6 | 15 | C | PL M | Clay loam | fill material with gravel |
| 17-20 | 10YR 4/1 | 90 | 7.5YR 3/4 | 10 | C | PL M | Clay loam | |
| 20-27 | 2.5Y 4/1 | 90 | 7.5YR 3/4 | 10 | C | PL M | Silt loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 11
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): gravel driveway (*level ground) Local relief (concave, convex, none): none Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: $E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | |
|---|---|---|
| Hydrophytic Vegetation Present? | ☒**Yes** | ☐No |
| Hydric Soils Present? | ☐Yes | ☒**No** |
| Wetland Hydrology Present? | ☐Yes | ☒**No** |

**Is the Sampled Area within a Wetland?** ☐ Yes ☒**No**

If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal. *Leveled ground at the sample site includes significant sand and gravel fill that is part of a driveway access to the site.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 30
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

**Wetland Hydrology Present?** Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sand and gravel fill (driveway material) to 18 inches below the surface. Gleyed clay loam at that point is saturated. Only one secondary wetland hydrology indicator observed.

**VEGETATION –** Use scientific names of plants. Sampling Point: 11

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Panicum dichotomiflorum** | **15** | ☒ | **FACW** |
| **2. Setaria pumila** | **12** | ☒ | **FAC** |
| 3. Poa pratensis | 2 | ☐ | FACU |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 29 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

☐ Rapid Test for Hydrophytic Vegetation
☒ **Dominance Test is >50%**
☐ Prevalence Index is ≤3.0[1]
☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Sparsely vegetated gravel driveway.

## SOIL

Sampling Point: 11

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-18 | 10YR 4/3 | 100 | | | | | Sandand gravel | Fill material |
| 18-24 | 5G 5/1 | 80 | 10YR 3/6 | 10 | C | M | Clay loam | |
| | | | 10YR 5/6 | 10 | C | M | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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: Due to the presence of fill material, no hydric soil indicators observed.

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 12
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): none Slope (%): 1-3%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton, silt loam (MmA) NWI classification: E2K
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation **X**, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ **No** ☒
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal. Sample site has disturbed vegetation due to mowing.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? **Yes** ☒ No ☐ Depth (inches): 16
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: 12

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| **1. Populus deltoides** | **15** | ☒ | **FAC** |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 15 | = Total Cover | |
| **Sapling/Shrub Stratum** (Plot size: 30' radius) | | | |
| 1. Cornus alba | 2 | ☐ | FACW |
| 2. Rhamnus cathartica | 2 | ☐ | FACU |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 4 | = Total Cover | |
| **Herb Stratum** (Plot size: 5' radius) | | | |
| **1. Poa pratensis** | **50** | ☒ | **FACU** |
| **2. Daucus carota** | **30** | ☒ | **UPL** |
| 3. Agrostis stolonifera | 15 | ☐ | FACW |
| 4. Schedonorus arundinaceus | 10 | ☐ | FACU |
| 5. Setaria pumila | 8 | ☐ | FAC |
| 6. Ambrosia artemisiifolia | 5 | ☐ | FACU |
| 7. Populus deltoides | 5 | ☐ | FAC |
| 8. Trifolium pratense | 3 | ☐ | FACU |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 126 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☒ **Problematic Hydrophytic Vegetation[1] (Explain)**

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) The sample site has disturbed vegetation due to mowing, grading, and staging of heavy equipment. It exhibits indicators of wetland hydrology and has a hydric soil. Thus, the site is determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (mowed) wetland.

## SOIL

Sampling Point: 12

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10YR 4/1 | 95 | 10YR 3/6 | 5 | C | PL M | Silt loam | |
| 5-11 | 2.5Y 4/1 | 85 | 7.5YR 3/4 | 15 | C | PL M | Silt loam | |
| 11-25 | 10Y 5/1 | 65 | 10YR 4/6 | 25 | C | PL M | Silty clay loam | |
| | 2.5Y 4/1 | 10 | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 13
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Drummer silt loam, gravelly substratum (Dt) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☒ **Yes** | ☐ No | **Is the Sampled Area within a Wetland?** | ☒ **Yes** | ☐ No |
| Hydric Soils Present? | ☒ **Yes** | ☐ No | | | |
| Wetland Hydrology Present? | ☒ **Yes** | ☐ No | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

| | | |
|---|---|---|
| ☒ **Surface Water (A1)** | ☐ Water-Stained Leaves (B9) | ☐ Surface Soil Cracks (B6) |
| ☐ High Water Table (A2) | ☐ Aquatic Fauna (B13) | ☐ Drainage Patterns (B10) |
| ☐ Saturation (A3) | ☐ Marl Deposits (B15) | ☐ Moss Trim Lines (B16) |
| ☐ Water marks (B1) | ☐ Hydrogen Sulfide Odor (C1) | ☐ Dry-Season Water Table (C2) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) | ☐ Crayfish Burrows (C8) |
| ☐ Drift Deposits (B3) | ☐ Presence of Reduced Iron (C4) | ☐ Saturation Visible on Aerial Imagery (C9) |
| ☐ Algal Mat or Crust (B4) | ☐ Recent Iron Reduction in Tilled Soils (C6) | ☐ Stunted or Stressed Plants (D1) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) | ☒ **Geomorphic Position (D2)** |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) | ☐ Shallow Aquitard (D3) |
| ☐ Sparsely Vegetated Concave Surface (B8) | | ☐ Microtopographic Relief (D4) |
| | | ☒ **FAC-Neutral Test (D5)** |

**Field Observations:**

Surface Water Present? **Yes** ☒ No ☐ Depth (inches): 4
Water Table Present? Yes ☐ No ☐ Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): _____

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: 13

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| **1. Salix x pendulina** | **20** | ☒ | **FACW** |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 20 | = Total Cover | |
| Sapling/Shrub Stratum (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |
| Herb Stratum (Plot size: 5' radius) | | | |
| **1. Phalaris arundinacea** | **35** | ☒ | **FACW** |
| **2. Persicaria amphibia** | **20** | ☒ | **OBL** |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 55 | = Total Cover | |
| Woody Vine Stratum (Plot size: 30' radius) | | | |
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = 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: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ **Dominance Test is >50%**
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Fresh (wet) meadow.

## SOIL

Sampling Point: 13

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
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[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains

[2]Location: 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) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☒ **Other (Explain in Remarks)**

[3]Indicators 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: Soils inundated with 4 inches of water, hydric by definition - Criteria 3.

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: McKay Park Proposed Park Improvements City/County: Village of Bloomfield/Walworth County Sampling Date: 10-28-2019
Applicant/Owner: _____ State: WI Sampling Point: 14
Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 16, T1N-R18E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Drummer silt loam, gravelly substratum (Dt) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ **No** ☒ (If no, explain in Remarks)
Are Vegetation_____, Soil_____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation_____, Soil_____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | ☐Yes | ☒**No** | **Is the Sampled Area within a Wetland?** | ☐ Yes | ☒**No** |
| Hydric Soils Present? | ☐Yes | ☒**No** | | | |
| Wetland Hydrology Present? | ☐Yes | ☒**No** | If yes, optional Wetland Site ID: _____ | | |

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is wetter than normal. Sample site contains gravel fill and is serving as a parking area.

## HYDROLOGY

**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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** ☒ Depth (inches): _____
Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____
Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 4

**Wetland Hydrology Present?** **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation this close to the surface at this location is due to wetter than normal antecedent precipitation. A water table could not be reached due to refusal at 14 inches. Therefore, the Saturation (A3) indicator does not apply.

**VEGETATION –** Use scientific names of plants. Sampling Point: 14

| Tree Stratum (Plot size: 30' radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |

| Sapling/Shrub Stratum (Plot size: 30' radius) | | | |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| 5. | | ☐ | |
| 6. | | ☐ | |
| 7. | | ☐ | |
| | 0 | = Total Cover | |

| Herb Stratum (Plot size: 5' radius) | | | |
|---|---|---|---|
| **1. Poa pratensis** | **40** | ☒ | **FACU** |
| **2. Trifolium repens** | **35** | ☒ | **FACU** |
| 3. Agrostis stolonifera | 10 | ☐ | FACW |
| 4. Plantago major | 10 | ☐ | FACU |
| 5. Erigeron annuus | 3 | ☐ | FACU |
| 6. | | ☐ | |
| 7. | | ☐ | |
| 8. | | ☐ | |
| 9. | | ☐ | |
| 10. | | ☐ | |
| 11. | | ☐ | |
| 12. | | ☐ | |
| | 98 | = Total Cover | |

| Woody Vine Stratum (Plot size: 30' radius) | | | |
|---|---|---|---|
| 1. | | ☐ | |
| 2. | | ☐ | |
| 3. | | ☐ | |
| 4. | | ☐ | |
| | 0 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

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

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

**Definitions of Vegetation Strata:**

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

**Sapling/shrub** – Woody plants less than 3in. DBH and greater than 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 number here or on a separate sheet.) Mowed lawn (parking area stabilized with gravel fill).

## SOIL

Sampling Point: 14

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox Features % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10YR 2/2 | 100 | | | | | Sandy loam | with gravel fill |
| 4-14 | 10YR 4/1 | 100 | | | | | Sandy loam | with 50% gravel fill |
| 14+ | | | | | | | | Refusal: Gravel fill |
| | | | | | | | | |
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| | | | | | | | | |

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

[2]Location: 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) **(LRR R, MLRA 149B**)
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B**)
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B**)
- ☐ 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)

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LLR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LLR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ 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 (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators 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: No hydric soil indicators observed.

# Exhibit 10. Site Photos

McKay Park Proposed Improvements
SE Quarter, Section 16, T1N-R18E
Village of Bloomfield, Walworth County

Photo 1. Wetland sample site 1. Fresh (wet) meadow. (NE view)

Photo 2. Upland sample site 2. Hardwoods.

Photo 3. Wetland sample site 3. Hardwood swamp.

Photo 4. Upland sample site 4. Hardwoods.

Photo 5. Wetland sample site 5. Fresh (wet) meadow with shrub-carr along the edge.

Photo 6. Upland sample site 6. Shrub thicket.

Photo 7. Wetland sample site 7. Atypical (mowed) wetland. In addition to mowing disturbance, the plant community is indicative of recent ground disturbance, i.e. spreading of soil fill material. (South view)

Photo 8. Wetland sample site 8. Atypical (mowed) wetland. Disturbances at this sample site are as observed at sample site 7, and described above. (South view)

Photo 9. Wetland sample site 9. Fresh (wet) meadow, with an old fill pile in the background. (South view)

Photo 10. Wetland hydrology indicator C8, crayfish burrow, at sample site 9.

Photo 11. Wetland sample site 10. Disturbed fresh (wet) meadow on the remainder of an old fill pile. Aerial imagery and on-site observations indicate fill from this area was spread toward samples sites 7 and 8, as indicated by the orange arrows, below. (South view)

Photo 12. Upland sample site 11. Sparsely vegetated gravel driveway. (Gravel fill to 18 inches)

Photo 13. Wetland sample site 12. Atypical (mowed) wetland. NW view is toward sample site 11, which is on the gravel driveway near the top of the shovel.

Photo 14. Wetland sample site 13. Fresh (wet) meadow.

Photo 15. Upland sample site 14. Mowed lawn.

Photo 16. North view across large wetland from sample site 5.

Photo 17. North view along staked wetland boundary from between sample sites 13 and 14.

Photo 18. South view along staked wetland boundary from between sample sites 13 and 14.