

WETLAND DELINEATION REPORT

JAMES MADISON PARK

City of Madison Parks
Madison, WI 53703

PROJECT #: 18-101

MAY 25, 2018



247 W. Freshwater Way, Suite 210
Milwaukee, Wisconsin – 53204

www.healthyenvironmentsdesigned.com

INTRODUCTION

James Madison Park is part of the City of Madison park system and is located on the shore of Lake Mendota at 614 E. Gorham Street in Madison, Wisconsin. The park is located in Sections 13 and 14, Township 7 North, Range 9 East, in the City of Madison, Dane County, Wisconsin. A map identifying the project location can be found in **FIGURE 1**.

The park is comprised of several parcels, which are approximately 13 acres in total. It is surrounded by single family residences and rental properties. The park consists of mowed lawn, a playground, a basketball court, a sand volleyball court, and a beach. It also contains several buildings including the Mendota Rowing Club, Lincoln School Apartments, restroom facilities, and the Mendota Lake House B&B. A redesign of the park's facilities is in the planning stages. The purpose of the wetland delineation was to identify the existing wetlands on the property and to create a map of their boundaries. A map of the surveyed wetland boundary is found in **FIGURE 7**.

Kristi Sherfinski of HELIANTHUS conducted the wetland delineation field work on May 7, 2018. Field conditions were sunny with air temperatures in the 60s (°F). The temperatures for the previous winter had been normal, but with a slightly lower than average amount of precipitation. Growing season conditions as defined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (2010) and Northcentral and Northeast Region (2012) were documented at the site prior to beginning the delineation. Soil temperatures must be at or above 41°F at depth of 12 inches and at least two plant species must be emerging or breaking bud. On May 7, soil temperatures were consistently greater than 41°F at a depth of 12 inches. Reed canary grass and Kentucky bluegrass had new growth emerging, and box elder and willow trees were breaking bud.

Kristi Sherfinski has over 17 years of experience delineating wetlands in the Great Lakes Region. She received her initial basic wetland training at the Wetland Training Institute in Hastings, Michigan in 2002. Kristi worked as a project manager and wetland delineator at JFNew & Associates in Grand Haven, Michigan for six years, conducting wetland delineations in Michigan, Indiana, Illinois, and Wisconsin. Kristi then moved to Wisconsin to work for the Southeastern Wisconsin Regional Planning Commission (SEWRPC) with Dr. Donald Reed. At SEWRPC, Kristi updated the Wisconsin Wetland Inventory (WWI) in 2005 and in 2010 for the seven county area of southeast Wisconsin. Kristi participated in the Critical Methods in Wetland Delineation (Assured Wetland Delineator) training in 2006. In 2009, she attended the Wetland Delineation USACE Regional Supplement training session, the Environmental Corridor Delineation

Workshop, and the Farm Service Agency (FSA) Slide Review training session. After working at SEWRPC for seven years, Kristi worked as an environmental specialist at JSD Professional Services, Inc. for two years, before she decided to start her own business—HELIANTHUS.

METHODS

The process of wetland delineation involves collecting information about the soils, vegetation, and hydrology of a site in order to determine where the wetland boundary is located. The methodology used to conduct the delineation followed the US Army Corps of Engineers Wetlands Delineation Manual (1987), and the appropriate Regional Supplement to the Corps of Engineers Wetland Delineation Manual. In general, in southeastern and western Wisconsin, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, August, 2010) is used. The remaining portions of the state follow the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0, January, 2012). At this site, the Northcentral and Northeast Regional Supplement was used.

Prior to the site visit, several sources of data are consulted to reveal information that will aid in the locating the wetlands on the site. The sources reviewed include weather records to determine antecedent hydrologic conditions, the Wisconsin Wetland Inventory (WWI) map, the soil survey map, a topographic map, and historic aerial photographs of the project area. In areas that are under active cultivation as farmland, a Farm Service Agency (FSA) Slide Review is also conducted.

Data sample points are chosen based on the potential wetland areas identified by reviewing the above-referenced sources, and other sample points are added based on information gathered while in the field. Sample points are chosen on either side of the wetland line for their ability to reveal information about the actual location of the line, and upland reference data samples are chosen in order to show the contrast between wetland and upland field conditions.

Once a data sample point is chosen and located in the field, data is collected on the vegetation, the hydrology, and the soils of the site. Vegetation is identified by strata (tree, shrub, herbaceous, and vine layers), and an aerial coverage percent is determined for each species by layer. The plot size for the tree, shrub, and vine layers is a 30-foot radius circle, and the plot size for the herbaceous layer is a 5-foot radius circle. The scientific names and wetland status of each plant species follows the National Wetland

Plant List (2016). Once all species have been assigned a cover percentage, the dominance by wetland indicator plant species is assessed.

Hydrological indicators, as described in the Regional Supplements, are then listed for the sample point. A soil pit is excavated to at least 20 inches and the depth of water, saturation, and the water table is recorded. The soil profile at the sample point is also described, using the Munsell Soil-Color Charts (2009) to assess the color of the soil, and a texture analysis to determine the predominant texture of each soil layer. This data is used to determine if the soil profile meets the hydric soil indicators as defined in the Regional Supplements and the Field Guide for Identifying Hydric Soils V. 8.1 (USDA, 2017).

Once the location of the wetland line is determined from the data sampling effort, the edge of the wetland is flagged in the field and then surveyed in order to produce a map of the wetland that occurs on the subject property. Representative photographs of the sample points and of each wetland area were taken during the field visit. Any ditch, stream, pond or other water body that may be considered a Water of the U.S. and thus regulated by the U.S. Army Corps of Engineers (USACE) or the Wisconsin Department of Natural Resources (WDNR) was also identified.

RESULTS AND DISCUSSION

Antecedent Hydrologic Condition Analysis

Weather records were consulted from the Dane County Regional Airport weather station to determine if precipitation levels were normal for the three months prior to the site visit. The antecedent hydrologic condition analysis for the site revealed that climactic conditions near the site were drier than normal at the time of the site visit (**Table 1**). Drier than normal conditions means that hydrologic indicators may be absent from the wetland sample points and the data must be interpreted accordingly. However, there was a 1.33 inch rain event on May 4, 2018, which was three days prior to the site visit, so recent conditions may have been a little wetter than normal.

Review of Existing Data Sources

Existing data sources were reviewed to aid in the identification of wetland areas in the field.

Table 1 – Antecedent Hydrologic Condition Analysis

Month	3 yrs in 10 Less Than	3 yrs in 10 More Than	Rain Fall	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous Two Columns
April	2.58	3.89	2.14	Dry	1	3	3
March	1.28	2.77	0.74	Dry	1	2	2
February	0.69	1.56	2.50	Wet	3	1	3
						Sum	8
If sum is:							
6-9	Then prior period has been drier than normal						
10-14	Then prior period has been normal						
15-18	Then prior period has been wetter than normal						
Conclusions:	A sum of 8 shows the prior period to be drier than normal.						

The topographic map (**FIGURE 2**) shows that the southwest part of the park is relatively flat, whereas the northeast part of the park is quite steep, with the slope dropping sharply down to Lake Mendota. The slope ranges from 2% at its flattest, to 6% in the middle portion of the park, to approximately 20% in the northeast. The shoreline itself had a very steep slope, about 20% in the northeast half of the park, where it was heavily armored with 2-foot diameter boulders. Except for a small area around the beach and another small area at the southwest end of the park, the remainder of the shoreline consisted of a concrete wall revetment.

The soil survey map show one hydric soil type in the project area (**FIGURE 3**)—Colwood silt loam. All of the soil types occurring on the property are listed in **Table 2**.

Table 2 – Soil Types

Map Symbol	Map Unit Name	Hydrologic Drainage Class
Co	Colwood silt loam, 0-2%	Poorly drained
DnB	Dodge silt loam, 2-6%	Well drained
KdD2	Kidder loam, 12-20%, eroded	Well drained
MdC2	McHenry silt loam, 6-12%, eroded	Well drained
W	Water	NA

The Wisconsin Wetland Inventory identifies no wetlands within the project area (**FIGURE 4**). The Colwood silt loam is shown as a wetland indicator soil in the southeast part of the property.

Historic aerial photographs show that the original extent of the park is only the southwest corner, and the remainder of the park consisted of single family homes that lined the lakeshore (**FIGURE 5**). By 1995, however, most of the houses had been razed and the park became the size it is today. There was no indication of any kind of wetland occurring within the park boundaries in any of the aerial photographs.

Wetlands Identified During the Site Visit

A total of two wetlands were identified on the property during the field visit. Site photos of the property are included in **FIGURE 6**. The area and wetland boundary that was identified and flagged for the project are shown in **FIGURE 7**. Field data sheets are included in **FIGURE 8**. A description of the wetland areas follows.

Wetland 1

The wetland area was a scrub-shrub wetland that occurred along the lakeshore at the southwest side of the property. The dominant vegetation was black willow. The soils were problematic because there was only a thin layer of soil over the top of the riprap. They met the test criteria for S7-Dark Surface, which is a 4-inch thick dark surface layer in sandy soil types. The hydrology indicators were FAC-Neutral Test and Geomorphic Position. The wetland boundary occurred at the toe of slope of the riprap.

The adjacent upland area consisted of riprap on a hillslope that was approximately two feet higher in elevation than the adjacent wetland. The vegetation was dominated by Norway maple, hackberry, Kentucky bluegrass, jewelweed, dandelion, white snakeroot, burdock, and white avens. The soils lacked hydric indicators, consisting of an inch of soil over solid rock/gravel riprap, and hydrology indicators were also lacking.

Chapter NR 151-Runoff Management defines buffer areas for different wetland types to protect them from nutrient enrichment from storm water runoff. Final authority on the NR 151 protective areas rests with the DNR, but it is likely that this area would have a protective buffer of 50 feet.

Wetland 2

The wetland area was a constructed detention basin planted with wetland plant species. It had a sewer grate outlet structure set at approximately one foot above the bottom of

the basin. The dominant vegetation was Virginia ryegrass, iris, burdock, and golden alexanders. The soils met the criteria for F6-Redox Dark Surface, with redoximorphic features starting at 6 inches below the ground surface. A solid gravel layer was encountered at 17 inches. The hydrology indicators were Saturation, Sediment Deposits, FAC-Neutral Test, and Geomorphic Position. The wetland boundary occurred at the toe of slope of the basin.

The adjacent upland was a mowed lawn area that occurred in an area mapped as Colwood silt loam. The dominant vegetation was Kentucky bluegrass. Soils were non-hydric. They consisted of a layer of topsoil over what appeared to be fill material because small fragments of trash were visible in the soil profile. A restrictive layer of rocky gravel fill was found at 13 inches below the ground surface. The only hydrology indicator was Geomorphic Position, due to the slight saddle in the landscape, though the ground sloped towards the lake.

Another upland data point (Dp#4) was taken along the shoreline in the strip of vegetation occurring above the riprap lining the shore about 15 feet above the lake level. The area occurred on a 20% slope and no signs of hydrology were present. The dominant vegetation was wild parsnip, tall goldenrod, and New England aster. The soils were non-hydric and a solid rock layer was found at 12 inches underneath the ground surface.

CONCLUSION

HELIANTHUS LLC identified a total of two wetlands on the project site on May 7, 2018 using the standard practices described in this report and their best professional judgment. However, the final authority for the location of the wetland boundary rests with the U.S. Army Corps of Engineers (USACE) and the Wisconsin Department of Natural Resources (WDNR). It is recommended that this report be submitted to the WDNR for their concurrence with the wetland boundary, and be submitted to the USACOE for a jurisdictional determination. It is possible that the constructed basin would be a candidate for artificial exemption. Any impact, alteration, or fill to either the wetland areas or to waterways that are considered Waters of the U.S. are subject to state and federal regulations and permits may be required. The WDNR administers Chapters 30 and 281 of the Wisconsin State Statues, and the USACE administers Section 404 of the Clean Water Act.

In addition, because a wetland delineation is considered to be a point in time determination, wetland delineations are considered to be valid for a period of only five

years for federal wetlands and 15 years for nonfederal wetlands. Weather patterns and site conditions can change over time, making a new delineation necessary.

Erosion control and stormwater plans must be developed and submitted to WDNR prior to any land disturbance. Stormwater runoff must be treated on site per the Wisconsin Administrative Code Chapter NR 151-Runoff Management and a WRAPP must be filed per Chapter NR 216-Stormwater Discharge Permits.

This property occurs within a Shoreland Zone, which is any area within 300 feet of the lake, measured from the Ordinary High Water Mark of the lake. The Ordinary High Water Mark (OHWM) is the benchmark for measuring distances from the edge of the lake, and must be determined by the WDNR. A conditional use permit must be obtained from the City of Madison before any development can occur. Upon the filing of an application for a conditional use, the development plan shall show a complete inventory of shoreline vegetation in any area proposed for building, filling, grading or excavating. In addition, the development plan shall indicate those trees and shrubbery which will be removed as a result of the proposed development. The cutting of trees and shrubbery shall be limited in the strip thirty-five (35) feet inland from the normal waterline. On any zoning lot not more than thirty percent (30%) of the frontage shall be cleared of trees and shrubbery. Coverage by impermeable surfaces within thirty-five (35) feet of the OHWM shall not exceed twenty percent (20%). Public paths within this area shall not be included in the lot coverage limit.

Dane County Shoreland Zoning Ordinance requires that all new structures must be set back 75 feet from the edge of any wetland that is 2 acres in size or larger. Because both wetlands on this property are smaller than two acres, this ordinance would not apply. However, the final authority on setback requirements would be the City of Madison and would be part of the conditional use application.

Other environmental considerations include threatened or endangered species. It is recommended that an Endangered Resources (ER) Review request be submitted to the WDNR prior to pursuing any permits for proposed work. There may also be archaeological or historical preservation issues that may need to be addressed at this site.

An attempt was made to summarize the regulations which would apply to this parcel; however, additional federal, state, county, or city ordinances may also apply. It is recommended that the appropriate agents at Dane County and at the City of Madison be consulted prior to commencing work. If any disturbance occurs on the property without obtaining proper permits or authorizations from the USACE, WDNR or other

local agency, it should be considered at the owner's own risk and HELIANTHUS LLC shall not be considered responsible or liable for any resulting damages.

REFERENCES

Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

Environmental Laboratory. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region, Version 2.0. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Corps of Engineer Research and Development Center.

Environmental Laboratory. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0. ERDC/EL TR 12-1. Vicksburg, MS: U.S. Army Corps of Engineer Research and Development Center.

Guidance for Offsite Hydrology/Wetland Determinations. July 1, 2016. St. Paul District US Army Corps of Engineers.

Guidance for Submittal of Delineation Reports to the St. Paul District Army Corps of Engineers and the Wisconsin Department of Natural Resources. March 4, 2015. St. Paul District US Army Corps of Engineers.

Lichvar, R.W, D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. State of Wisconsin 2016 Wetland Plant List. The National Wetland Plant List: 2016 Wetland Ratings. Phytoneuron 2016-30: 1-17.

Munsell Color X-rite. 2009. Munsell Soil-Color Charts. Grand Rapids, MI.

NOAA Regional Climate Centers. Applied Climate Information System (ACIS). Online: www.rcc-acis.org.

Southeastern Wisconsin Regional Planning Commission (SEWRPC) Regional Map Server. Online: maps.sewrpc.org/regionallandinfo/regionalmapping/RegionalMaps/viewer.htm.

USDA Natural Resources Conservation Service. 2017. Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.1, ed. L. M. Vasilas, G.W. Hurt, and C.V. Noble. Washington, DC: USDA NRCS in cooperation with the National Technical Committee for Hydric Soils.

USDA Natural Resources Conservation Service. Web Soil Survey. Online: www.websoilsurvey.sc.egov.usda.gov.

Wisconsin DNR Surface Water Data Viewer (SWDV). Online: www.dnr.wi.gov/topic/surfacewater/swdv/.



Source: Google Maps, 2018



2000 FT



FIGURE 1. LOCATION MAP

Elevation

Contours - 2 ft Intervals

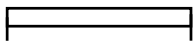
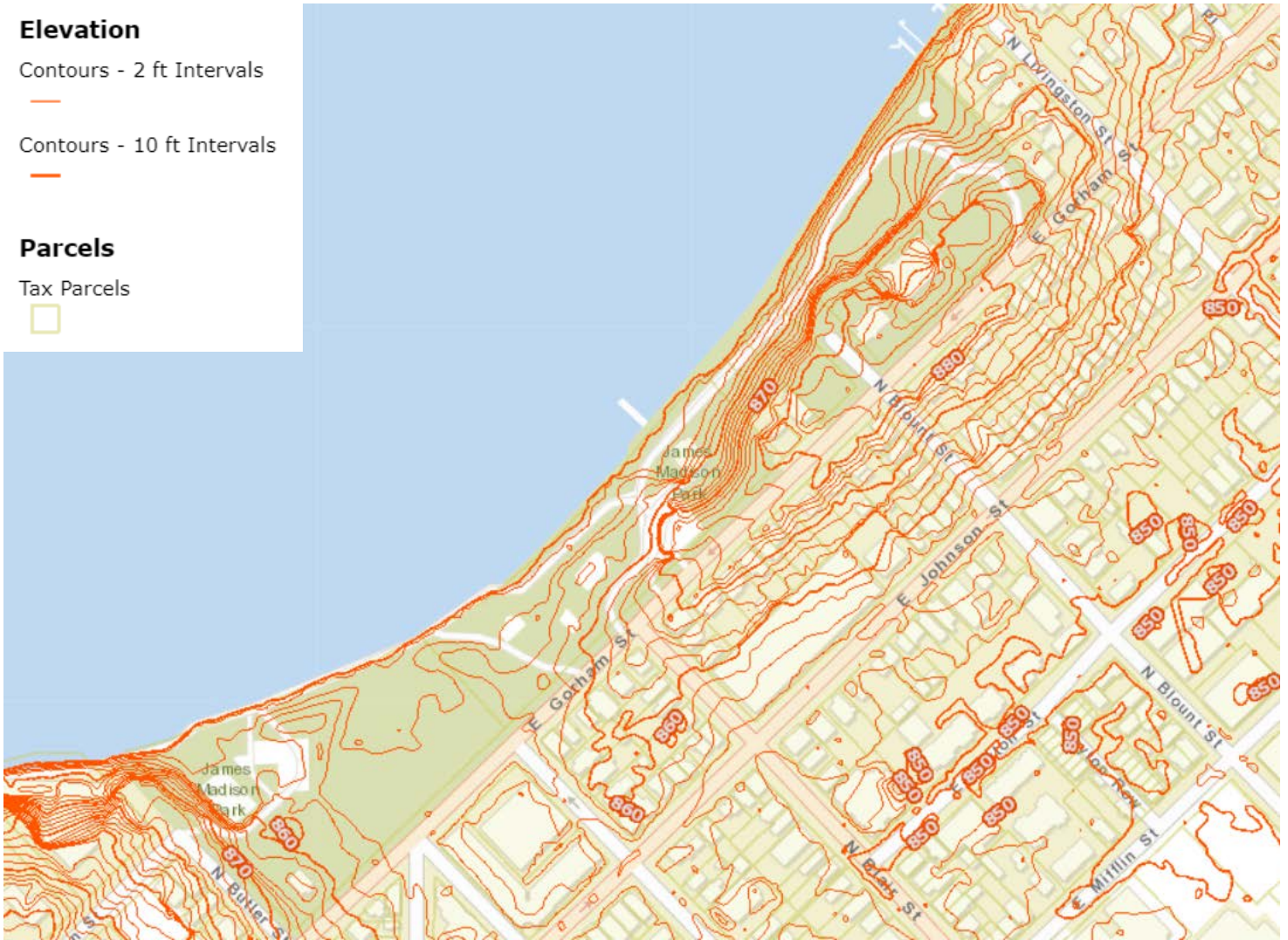


Contours - 10 ft Intervals



Parcels

Tax Parcels



300 FT

Source: Dane County DCiMap 3.1, 2018

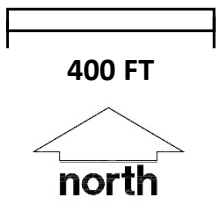


north

FIGURE 2. TOPOGRAPHIC MAP

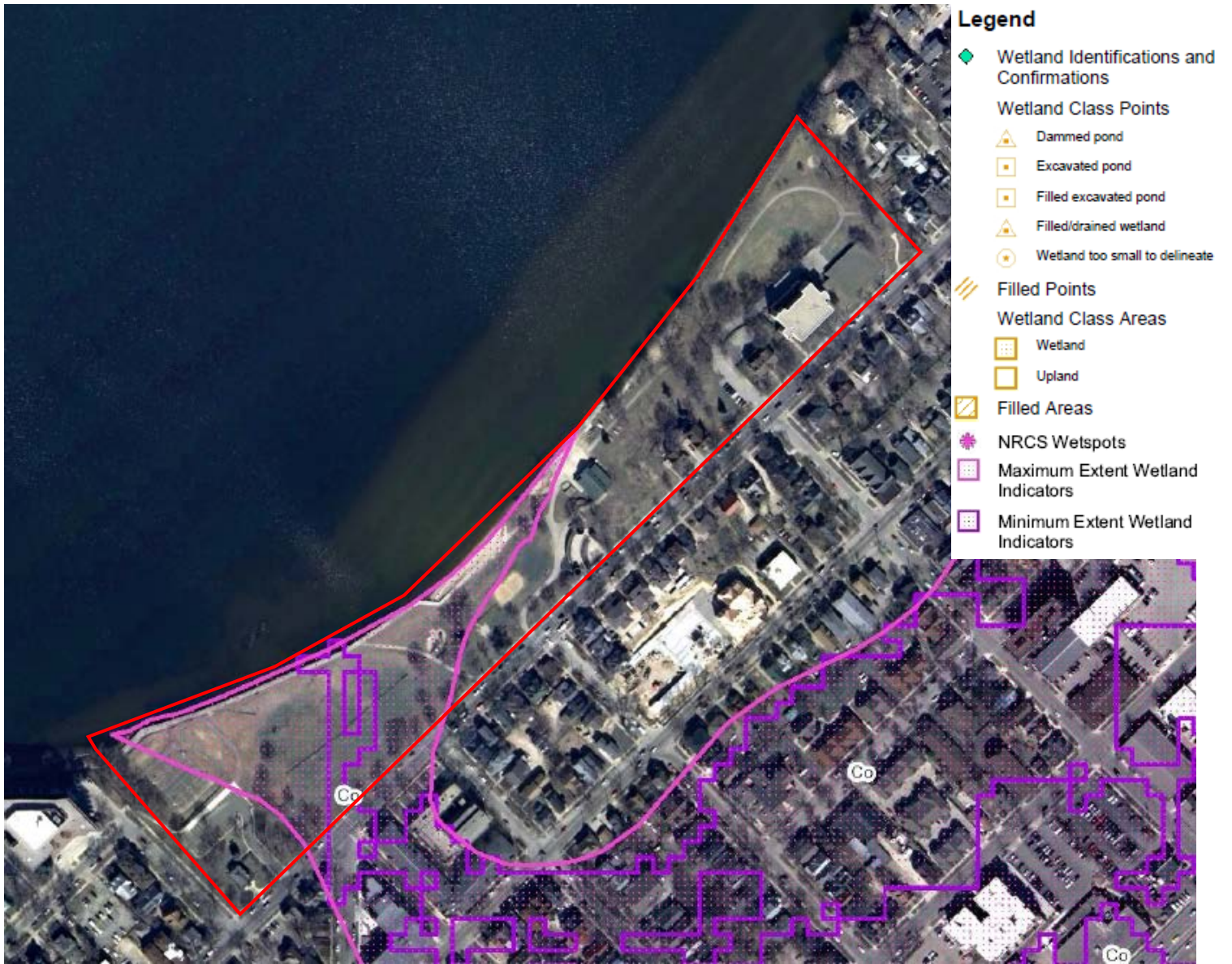


Source: NRCS Web Soil Survey, 2018



Map Unit Symbol	Map Unit Name
Co	Colwood silt loam, 0-2%
DnB	Dodge silt loam, 2-6%
KdD2	Kidder loam, 12-20%, eroded
MdC2	McHenry silt loam, 6-12%, eroded
W	Water

FIGURE 3. SOIL SURVEY MAP



Source: WIDNR Surface Water Data Viewer, 2018

500 feet

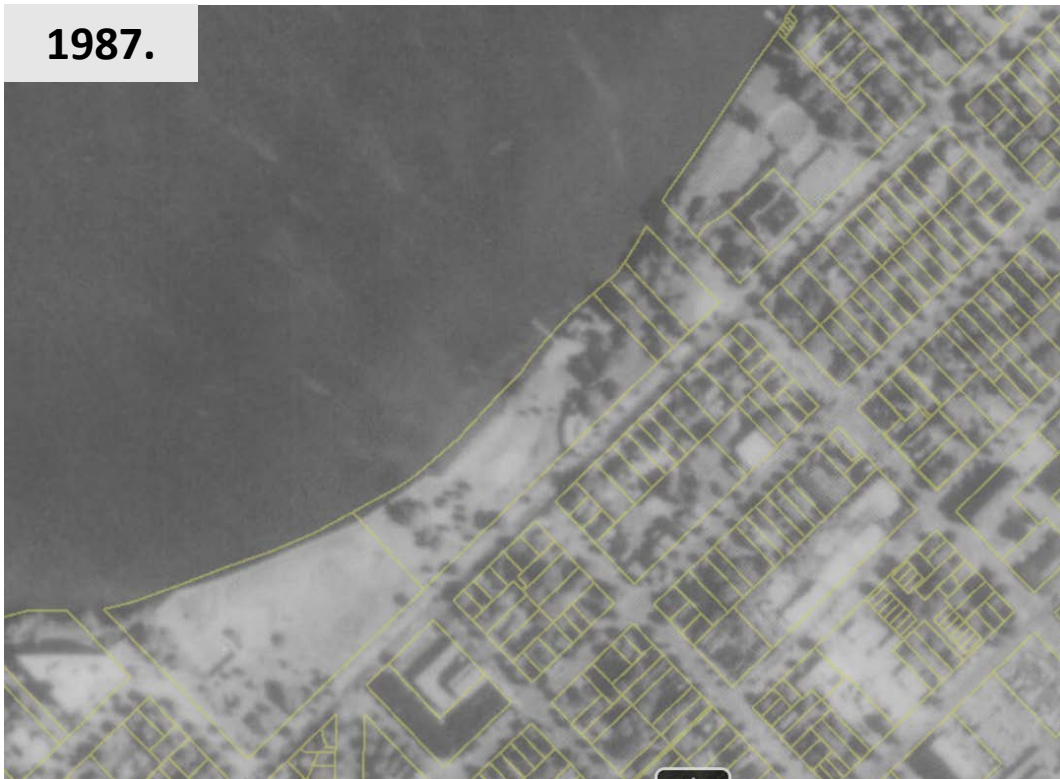
north

FIGURE 4. WWI MAP

1957.

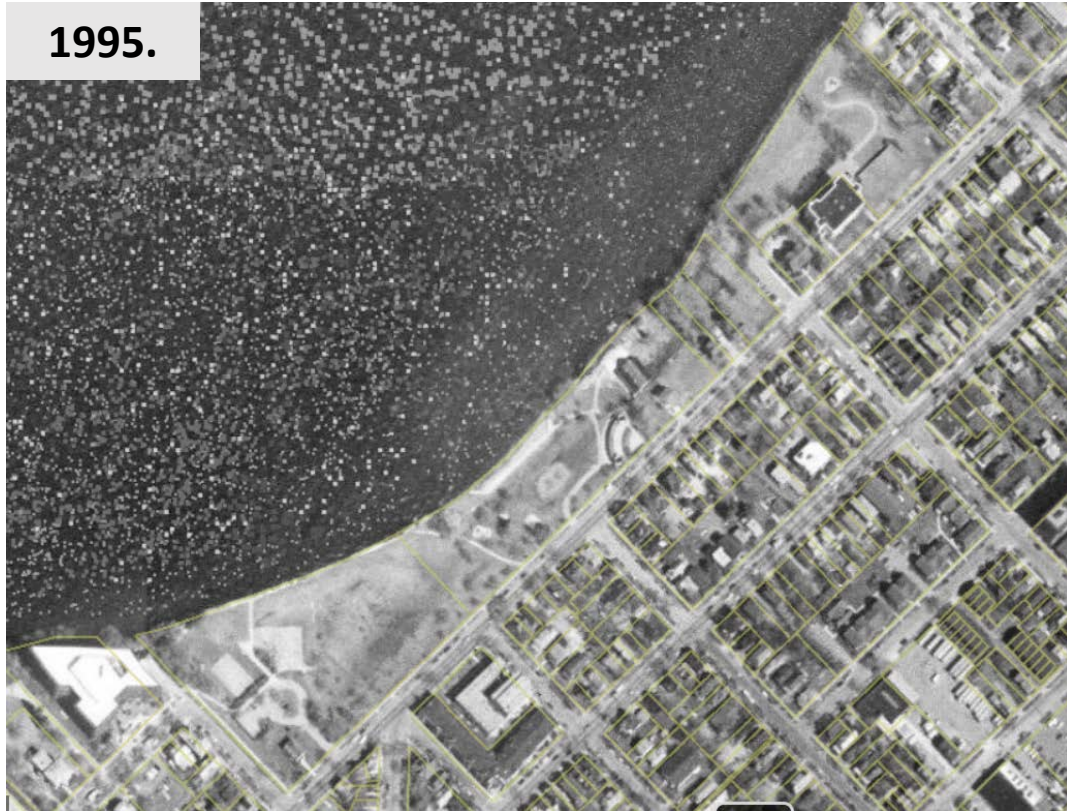


1987.



Source: Dane County DCiMap 3.1, 2018

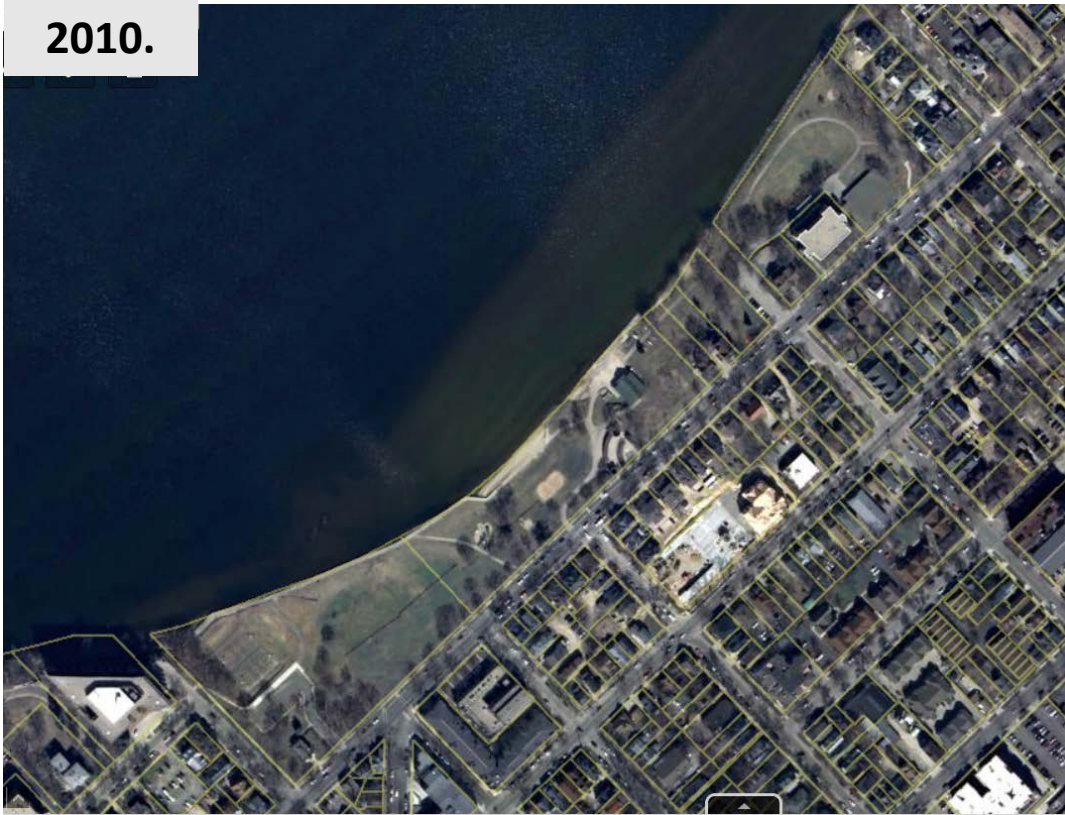
FIGURE 5. HISTORIC AERIAL PHOTOS



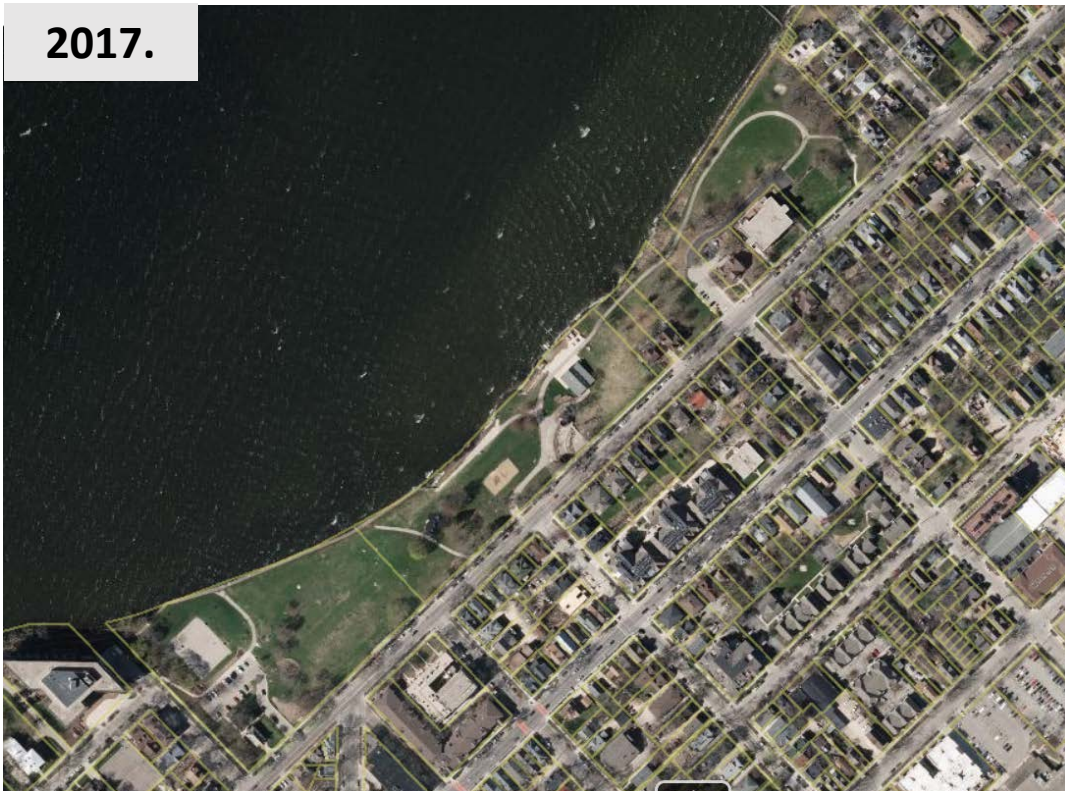
Source: Dane County DCiMap 3.1, 2018

FIGURE 5. HISTORIC AERIAL PHOTOS

2010.



2017.



Source: Dane County DCiMap 3.1, 2018

FIGURE 5. HISTORIC AERIAL PHOTOS



The majority of the shoreline is lined with a concrete wall.



The northeastern half of the shoreline is lined with large boulders on a steep slope.



The sample point taken in the Colwood hydric soil is mowed lawn.



The soils at this sample point appears to be fill material.



The southwest corner of the property has a small wetland along the shoreline.



The wetland is located at the water's edge, with rock riprap occurring above the wetland boundary.



A constructed detention basin contains wetland vegetation.



The soils were also hydric within the basin.

FIGURE 7. WETLAND BOUNDARY MAP



Client Address
 SAIKI DESIGN INC.
 1110 S. PARK ST.
 MADISON, WI 53715

Project Address

WETLAND BOUNDARY MAP
JAMES MADISON PARK
 614 E. GORHAM ST, MADISON WI

Exhibit
FIGURE 8
 Project 18-101
 Date 05-24-2018
 Drawn by KAS
 Sheet **W1.0**

HELIANTHUS
 HELIANTHUS LLC
 247 W. FRESHWATER
 WAY, SUITE 210
 MILWAUKEE, WI 53204

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: James Madison Park City/County: Madison/Dane Sampling Date: 05-07-2018
 Applicant/Owner: City of Madison State: WI Sampling Point: 1
 Investigator(s): K. Sherfinski Section, Township, Range: S13 & 14, T7N, R9E
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): concave
 Slope (%): 0-2% Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Dodge silt loam (DnB) NWI Classification: None
 Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
 Are vegetation _____, soil X, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="text-align: center;">Precipitation levels are drier than normal for this time of year, though there had been a recent rain event on site. The wetland soils occur over the top of rock riprap fill.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)
Indicators of wetland hydrology present? <u>Y</u>		Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____ _____
Remarks: The data point is located along the lakeshore edge. The actual point itself is not under water, but surface water is present nearby due to the lake.		

VEGETATION - Use scientific names of plants

Sampling Point: 1

Tree Stratum					50/20 Thresholds		
Plot Size (30ft radius)		Absolute % Cover	Dominant Species	Indicator Status		20%	50%
1	<i>Salix nigra</i>	50	Y	OBL	Tree Stratum	12	30
2	<i>Acer negundo</i>	10	N	FAC	Sapling/Shrub Stratum	1	2
3					Herb Stratum	1	2
4					Woody Vine Stratum	1	2
5							
6							
7							
8							
9							
10							
		60	= Total Cover				
Sapling/Shrub Stratum					Dominance Test Worksheet		
Plot Size (30ft radius)		Absolute % Cover	Dominant Species	Indicator Status	Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)		
1	<i>Acer negundo</i>	3		FAC	Total Number of Dominant Species Across all Strata: <u>1</u> (B)		
2					Percent of Dominant Species that are OBL, FACW, or FAC: <u>100.00%</u> (A/B)		
3							
4							
5							
6							
7							
8							
9							
10							
		3	= Total Cover				
Herb Stratum					Prevalence Index Worksheet		
Plot Size (5ft radius)		Absolute % Cover	Dominant Species	Indicator Status	Total % Cover of:		
1	<i>Urtica dioica</i>	3		FAC	OBL species	<u>50</u> x 1 =	<u>50</u>
2	<i>Arcium minus</i>	1		FACU	FACW species	<u>0</u> x 2 =	<u>0</u>
3					FAC species	<u>19</u> x 3 =	<u>57</u>
4					FACU species	<u>1</u> x 4 =	<u>4</u>
5					UPL species	<u>0</u> x 5 =	<u>0</u>
6					Column totals	<u>70</u> (A)	<u>111</u> (B)
7					Prevalence Index = B/A =	<u>1.59</u>	
8							
9							
10							
11							
12							
13							
14							
15							
		4	= Total Cover				
Woody Vine Stratum					Hydrophytic Vegetation Indicators:		
Plot Size (30ft radius)		Absolute % Cover	Dominant Species	Indicator Status	Rapid test for hydrophytic vegetation		
1	<i>Vitis riparia</i>	3		FAC	<input checked="" type="checkbox"/> Dominance test is >50%		
2					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
3					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
4					Problematic hydrophytic vegetation* (explain)		
5					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
		3	= Total Cover				
Remarks: (Include photo numbers here or on a separate sheet)					Definitions of Vegetation Strata:		
Scrub-shrub vegetation along the edge of the lake.					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					Sapling/shrub - Woody plants less than 3 in. DBH and greater than 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? <u>Y</u>		

SOIL

Sampling Point: 1

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-4	10YR 2/1	75					loamy sand	mixed matrix
	10YR 5/3	25						organic material present

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

<p>Hydric Soil Indicators:</p> <p> <input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) </p>	<p>Indicators for Problematic Hydric Soils:</p> <p> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) </p>
<p> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) <input checked="" type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) </p>	

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

Restrictive Layer (if observed): Type: <u>Rip rap</u> Depth (inches): <u>4</u>	Hydric soil present? <u>Y</u>
--	--------------------------------------

Remarks:
 Problematic hydric soils. A dark surface layer with organic material over the top of riprap.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: James Madison Park City/County: Madison/Dane Sampling Date: 05-07-2018
 Applicant/Owner: City of Madison State: WI Sampling Point: 2
 Investigator(s): K. Sherfinski Section, Township, Range: S13 & 14, T7N, R9E
 Landform (hillslope, terrace, etc.): constructed basin Local relief (concave, convex, none): concave
 Slope (%): 0-2% Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Colwood silt loam (Co) NWI Classification: None
 Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>Y</u> Indicators of wetland hydrology present? <u>Y</u>	Is the sampled area within a wetland? <u>Y</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">Precipitation levels are drier than normal for this time of year, though there had been a recent rain event on site. Area is a constructed basin.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>11</u> (includes capillary fringe)		Indicators of wetland hydrology present? <u>Y</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: <p style="margin-left: 40px;">The data point is located in a depression.</p>		

VEGETATION - Use scientific names of plants

Sampling Point: 2

Tree Stratum	Plot Size (30ft radius)	Absolute % Cover	Dominant Species	Indicator Status	50/20 Thresholds		
1 _____					Tree Stratum	20% 0	50% 0
2 _____					Sapling/Shrub Stratum	1	2
3 _____					Herb Stratum	22	56
4 _____					Woody Vine Stratum	0	0
5 _____					Dominance Test Worksheet		
6 _____					Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)		
7 _____					Total Number of Dominant Species Across all Strata: <u>4</u> (B)		
8 _____					Percent of Dominant Species that are OBL, FACW, or FAC: <u>75.00%</u> (A/B)		
9 _____					Prevalence Index Worksheet		
10 _____		0 = Total Cover			Total % Cover of:		
					OBL species <u>20</u> x 1 = <u>20</u>		
					FACW species <u>33</u> x 2 = <u>66</u>		
					FAC species <u>20</u> x 3 = <u>60</u>		
					FACU species <u>38</u> x 4 = <u>152</u>		
					UPL species <u>3</u> x 5 = <u>15</u>		
					Column totals <u>114</u> (A) <u>313</u> (B)		
					Prevalence Index = B/A = <u>2.75</u>		
					Hydrophytic Vegetation Indicators:		
					Rapid test for hydrophytic vegetation		
					<input checked="" type="checkbox"/> Dominance test is >50%		
					<input checked="" type="checkbox"/> Prevalence index is ≤3.0*		
					Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)		
					Problematic hydrophytic vegetation* (explain)		
					*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
					Definitions of Vegetation Strata:		
					Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
					Sapling/shrub - Woody plants less than 3 in. DBH and greater than 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? <u>Y</u>		
					Remarks: (Include photo numbers here or on a separate sheet)		
					Constructed stormwater basin planted with wetland plant species.		

SOIL

Sampling Point: 2

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 2/1	100					clay loam	
6-18	10YR 2/1	97	10YR 4/4	3	C	M	sandy clay loam	

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

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (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)

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- 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)

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

Restrictive Layer (if observed):
 Type: Gravel substrate
 Depth (inches): 17

Hydric soil present? Y

Remarks:
 Gravel substrate at bottom of pit.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: James Madison Park City/County: Madison/Dane Sampling Date: 05-07-2018
 Applicant/Owner: City of Madison State: WI Sampling Point: 3
 Investigator(s): K. Sherfinski Section, Township, Range: S13 & 14, T7N, R9E
 Landform (hillslope, terrace, etc.): slight saddle Local relief (concave, convex, none): concave
 Slope (%): 2% Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Colwood silt loam (Co) NWI Classification: None
 Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
 Are vegetation X, soil X, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> N </u> Hydric soil present? <u> N </u> Indicators of wetland hydrology present? <u> N </u>	Is the sampled area within a wetland? <u> N </u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">Precipitation levels are drier than normal for this time of year, though there had been a recent rain event on site. Mowed lawn over fill material.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes _____ No <u> X </u> Depth (inches): _____ Water table present? Yes _____ No <u> X </u> Depth (inches): _____ Saturation present? Yes _____ No <u> X </u> Depth (inches): _____ (includes capillary fringe)
Indicators of wetland hydrology present? <u> N </u>		Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <hr/> Remarks: <p style="margin-left: 40px;">The soil pit was dry.</p>

VEGETATION - Use scientific names of plants

Sampling Point: 3

Tree Stratum	Plot Size (30ft radius)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		<u>0</u>	=	Total Cover

Sapling/Shrub Stratum	Plot Size (30ft radius)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		<u>0</u>	=	Total Cover

Herb Stratum	Plot Size (5ft radius)	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Poa pratensis</i>	80	Y	FACU
2	<i>Trifolium repens</i>	20	N	FACU
3	<i>Veronica arvensis</i>	10	N	FACU
4	<i>Plantago major</i>	3	N	FACU
5	<i>Taraxacum officinale</i>	2	N	FACU
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		<u>115</u>	=	Total Cover

Woody Vine Stratum	Plot Size (30ft radius)	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		<u>0</u>	=	Total Cover

50/20 Thresholds

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	23	58
Woody Vine Stratum	0	0

Dominance Test Worksheet

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

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 0.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	<u>0</u> x 1 =	<u>0</u>
FACW species	<u>0</u> x 2 =	<u>0</u>
FAC species	<u>0</u> x 3 =	<u>0</u>
FACU species	<u>115</u> x 4 =	<u>460</u>
UPL species	<u>0</u> x 5 =	<u>0</u>
Column totals	<u>115</u> (A)	<u>460</u> (B)
Prevalence Index = B/A =	<u>4.00</u>	

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 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? N

Remarks: (Include photo numbers here or on a separate sheet)
 Mowed lawn on compacted soils. Some bare areas due to compaction.

SOIL

Sampling Point: 3

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 3/2	100					silt loam	
6-13	10YR 3/2	75	10YR 5/4	2	C	PL	silt loam	w/small trash fragments
	10YR 4/3	25						

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

**Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histisol (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:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- 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)

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

Restrictive Layer (if observed):
 Type: rocky fill
 Depth (inches): 13

Hydric soil present? N

Remarks:

Refusal at 13" due to rocky fill material. Trash bits and mixing in the soil profile is evidence of fill.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: James Madison Park City/County: Madison/Dane Sampling Date: 05-07-2018
 Applicant/Owner: City of Madison State: WI Sampling Point: 4
 Investigator(s): K. Sherfinski Section, Township, Range: S13 & 14, T7N, R9E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____
 Slope (%): 20% Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: McHenry silt loam (MdC2) NWI Classification: None
 Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
 Are vegetation _____, soil X, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>N</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">Precipitation levels are drier than normal for this time of year, though there had been a recent rain event on site. Sample point is located in a patch of vegetation above 15 feet of riprap.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Living Roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled <input type="checkbox"/> Inundation Visible on Aerial <input type="checkbox"/> Soils (C6) <input type="checkbox"/> Imagery (B7) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Sparsely Vegetated Concave <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery <input type="checkbox"/> (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)	Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)
Indicators of wetland hydrology present? <u>N</u>		Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____ _____
Remarks: <p style="margin-left: 40px;">The data point is located on a hillslope and is approximately 15 feet above the lake level.</p>		

VEGETATION - Use scientific names of plants

Sampling Point: 4

Tree Stratum					50/20 Thresholds		
Plot Size (30ft radius)		Absolute % Cover	Dominant Species	Indicator Status	20%	50%	
1	<i>Malus species</i>	2		UPL	1	2	
2	<i>Salix fragilis</i>	2		FAC	1	2	
3					30	74	
4					0	0	
5							
6							
7							
8							
9							
10							
		4	= Total Cover				
Sapling/Shrub Stratum							
Plot Size (30ft radius)		Absolute % Cover	Dominant Species	Indicator Status			
1	<i>Ulmus americana</i>	2		FACW			
2	<i>Fraxinus pennsylvanica</i>	1		FACW			
3							
4							
5							
6							
7							
8							
9							
10							
		3	= Total Cover				
Herb Stratum							
Plot Size (5ft radius)		Absolute % Cover	Dominant Species	Indicator Status			
1	<i>Pastinaca sativa</i>	40	Y	UPL			
2	<i>Solidago altissima</i>	30	Y	FACU			
3	<i>Symphotrichum novae-angliae</i>	20	Y	FACW			
4	<i>Monarda fistulosa</i>	10	N	FACU			
5	<i>Euthamia graminifolia</i>	10	N	FAC			
6	<i>Carex pensylvanica</i>	8	N	UPL			
7	<i>Oenothera biennis</i>	5	N	FACU			
8	<i>Linaria vulgaris</i>	5	N	UPL			
9	<i>Arctium minus</i>	5	N	FACU			
10	<i>Poa pratensis</i>	5	N	FACU			
11	<i>Alliaria petiolata</i>	3	N	FACU			
12	<i>Taraxacum officinale</i>	3	N	FACU			
13	<i>Phalaris arundinacea</i>	3	N	FACW			
14	<i>Asclepia syriaca</i>	1	N	UPL			
15							
		148	= Total Cover				
Woody Vine Stratum							
Plot Size (30ft radius)		Absolute % Cover	Dominant Species	Indicator Status			
1							
2							
3							
4							
5							
		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: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species 0 x 1 = 0

FACW species 26 x 2 = 52

FAC species 12 x 3 = 36

FACU species 61 x 4 = 244

UPL species 56 x 5 = 280

Column totals 155 (A) 612 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators:

Rapid test for hydrophytic vegetation

Dominance test is >50%

Prevalence index is ≤3.0*

Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub - Woody plants less than 3 in. DBH and greater than 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? N

Remarks: (Include photo numbers here or on a separate sheet)
Scrub-shrub upland.

SOIL

Sampling Point: 4

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-6	10YR 3/2	100					loam	
6-12	10YR 3/2	77	10YR 4/4	3	C	M	clay loam	
	10YR 4/3	20						

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

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (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**)
- 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)

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- 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)

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

Restrictive Layer (if observed):
 Type: Large rocks
 Depth (inches): 12

Hydric soil present? N

Remarks:
 Refusal at 12 inches due to large rip rap rocks.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: James Madison Park City/County: Madison/Dane Sampling Date: 05-07-2018
 Applicant/Owner: City of Madison State: WI Sampling Point: 5
 Investigator(s): K. Sherfinski Section, Township, Range: S13 & 14, T7N, R9E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____
 Slope (%): 12-18% Lat.: _____ Long.: _____ Datum: _____
 Soil Map Unit Name: Dodge silt loam (DnB) NWI Classification: None
 Are climatic/hydrologic conditions of the site typical for this time of the year? N (If no, explain in remarks)
 Are vegetation _____, soil X, or hydrology _____ significantly disturbed? Are "normal
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? circumstances" present? No
 (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Y</u> Hydric soil present? <u>N</u> Indicators of wetland hydrology present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <p style="margin-left: 40px;">Precipitation levels are drier than normal for this time of year, though there had been a recent rain event on site. Rock riprap of 18-24" stones.</p>	

HYDROLOGY

Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Microtopographic Relief (D4)
Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): _____ Water table present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Indicators of wetland hydrology present? <u>N</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 		
Remarks: <p style="margin-left: 40px;">The data point is located on a hillslope in a patch of riprap approximately 2 feet in elevation above the wetland.</p>		

VEGETATION - Use scientific names of plants

Sampling Point: 5

Tree Stratum					50/20 Thresholds		
Plot Size (30ft radius)	Absolute % Cover	Dominant Species	Indicator Status				
1 <i>Celtis occidentalis</i>	10	Y	FAC		Tree Stratum	3	8
2 <i>Acer platanoides</i>	5	Y	UPL		Sapling/Shrub Stratum	0	0
3 _____	_____	_____	_____	_____	Herb Stratum	7	18
4 _____	_____	_____	_____	_____	Woody Vine Stratum	1	2
5 _____	_____	_____	_____	_____	Dominance Test Worksheet		
6 _____	_____	_____	_____	_____	Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A)		
7 _____	_____	_____	_____	_____	Total Number of Dominant Species Across all Strata: <u>8</u> (B)		
8 _____	_____	_____	_____	_____	Percent of Dominant Species that are OBL, FACW, or FAC: <u>37.50%</u> (A/B)		
9 _____	_____	_____	_____	_____	Prevalence Index Worksheet		
10 _____	15 = Total Cover	_____	_____	_____	Total % Cover of:		
					OBL species <u>0</u> x 1 = <u>0</u>		
					FACW species <u>5</u> x 2 = <u>10</u>		
					FAC species <u>18</u> x 3 = <u>54</u>		
					FACU species <u>25</u> x 4 = <u>100</u>		
					UPL species <u>5</u> x 5 = <u>25</u>		
					Column totals <u>53</u> (A) <u>189</u> (B)		
					Prevalence Index = B/A = <u>3.57</u>		
Sapling/Shrub Stratum							
Plot Size (30ft radius)	Absolute % Cover	Dominant Species	Indicator Status				
1 _____	_____	_____	_____	_____			
2 _____	_____	_____	_____	_____			
3 _____	_____	_____	_____	_____			
4 _____	_____	_____	_____	_____			
5 _____	_____	_____	_____	_____			
6 _____	_____	_____	_____	_____			
7 _____	_____	_____	_____	_____			
8 _____	_____	_____	_____	_____			
9 _____	_____	_____	_____	_____			
10 _____	0 = Total Cover	_____	_____	_____			
Herb Stratum							
Plot Size (5ft radius)	Absolute % Cover	Dominant Species	Indicator Status				
1 <i>Poa pratensis</i>	10	Y	FACU		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid test for hydrophytic vegetation <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤3.0* <input type="checkbox"/> Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic hydrophytic vegetation* (explain) *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
2 <i>Impatiens capensis</i>	5	Y	FACW				
3 <i>Taraxacum officinale</i>	5	Y	FACU				
4 <i>Geum canadense</i>	5	Y	FAC				
5 <i>Arctium minus</i>	5	Y	FACU				
6 <i>Ageratina altissima</i>	5	Y	FACU				
7 _____	_____	_____	_____	_____	Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 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.		
8 _____	_____	_____	_____	_____			
9 _____	_____	_____	_____	_____			
10 _____	_____	_____	_____	_____			
11 _____	_____	_____	_____	_____			
12 _____	_____	_____	_____	_____			
13 _____	_____	_____	_____	_____			
14 _____	_____	_____	_____	_____			
15 _____	35 = Total Cover	_____	_____	_____			
Woody Vine Stratum							
Plot Size (30ft radius)	Absolute % Cover	Dominant Species	Indicator Status				
1 <i>Vitis riparia</i>	3	_____	FAC		Hydrophytic vegetation present? <u>Y</u>		
2 _____	_____	_____	_____	_____			
3 _____	_____	_____	_____	_____			
4 _____	_____	_____	_____	_____			
5 _____	3 = Total Cover	_____	_____	_____			

Remarks: (Include photo numbers here or on a separate sheet)
 The trees were planted landscape trees.

SOIL

Sampling Point: 5

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-1	10YR 2/1	100					loam	

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

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|---|--|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

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

Restrictive Layer (if observed): Type: <u>Solid rock/gravel fill</u> Depth (inches): <u>1</u>	Hydric soil present? <u>N</u>
---	--------------------------------------

Remarks:
 Refusal at 1" due to solid rock and gravel fill.