.500 W. MAIN STREET
PO BOX 100
WAUNAKEE WI 53597
608-850-8500
FAX 608-849-5628
WWW.WAUNAKEE.COM/VILLAGE



July 17, 2017

Larry Palm, Executive Chairperson - Capital Area Regional Planning Commission City County Building - Room 362 210 Martin Luther King Jr. Blvd.

Madison WI 53703

RE: Amendment of the Water Quality Management Plan for Dane County to revise Environmental Corridor Boundaries near the new Waunakee Public Library

Dear Mr. Palm:

The Village of Waunakee has been working for the past eight years to clean up and redevelop a 6.34-acre former industrial site adjoining a Village park, one block north of Main Street. When Waunakee Alloy Casting Corporation closed in 2009 after more than 60 years in operation as a metal foundry and casting company, it left a legacy of soil contamination and vacant buildings. With help from the USEPA to remove mercury and PCB contaminants, and with assistance from Dane County to clear the site, it is now ready for its next life as home of the new Waunakee Public Library.

This site for the new library is ideally located contiguous with McWatty Park, a 2.1-acre neighborhood park adjoining Six Mile Creek at the east end of our historic downtown business district. We propose to integrate and improve both sites, as illustrated in the enclosed materials, to achieve the following benefits:

- An exceptional natural and civic amenity to enhance the success of our Central Business District, including recent and future new residential units in our downtown area
- Walking, biking and vehicle access to the library from both N. Madison St. and Pleasant Dr., to optimize access and user safety from both directions
- Completion of a segment in a planned off-street trail along Six Mile
 Creek through the Village, connecting more neighborhoods with a safe walking route
- Restoration of approximately 1,300 linear feet of Six Mile Creek to restore natural stream hydrology and increase the channel's habitat value while controlling invasive species
- Restoration of shoreland buffer strips near the Creek, replacing turf grass with native prairie and wetland species that can slow, filter and cool runoff from impervious surfaces before it reaches the Creek
- Removal of an underutilized basketball court and replacement of an aging playground

500 W. MAIN STREET

PO BOX 100

WAUNAKEE WI 53597

608-850-8500

FAX 608-849-5628

WWW.WAUNAKEE.COM/VILLAGE



With this application the Village respectfully requests amendment to the Water Quality Management Plan for Dane County to remove and alter area from the mapped Environmental Corridor. Access to Pleasant Dr. requires a driveway through McWatty Park on land occupied by the basketball court and playground, both of which are currently within the mapped Environmental Corridor. There will be a net increase in impervious surface within this area. The grading will allow all runoff from the impervious surface to be conveyed to stormwater facilities prior to release to Six Mile Creek. This includes the offstreet path that is within the environmental corridor. The Village is confident that the other vegetative improvements in and near the Creek throughout the two properties will result a net improvement in water quality to the water shed.

The Village is very excited about this proposed enhancement to our community. Please contact me if you have any questions or concerns about this request.

Sincerely,

Todd J. Schmidt, Village Administrator

Village of Waunakee



July 17, 2017

Mike Rupiper Capital Area Regional Planning Commission 210 Martin Luther King Jr. Blvd. Room 362 Madison, WI 53703

RE: Waunakee Library – Major Amendment to Environmental Corridor

Dear Mr. Rupiper:

Thanks again for your assistance with the proposed Waunakee Library slated for construction on the former Waunakee Alloy Site. Your visit and walk through on June 1st was very helpful for the Village, Library Board, and AE Team. Since then, we have made significant progress on our design.

In order to complete necessary improvements, we are requesting a Major Amendment to the Environmental Corridor in order to perform the following actions:

- Grading within 30' of wetlands
- Impervious areas within 75' of wetlands
- Filling in of wetlands

In support of this request, the following documents are enclosed with this letter:

- 1. Existing Site Plan Aerial
- 2. Existing Site Survey
- 3. Existing Site Photographs
- 4. Proposed Site Plan Color
- 5. Proposed Site Plan Environmental Setbacks
- 6. Proposed Grading Plan
- 7. Concept Stormwater Management Plan
- 8. Wetland Delineation Report
- 9. Trail Connectivity

In addition to the material listed above, I'd like to draw attention to some specific aspects of how this project will benefit the objectives set forth by the Capital Regional Planning Commission to protect water quality in Dane County.

• Contaminated Site Cleanup

The site at 201 North Madison Street currently houses the former Waunakee Alloy plant. The Village purchased this brownfield site to redevelop it for the library. The Village has retained consultants for clean up, mitigation, and/or removal of existing hazardous materials and structures. The site will become an extension of the existing adjacent McWatty Park and the recreational and multi-use path corridor proposed along Six Mile Creek.

The development of this corridor will incorporate a recreational trail for cyclists, walkers, and joggers following Six Mile Creek. The trail is intended to connect with future trail extensions to the east and west of the library site. The northeastern area of the site will accommodate relocation of the existing McWatty Park playground.

• Stormwater Quality, Infiltration, and Peak Flow

Redevelopment of the property will require that stormwater management facilities be incorporated into the site. A green roof along with two bioretention areas will meet the required total suspended solids removal and oil and grease treatment needed for this site. Although not required, peak flow and infiltration will also naturally occur within these facilities. On the south side of the creek, the proposed parking lot will be designed with stormwater facilities that will fulfill the requirements for new development. This will be a large improvement over existing conditions, which direct stormwater runoff into the creek without treatment.

• Increase of Open Space

The proposed site improvements will decrease the amount of imperviousness on the site from approximately 46% to 36%. The increase in the pervious area is over 36,000 square feet. The change of vegetation of turf grass to a vegetative buffer of native plantings along the creek will also increase the value of the pervious space.

• Trail Connectivity

The property to be developed has been part of planning documents for connectivity of multi-use trails since at least 2005. This redevelopment will provide a major connection point of 900' of trail that will be used by village residents to access the library, the nearby Prairie Elementary School, and adjacent neighborhoods.

• Landscaping Improvements

Responding to site conditions and the existing environment, the design intent is to provide a low impact development (LID) that will utilize landscaped areas to slow, treat,

and infiltrate stormwater runoff before it reaches the edges of Six Mile Creek. The landscape design will provide a mixture of systems within the larger site including:

- Vegetation mitigation and restoration along the banks of Six Mile Creek
- A prairie buffer between the creek bank, recreational trail, and park's setting beyond the site
- Bioretention structures that collect, retain, and infiltrate stormwater
- Mowed lawns adjacent to and surrounding the library, parking, and drive to create recreational areas for the larger park setting
- Tree planting at parking areas and appropriate areas around the site for future shade and biodiversity
- Tree screening between the library and existing residential properties along the north and east property boundaries

Plant selection, locations, arrangements, and soil preparation will be appropriately specified for specific function and moisture conditions (wet, dry). Additional considerations will include regional tolerances, non-invasiveness, biodiversity, low maintenance, and appearance.

The vegetative buffer along the creek will be a minimum 20 feet wide and exceed that width along most of the creek. Landscape objectives for the buffer zone include the removal of existing poor quality or invasive trees and the addition of appropriate new plants as follows:

- Trees Create an upper canopy to provide habitat for birds and other wildlife and shade for wetlands
- Shrubs Create a mid-story of vegetation to provide food and cover for wildlife and help prevent erosion
- Herbaceous Plants Create an understory and include ferns, wildflowers, and various groundcover plants

• Sustainability and High Performance Building Systems

The approximate 40,000 square foot, two-story Waunakee Public Library is designed with energy efficiency and environmental sustainability in mind. An integrative design process will be used on this facility to support high-performance, cost-effective project outcomes. This integrated design process will bring the whole team to the table early on in the project to highlight opportunities, set goals, and establish roles and responsibilities for the team throughout design, construction, and into the occupancy period of the new building.

The project team will take the following steps in the Design Development phase to establish a high performance, cost-effective project:

- Building systems coordination meeting
- Site design coordination meeting
- Conceptual Energy Model
- Conceptual Daylighting Model

This process includes an early analysis of the interrelationships between building systems. Envelope requirements for the library include access to natural light and views, energy efficiency, and durability.

Key components of this concept are:

- A high Window to Wall Ratio (WWR)
- Clear, high-performance glass to preserve view and daylight qualities (minimal tinting)
- Exterior overhangs and a louver system to control solar gain and reduce glare
- Varying depths of field (moderate to high) for outdoors views
- Design that enhances views into and out of the space
- Low impact development integrated into the site design
- Exterior public spaces into the park and environmental corridor setting
- Biodiverse landscaping with tree, prairie, and wetland plantings
- Conveying a sense of time and weather (seasonality of landscape)
- Leveraging various intensities of light and shadow that change over time to create conditions that occur in nature
 - a. Daylight from multiple angles
 - b. Controlled direct sunlight in appropriate areas
 - c. Diurnal and seasonal light
 - d. Artificial light sources and layers

• Green Roof

The Library is proposed to have a modular green roof system over a portion of the roof (approximately 4,150 square feet). A green roof system requires a high-quality waterproofing and root replant system, drainage system, lightweight growing medium, and plants. Benefits of the green roof include:

- Reduction of impervious surfaces to mitigate stormwater runoff
- Ability to absorb stormwater and release it slowly
- A longer life-span than standard roofs
- Helps cool the membrane and building during summer months

Green roof plantings are selected for aesthetics, drought tolerance, stormwater management, and regional appropriateness. They will include low-growing succulents, particular colorful sedums. Sedums low growth, spreading habits, drought tolerance, seasonal flowers and contrasting

foliage colors, textures and forms. Additionally, an appropriate mix of herbaceous perennials and ornamental grasses may be incorporated into the planting mix.

Please review the attachments provided showing some of the items discussed on the previous pages in graphic form. If you have any questions, comments, or need additional information, please let me know at once. We look forward to your favorable consideration during your review of our request.

Sincerely,

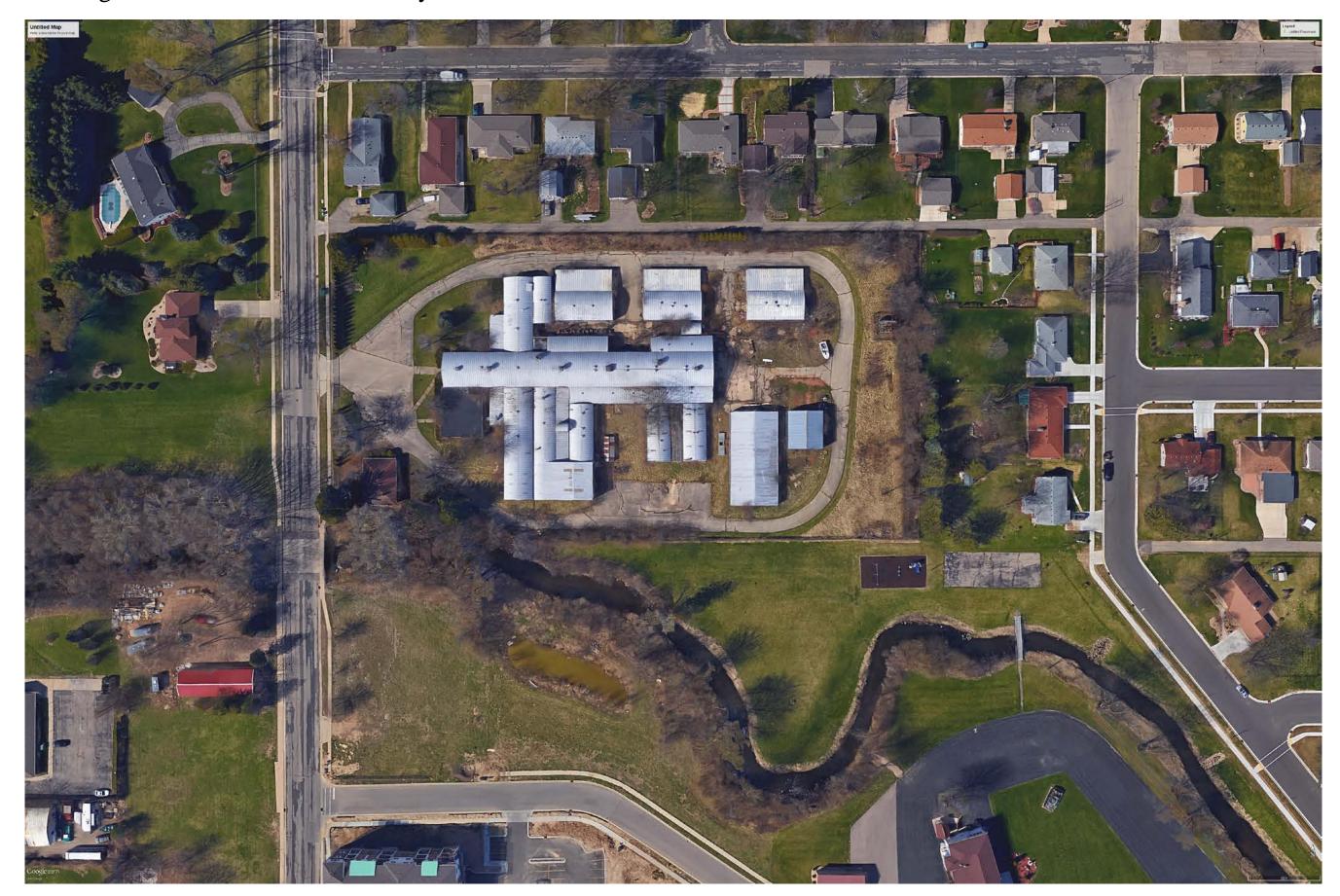
Scott Anderson, P.E.

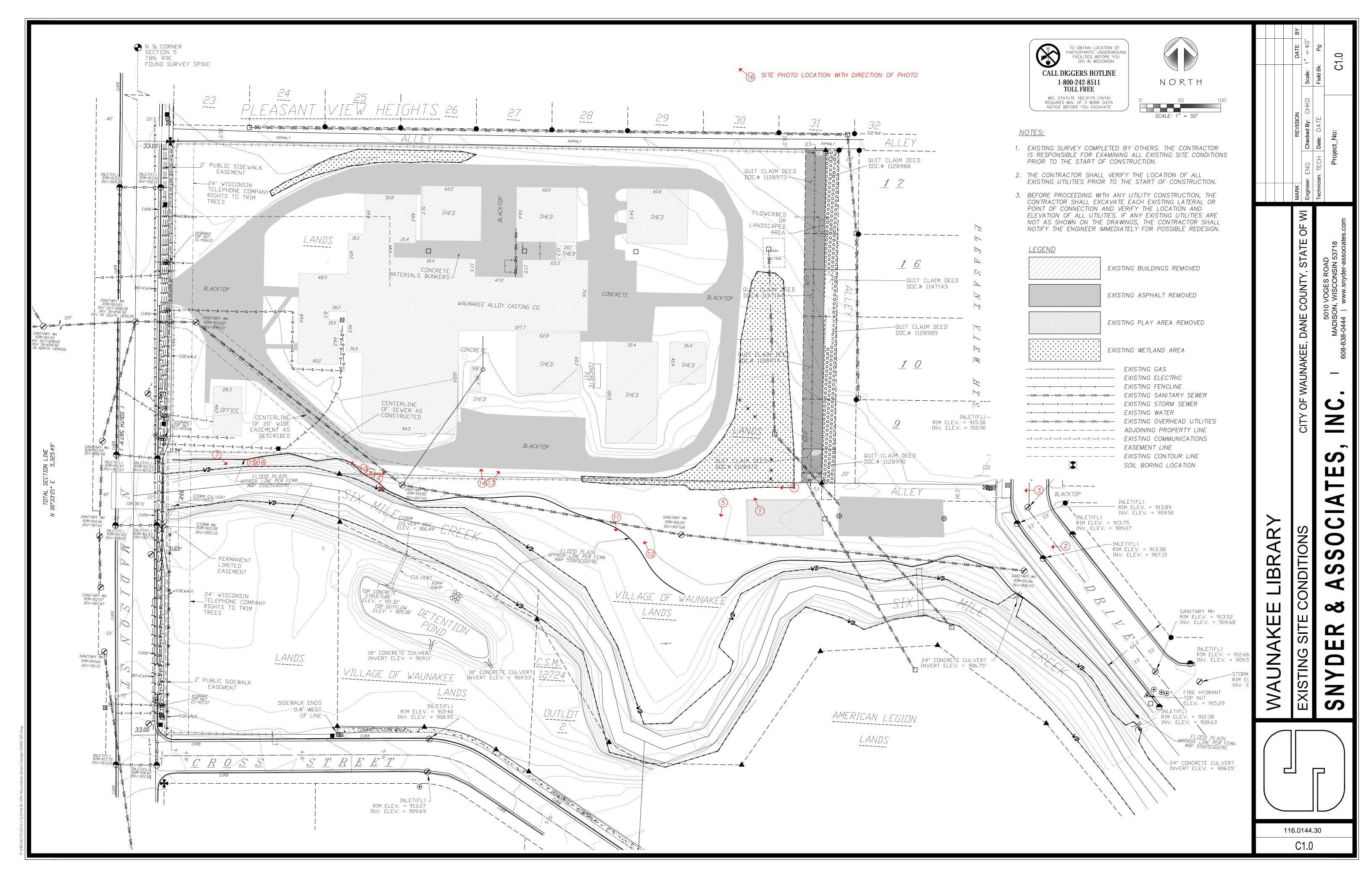
Civil Engineer

SNYDER & ASSOCIATES, INC.

Enclosures

Existing Aerial of the Waunakee Alloy Site





Please see Sheet C1.0 – Existing Site Plan for the location of the following photos below.



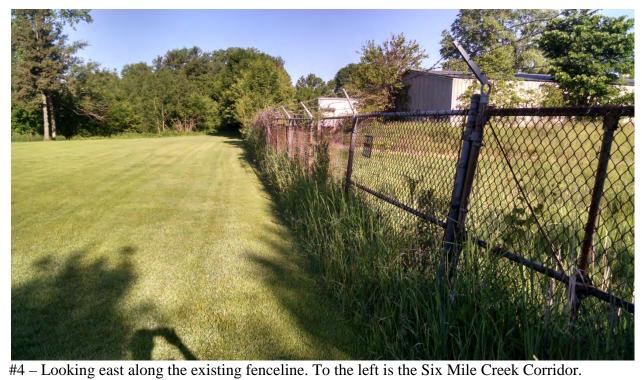
#1 - At Playground area looking inside fence at existing wetland in the southeast corner.



#2 – In Pleasant Drive looking east at McWatty Park.



#3 – Another view from Pleasant Drive looking at McWatty Park.





#5 – Looking to the south at Six Mile Creek at open space.



#7 – Looking at the existing Six Mile Creek corridor.



#8 – At the fenceline looking to the west towards McWatty Park.



#9 – Same spot at previous photo, looking towards the creek.



#10 – Looking west towards Madison Street with creek on left and the site on the right.



Waunakee Alloy Existing Site Photos



#12 – Looking northwest along Six Mile Creek.



#13 – Looking northerly at the site through the fence.



#14 – Looking over the fence into the existing site.



#15 – An example of some of the junk within the Six Mile Creek corridor.

Waunakee Alloy Existing Site Photos



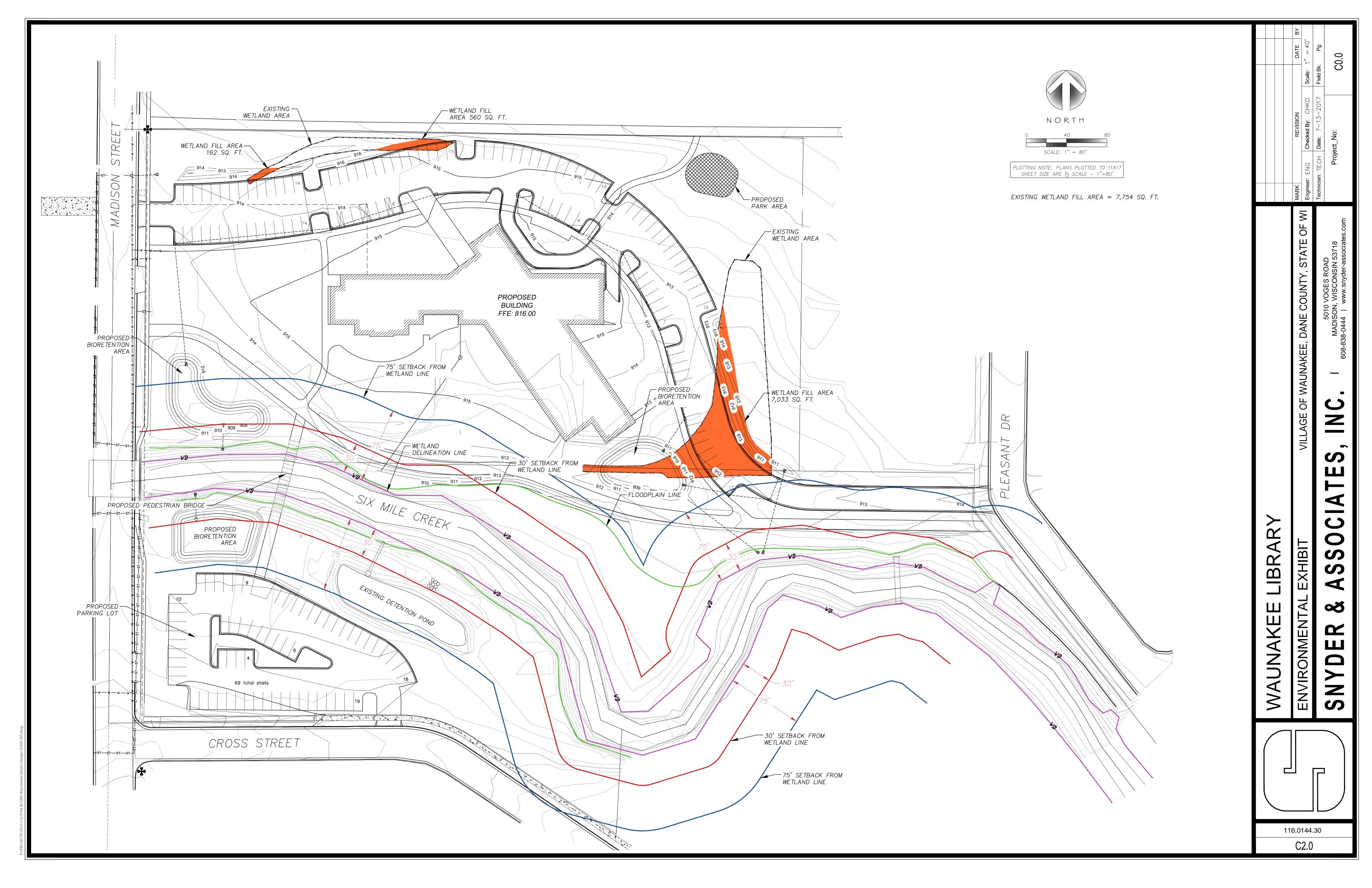
#16 – Another picture showing some junk within Six Mile Creek corridor.

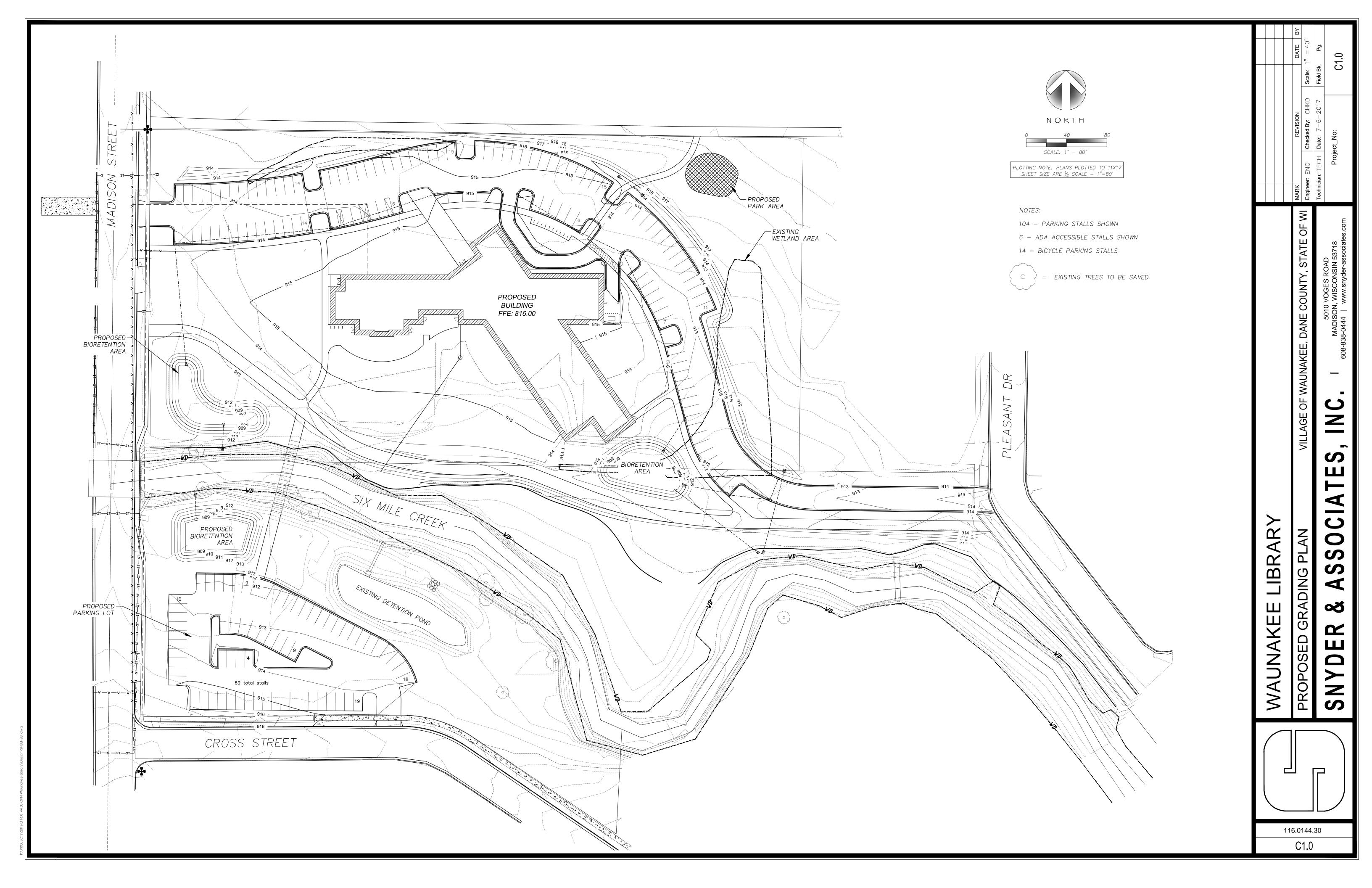


Site Plan: 1" = 40'



WAUNAKEE PUBLIC LIBRARY 2017 June 26







STORMWATER MANAGEMENT REPORT

for

Waunakee Library Alloy Site Redevelopment

Village of Waunakee Dane County, Wisconsin

July 17, 2017
CONCEPT STORMWATER MANAGEMENT PLAN

Prepared by: **Snyder & Associates** 5010 Voges Road Madison, WI 53718 Phone: (608) 838-0444 Prepared for: OPN Architects 301 N. Broom Street #100 Madison, WI 53703

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Water Quality	1
Peak Flows	2
Oil & Grease Control	2
Erosion Control	2
Project Schedule	2
Monitoring and Maintenance	
Storm Sewer Sizing	

APPENDIX A

Project Location Websoil Survey WisDNR Wetland Inventory Map WisDNR Topo Map

APPENDIX B

WinSlamm Areas WinSlamm Data & Outputs

1.0 INTRODUCTION

The proposed project is a new library building at the existing Waunakee Alloy Casting Corporation site located at 201 N. Madison Street in the Village of Waunakee, Dane County, WI. The project site is approximately 6 acres in size and is bounded by Six Mile Creek to the south, a residential alley and residential homes to the north, Madison Street to the west and Pleasant Drive and residential homes to the east. The basis of this report is based on the requirements of the Village of Waunakee and WisDNR Stormwater and Erosion Control Ordinance.

2.0 DESIGN CRITERIA

The proposed site is currently split by Six Mile Creek. The north side of the creek will abide by the redevelopment stormwater standards while the south side will abide by new development standards. Those standards are discussed below.

Based on the Village and WisDNR ordinances and regulations for a redevelopment project the following items were taken into account for the design of the stormwater management facilities for this project:

- 1. Safe passage of the 100-year storm event.
- 2. 40% of total suspended solids removal for water quality.
- 3. Provide oil and grease control.
- 4. Size all storm sewer for the conveyance of the 10-year storm event.

Based on the Village and WisDNR ordinances and regulations for a new development the following items were taken into account for the design of the stormwater management facilities for this project:

- 1. Infiltration of 90% pre to post-development infiltration for the one year average annual rainfall.
- 2. Maintain pre to post-development peak flows for the 1, 2, 5, and 10-year storm events.
- 3. Safe passage of the 100-year storm event.
- 4. 80% of total suspended solids removal for water quality.
- 5. Provide oil and grease control.
- 6. Size all storm sewer for the conveyance of the 10-year storm event.

3.0 INFILTRATION

The north side of the project site is except from infiltration as it is a redevelopment site. The south side parking lot will be designed with a bioretention area to satisfy the infiltration requirements. We are still awaiting soil borings for this area of the project to finalize this design. Ample area has been put aside to design the facilities to meet the regulations.

4.0 WATER QUALITY (TSS REMOVAL)

Three bioretention areas will be utilized throughout the site to meet the total suspended solids removal for the site. The site and bioretention areas were modeled in WinSLAMM with the following results:

East Bioretention Area = 54% TSS Removal West Bioretention Area = 75% TSS Removal South Bioretention Area = 96% TSS Removal Total Site TSS Removal = 65% TSS Removal

These results will be finalized once soil boring data is obtained for the site. A final stormwater management plan presenting this information will be provided to all approving authorities. Please see the Appendix for more information on the conservative assumptions made for the project.

5.0 PEAK FLOW

The north side of the development does not require peak flow control as it is a redevelopment site. the south side parking lot has ample space available to meet the required 1, 2, 10, and 100 year storms as required by the Village of Waunakee and the WisDNR. A final stormwater management plan will include the required calculations for peak flow control.

6.0 OIL & GREASE CONTROL

Oil and grease control will be required for the project site. All parking lot runoff is routed through the bioretention area which provides the necessary oil and grease control.

7.0 EROSION CONTROL

A final erosion control plan will be provided at a later date. Erosion control items that will be used in the site will be:

STONE TRACKING PAD

SILT FENCE

INLET PROTECTION

SEDIMENT BASIN (BIORETNETION AREA POST CONSTRUCTION)

Inspections of the installed erosion control measures and best management practices must be performed weekly and within 24 hours after a precipitation event 0.5 inches or greater which results in runoff. Weekly written reports of all inspections conducted by or for the permittee must be maintained throughout the period of permit coverage by the City of Middleton and the State of Wisconsin.

8.0 PROJECT SCHEDULE

The project schedule is approximate and may completely depend on project approvals, contractor efficiency, and weather.

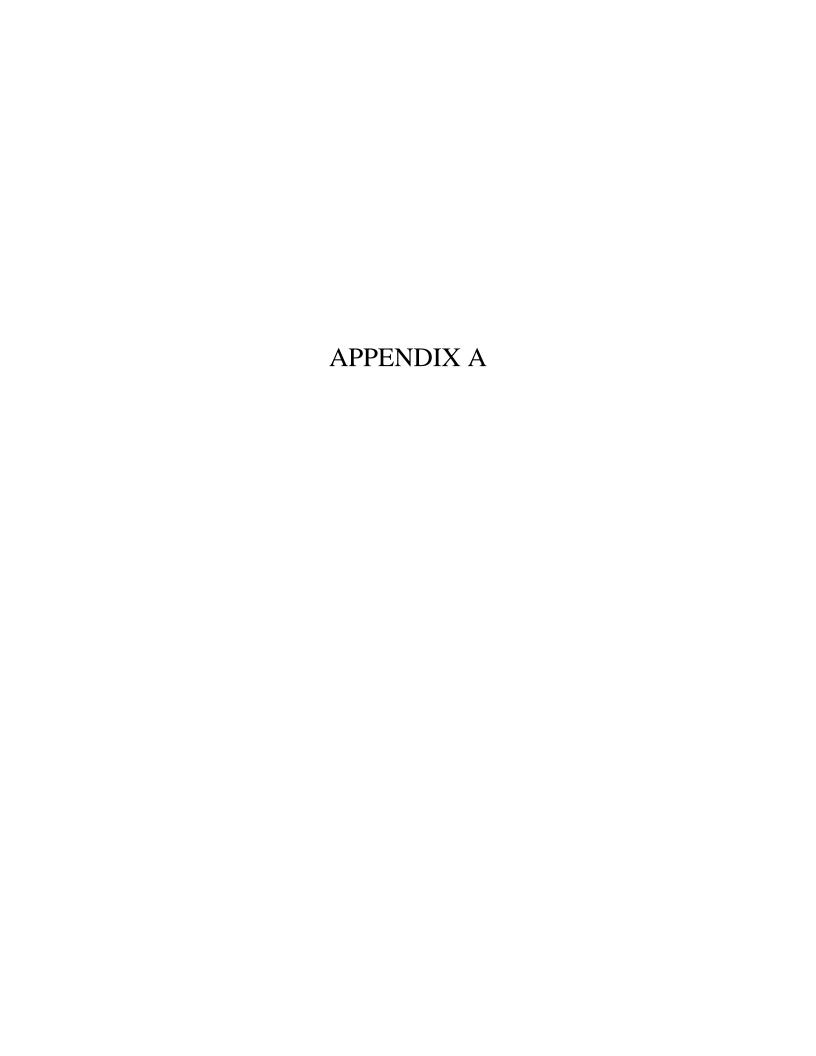
Demolition of Existing Site Fall 2017
Start Construction Spring 2018
Library Open Spring 2019

9.0 MONITORING & MAINTENANCE

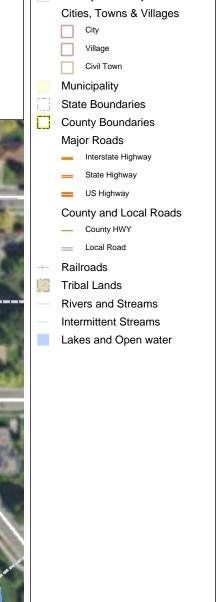
The Property Owner will maintain the facilities after construction is completed. A copy of the maintenance agreement will be included in the final stormwater management plan.

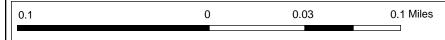
10.0 STORM SEWER SIZING

The proposed storm sewer will be modeled to convey the 10 year storm event.



Legend **Surface Water Data Viewer Map County Boundary** Lat: 43.19418° N Lon: 89.45143° W Hillcrest, Drive Warmakee





NAD_1983_HARN_Wisconsin_TM 1: 1,980

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/legal/

Notes

April Lane

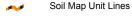
MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Sandy Spot

Severely Eroded Spot

Saline Spot

Sinkhole

Slide or Slip

Sodic Spot

U_.._

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Δ

Streams and Canals

Transportation

+++ Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15.800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dane County, Wisconsin Survey Area Data: Version 15, Sep 27, 2016

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Data not available.

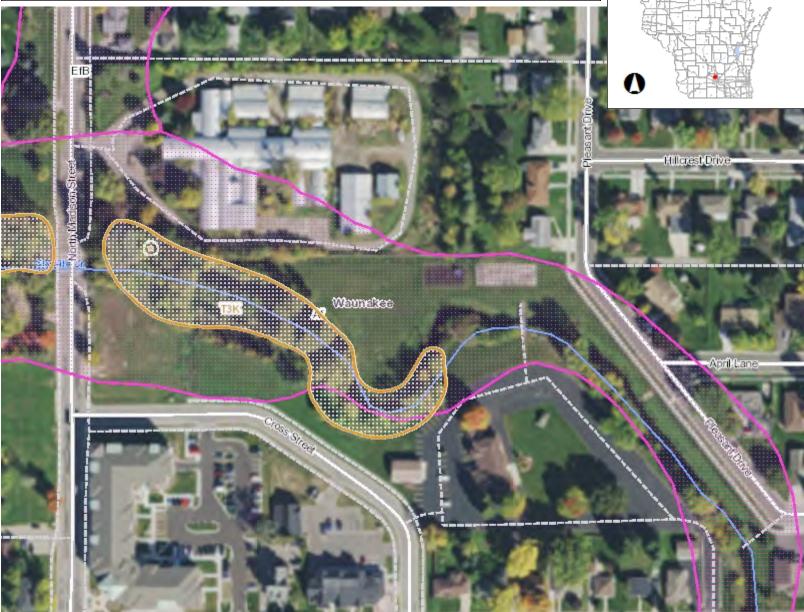
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Dane County, Wisconsin (WI025)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Af	Alluvial land, wet	5.5	62.6%
EfB	Elburn silt loam, 0 to 3 percent slopes	0.3	3.4%
GwC	Griswold loam, 6 to 12 percent slopes	0.3	3.8%
PnB	Plano silt loam, till substratum, 2 to 6 percent slopes	2.7	30.2%
Totals for Area of Interest	,	8.9	100.0%

WSCOSSIN DEPT. OF NATURAL RESOURCES

Surface Water Data Viewer Map



0.1 0 0.03 0.1 Miles

NAD_1983_HARN_Wisconsin_TM 1: 1,980

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Legend

Wetland Class Points

♠ Dammed pond

Excavated pond

Filled excavated pond

Filled/drained wetland

Wetland too small to delineate

Filled Points

Wetland Class Areas

Wetland

Upland

Filled Areas

NRCS Wetspots

Wetland Indicators

County Boundary

Cities, Towns & Villages

City

Village

Civil Town

Municipality

State Boundaries

County Boundaries

Major Roads

Interstate Highway

State Highway

US Highway

County and Local Roads

County HWY

___ Local Road

Railroads

Tribal Lands

Rivers and Streams

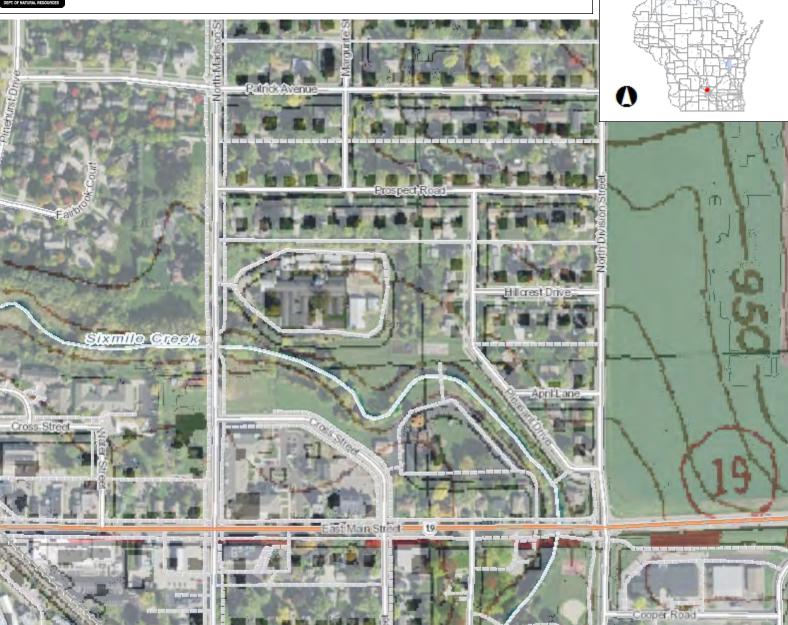
Intermittent Streams

Lakes and Open water

Notes

WISCORDIN DEPT OF NATURAL RESOURCES

Surface Water Data Viewer Map



Legend

County Boundary
Cities, Towns & Villages

Ci

Village

Civil Town

Municipality

State Boundaries

County Boundaries

Major Roads

Interstate Highway

State Highway

US Highway

County and Local Roads

County HWY

___ Local Road

Railroads

Tribal Lands

Rivers and Streams

Intermittent Streams

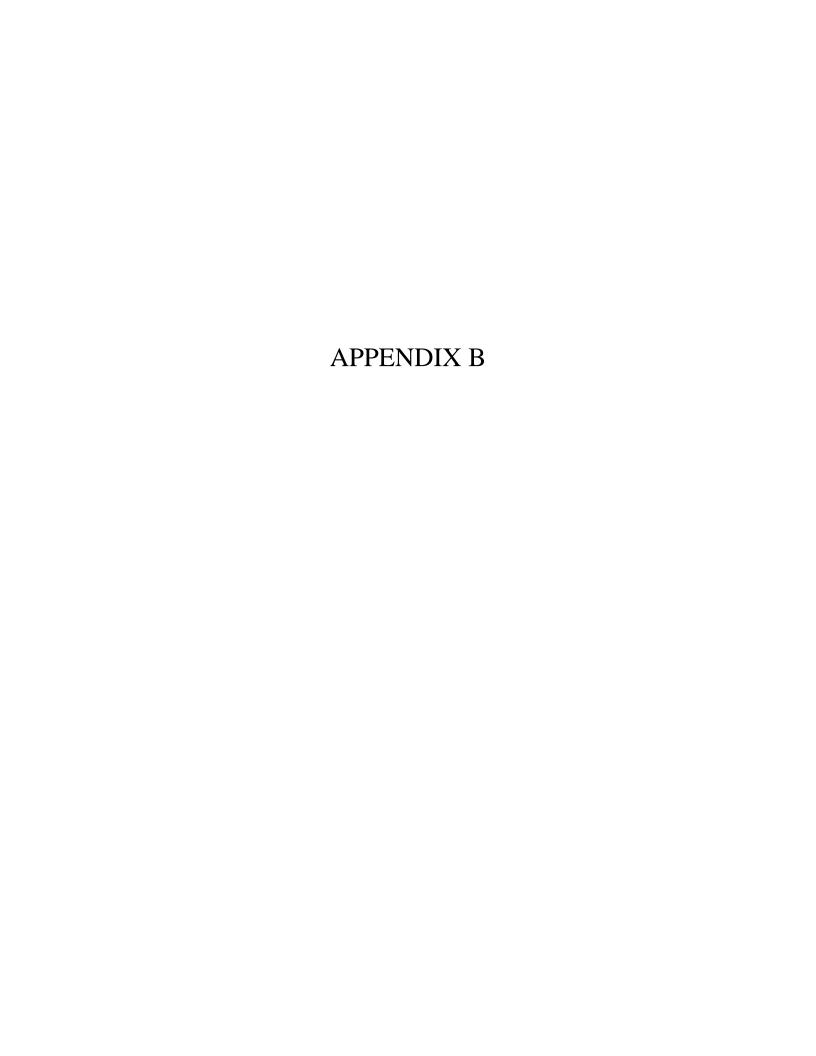
Lakes and Open water

0.1 0 0.06 0.1 Miles

NAD_1983_HARN_Wisconsin_TM 1: 3,960

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Notes



Waunakee Library

SLAMM Data and Outputs

Data file name: P:\PROJECTS\2016\116.0144.30 OPN Waunakee

Library\Stormwater\Waunakee Library Proposed Site.mdb

WinSLAMM Version 10.2.1

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

Seed for random number generator: -42

Study period starting date: 01/01/81 Study period ending date: 12/31/81

Start of Winter Season: 12/02 End of Winter Season: 03/12

Date: 07-14-2017 Time: 12:59:38

Site information: Waunakee Library

Pre-Development Area Description Pre-Development Area (ac) Pre-Development CN

Pre Development 1.930 61

Total Area (ac)/Composite CN 1.930 61

- LU# 1 Commercial: 101 Total area (ac): 1.103
- 13 Paved Parking 1: 0.494 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 31 Sidewalks 1: 0.058 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 45 Large Landscaped Areas 1: 0.551 ac. Moderately Compacted Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- LU# 2 Commercial: 200 Total area (ac): 0.063
- 1 Roofs 1: 0.063 ac. Flat Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- LU# 3 Commercial: 102 Total area (ac): 1.229
- 13 Paved Parking 1: 0.274 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Waunakee Library SLAMM Data and Outputs

- 31 Sidewalks 1: 0.164 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 45 Large Landscaped Areas 1: 0.720 ac. Moderately Compacted Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 - 70 Water Body Areas: 0.071 ac. Source Area PSD File:
- LU# 4 Commercial: 100 Total area (ac): 0.411
- 1 Roofs 1: 0.411 ac. Flat Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- LU# 5 Commercial: 103 Total area (ac): 0.548
- 1 Roofs 1: 0.069 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 13 Paved Parking 1: 0.231 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 31 Sidewalks 1: 0.076 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 45 Large Landscaped Areas 1: 0.172 ac. Moderately Compacted Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- LU# 6 Commercial: 201 Total area (ac): 0.159
- 1 Roofs 1: 0.159 ac. Flat Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- LU# 7 Commercial: 202 Total area (ac): 0.802
- 13 Paved Parking 1: 0.415 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 31 Sidewalks 1: 0.101 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 45 Large Landscaped Areas 1: 0.286 ac. Moderately Compacted Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- LU# 8 Commercial: 203 Total area (ac): 0.404
- 31 Sidewalks 1: 0.059 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 45 Large Landscaped Areas 1: 0.284 ac. Moderately Compacted Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 - 70 Water Body Areas: 0.061 ac. Source Area PSD File:
- LU# 9 Commercial: 300 Total area (ac): 0.793

Waunakee Library SLAMM Data and Outputs

- 13 Paved Parking 1: 0.533 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 31 Sidewalks 1: 0.015 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
- 45 Large Landscaped Areas 1: 0.206 ac. Moderately Compacted Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 - 70 Water Body Areas: 0.039 ac. Source Area PSD File:
- LU# 10 Commercial: Green Roof Total area (ac): 0.095
- 45 Large Landscaped Areas 1: 0.095 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Biofilter CP# 1 (DS) - East Bioretention Area

- 1. Top area (square feet) = 4700
- 2. Bottom aea (square feet) = 2050
- 3. Depth (ft): 8
- 4. Biofilter width (ft) for Cost Purposes Only: 10
- 5. Infiltration rate (in/hr) = 0.5
- 6. Random infiltration rate generation? No
- 7. Infiltration rate fraction (side): 0.01
- 8. Infiltration rate fraction (bottom): 1
- 9. Depth of biofilter that is rock filled (ft) 2
- 10. Porosity of rock filled volume = 0.33
- 11. Engineered soil infiltration rate: 3.6
- 12. Engineered soil depth (ft) = 2
- 13. Engineered soil porosity = 0.27
- 14. Percent solids reduction due to flow through engineered soil = 0
- 15. Biofilter peak to average flow ratio = 3.8
- 16. Number of biofiltration control devices = 1
- 17. Particle size distribution file: Not needed calculated by program
- 18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

- 1. Weir crest length (ft): 20
- 2. Weir crest width (ft): 10
- 3. Height of datum to bottom of weir opening: 7.5

Outlet type: Vertical Stand Pipe

- 1. Stand pipe diameter (ft): 3
- 2. Stand pipe height above datum (ft): 5

Waunakee Library

SLAMM Data and Outputs

Control Practice 2: Biofilter CP# 2 (DS) - West Bioretention Area

- 1. Top area (square feet) = 4900
- 2. Bottom aea (square feet) = 1575
- 3. Depth (ft): 8
- 4. Biofilter width (ft) for Cost Purposes Only: 10
- 5. Infiltration rate (in/hr) = 0.5
- 6. Random infiltration rate generation? No
- 7. Infiltration rate fraction (side): 0.01
- 8. Infiltration rate fraction (bottom): 1
- 9. Depth of biofilter that is rock filled (ft) 2
- 10. Porosity of rock filled volume = 0.33
- 11. Engineered soil infiltration rate: 3.6
- 12. Engineered soil depth (ft) = 2
- 13. Engineered soil porosity = 0.27
- 14. Percent solids reduction due to flow through engineered soil = 0
- 15. Biofilter peak to average flow ratio = 3.8
- 16. Number of biofiltration control devices = 1
- 17. Particle size distribution file: Not needed calculated by program
- 18. Initial water surface elevation (ft): 0

Soil Data

Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

- 1. Weir crest length (ft): 20
- 2. Weir crest width (ft): 10
- 3. Height of datum to bottom of weir opening: 7.5

Outlet type: Vertical Stand Pipe

- 1. Stand pipe diameter (ft): 3
- 2. Stand pipe height above datum (ft): 5

Control Practice 3: Biofilter CP# 3 (DS) - South Bioretention Area

- 1. Top area (square feet) = 4000
- 2. Bottom aea (square feet) = 1700
- 3. Depth (ft): 8
- 4. Biofilter width (ft) for Cost Purposes Only: 10
- 5. Infiltration rate (in/hr) = 0.5
- 6. Random infiltration rate generation? No
- 7. Infiltration rate fraction (side): 0.01
- 8. Infiltration rate fraction (bottom): 1
- 9. Depth of biofilter that is rock filled (ft) 2
- 10. Porosity of rock filled volume = 0.33
- 11. Engineered soil infiltration rate: 3.6
- 12. Engineered soil depth (ft) = 2
- 13. Engineered soil porosity = 0.27
- 14. Percent solids reduction due to flow through engineered soil = 0
- 15. Biofilter peak to average flow ratio = 3.8

- 16. Number of biofiltration control devices = 1
- 17. Particle size distribution file: Not needed calculated by program
- 18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

- 1. Weir crest length (ft): 20
- 2. Weir crest width (ft): 10
- 3. Height of datum to bottom of weir opening: 7.5

Outlet type: Vertical Stand Pipe

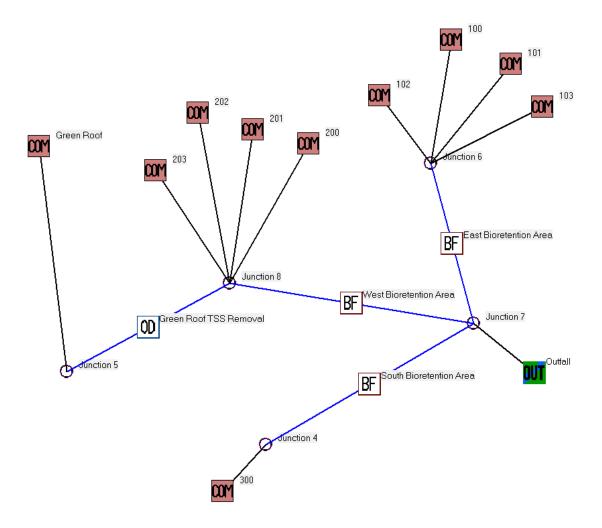
- 1. Stand pipe diameter (ft): 3
- 2. Stand pipe height above datum (ft): 5

Control Practice 4: Other Device CP# 1 (DS) - Green Roof TSS Removal

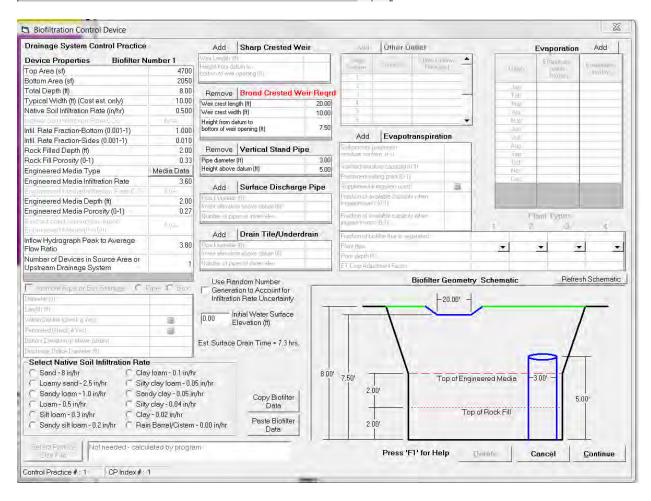
Fraction of drainage area served by device (ac) = 1.00

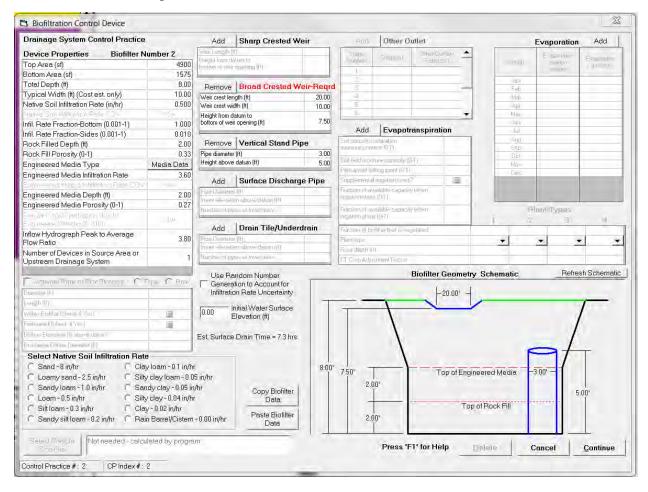
Concentration reduction fraction = 1.00

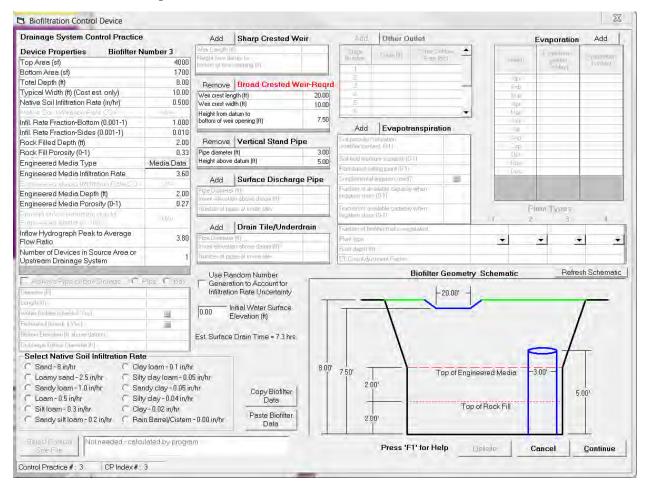
Runoff volume reduction fraction = 0



Land Use #	Land Use Type	Lar	Land Use Area (acres)	_	
1	Commercial	101		1.103	
2	Commercial	200		0.063	
3	Commercial	102	102 1.229		
4	Commercial	100	100 0.411		
5	Commercial	103 0.5			
6	Commercial	201	0.159		
7	Commercial	202	0.802		
8	Commercial	203	0.404		
9	Commercial	300	0.793		
10	Commercial	Croop Boof		0.005	_
CP#	Control Pr	actice Type	Control Practice Nar	me or Location	•
1	Biofilter		East Bioretention Area		
2	Biofilter		West Bioretention Area		
3	Biofilter		South Bioretention A	rea	
4	Other Device		Green Roof TSS Rem	noval	

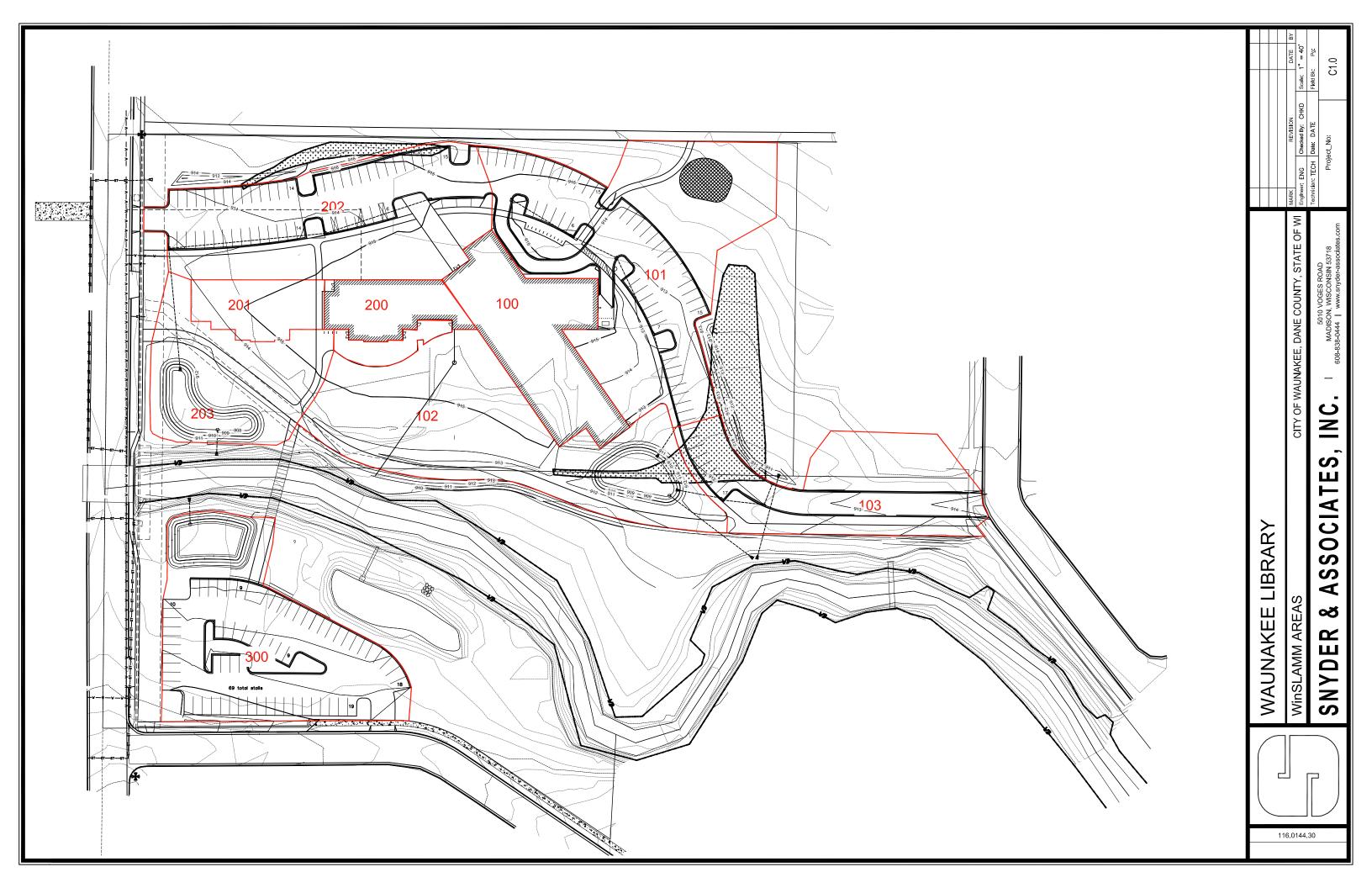






Land Uses	Junctions		Control Practices		Ou	
File Name:						
P:\PROJECTS\2016\116.0144.30 OPN Wat	inakee Library\Stormwater\Waunakee	e Library Proposed	d Site.map			
	Outfall Outpo	ut Summary				
	Runoff Volume Percent Runoff (cu. ft.) Reduction	Runoff Coefficient (Rv)	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction	
Total of All Land Uses without Controls	424106	0.65	144.5	3826		
Outfall Total with Controls	143606 66.14%	0.22	145.5	1304	65.92 %	
		del Run:	1.00	1308		
Current File Output: Annualized Total After Outfall Controls	144000 Years in Mo	,				
	144UUU Years in Mo					
Print Output Summary to Text File Total Control Practice Costs	Total Area Modeled (ac)		To S	n g Water Imp Stormwater F PImpervious Cover	lunoff	
Outfall Controls Print Output Summary to Text File Print Output Summary to .csv File	Total Area Modeled (ac)		To S	Stormwater P PImpervious Cover	Runoff Model) Approximate	
Outfall Controls Print Output Summary to Text File Print Output Summary to .csv File Total Control Practice Costs Capital Cost N/A	Total Area Modeled (ac)	Destant O. W.	To S	Stormwater F	Runoff Model) Approximate Urban Stream	
Print Output Summary to Text File Total Control Practice Costs Capital Cost Land Cost N/A	Total Area Modeled (ac)	Perform Outfall Flow Duration Curve Calculatior	To \$ (CWF	Stormwater P PImpervious Cover Calculated Rv	Runoff Model) Approximate Urban	

	Land Uses			Junctions		Ĭ	Control Practices				Outfall
	Runoff Volur	ne		P	art. Solids Yie	ld (lbs)			Part. Solids C	onc. (mg/L)	
Data File: 1	P:\PROJECTS\2016\116.01	44kee Library Propo	sed Site.mdb								
Rain File: \	WisReg - Madison WI 1981.R	A									
Date: 07-14	4-17 Time: 1:05:15 PM										
Site Descrip	ption: Waunakee Library						$\overline{}$				
Col. #:	2	4	5	6	7	8	9	10	11	12	13
Control Practice No.	Control Practice Type	Total Inflow Volume (cf)	Total Outflow Volume (cf)	Percent Volume Reduction	Total Influent Load (lbs)	Total Effluent Load (lbs)	Percent Load Reduction	Flow Weighted Influent Conc (mg/L)	Flow Weighted Effluent Conc (mg/L)	Percent Conc. Reduction	Influent Median Part. Size (microns)
1	Biofilter	252460	114168	54.78	2319	1051	54.68	147.2	147.4	-0.203	7.8
2	Biofilter	110697	27126	75.50	948.2	232.6	75.47	137.2	137.3	-0.091	7.8
3	Biofilter	60950	2312	96.21	550.1	20.99	96.18	144.6	145.4	-0.580	7.8
4	Other Device	596.3	596.3	0	8.451	0	100.0	227.0	0	100.000	7.8
4								1			



Wetland Delineation Report

Waunakee Public Library

Village of Waunakee, Dane County Wisconsin

June 30th, 2017

Prepared for:

Jean Elvekrog Waunakee Library Board 710 South Street Waunakee, WI 53597

Prepared by:

Mr. Scott O. Taylor Taylor Conservation, LLC 3856 Schneider Dr. Stoughton, WI. 53589 (608) 444-7483



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Wetland Delineator Qualifications

Scott Taylor holds a Master of Science degree in Forest Ecology and Management from the University of Wisconsin-Madison (1999). Taylor has attended the "Critical Methods in Wetland Delineation" training course annually since 2006. Taylor is an **Assured Wetland Delineator** under Wisconsin Department of Natural Resources guidelines. Taylor also completed the following courses that prepared him for performing wetland determinations and delineations in Wisconsin using the Army Corps of Engineers 1987 Manual Method:

- ➤ Wetland Plant Identification (July 2003, Delafield, WI. Biotic Consultants, Inc.)
- ➤ Basic Wetland Delineation Training (August 2006, Cable, WI. University of Wisconsin, La Crosse Continuing Education & Extension)
- ➤ Advanced Wetland Delineation Training (July 2012, LaCrosse, WI University of Wisconsin, La Crosse Continuing Education & Extension).
- ➤ Hydric Soils Identification (June 2014, UW-Waukesha Field Station University of Wisconsin, La Crosse Continuing Education & Extension).

Introduction

On April 19th and on June 9th of 2017, Scott Taylor of Taylor Conservation, LLC performed wetland determinations and delineations within a 10-acre area of land encompassing an old industrial site and a stretch of the Yahara River in the Village of Waunakee, Dane County, Wisconsin (Figures 1 & 2). The wetland investigation area consisted of old buildings surrounded by unmowed, grassy and brushy areas in the old industrial site; of wooded and grassy stream banks along the Yahara River; and of mowed turf areas above the banks of the river. It also contained a storm water basin just south of the river.

Four wetlands were identified: the low-lying margins of the stream banks; the storm water basin; and 2 depressions in the industrial site (Figure 2). In the investigator's opinion, the storm water basin, which was clearly constructed, was an artificial wetland. Two sample plots immediately outside of the basin (plots 1B & 1C, Figure 2) did not show wetland indicators. The Army Corps of Engineers and the Wisconsin Department of Natural Resources will decide whether to take jurisdiction over the storm water basin.

A total of approximately 1.75 acres (1.3-streamside wetlands; 0.2-storm water basin wetland; 0.25 acre in the industrial site depressions) of wetlands were delineated. The site is in Section 5 (SWSE) T8N, R9E.

The Waunakee Public Library is planning a new facility centered on the industrial area. It ordered a wetland delineation for planning purposes.

The purpose of this report is to explain the results of the wetland delineation and to describe the features of the wetlands and non-wetlands (uplands) in the project area.

Methods

The following reference materials were reviewed prior to performing fieldwork:

- 1) Natural Resource Conservation Service, Soil Survey.
- 2) Wisconsin Wetland Inventory (WDNR Surface Water Data Viewer Wetlands & Wetland Indicators Theme).
- 3) United States Geological Survey 7.5-minute quadrangle map, Waunakee Quadrangle.
- 4) Natural Resource Conservation Service, hydric soils list for Dane County.

The wetland determinations and the delineations followed the procedures for the Routine Method set forth in <u>The Corps of Engineers Wetlands Delineation Manual</u> (US Army Corps of Engineers 1987) and <u>Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northeast & Northcentral Region</u>. They also followed the methods set forth in the <u>Basic Guide to Wisconsin Wetlands and their Boundaries</u> (WI Dept. of Administration 1995).

Method of Data Collection

Vegetation, hydrology and soil information were gathered in sample plots and recorded on U.S. Army Corps of Engineers "Wetland Determination Data Forms" for the appropriate region. At each plot, a plot center was established and the presence or absence of normal circumstances or disturbances was noted. Next, herbaceous vegetation was sampled within a circular 5-foot radius plot. After that, vines, shrubs and trees were sampled within a circular 30-foot radius plot, centered on the herbaceous plot. Next, a 20 inch-deep (at minimum) soil pit was dug at the plot center. The presence or absence of hydrology indictors in the soil pit and within the surrounding 30-foot circular plot was noted. Finally, the soil profile in the pit was examined and described. A determination was then made as to whether the site was wetland or upland.

Location of Transects

Transect beginning points (sample plots) were located inside of areas that appeared to have potential to be wetlands based on maps and field observations. These areas included mapped hydric soil locations, Wisconsin Wetland Inventory-mapped wetlands, and areas that showed pronounced wetland signatures on more than one year of aerial photography. They also included field observed plant communities typical of wetlands or field observed landscape features that collect water, like swales, depressions and drainageways.

If the sample plot data suggested that the location was inside of a wetland, a second plot was placed in an upslope location with a different plant community. If data collected at this plot suggested that the location was inside of the upland, no further plots were

sampled. Otherwise, the process was repeated. A total of 16 plots were sampled, 5 inside of wetlands and 11 on the uplands (Figure 2).

Procedure for Locating Wetland Boundaries

The wetland boundaries were located by observing increases in elevation and changes in plant community composition. The presence of healthy, dominant populations of upland plants, such as black raspberry (*Rubus occidentalis*-Upl), honeysuckle (*Lonicera X bella*-FacU), Queen Anne's lace (*Daucus carota*-Upl) or tall fescue (*Schedorus arundinaceus*-FacU), as one moved upslope, away from the wetland, was often considered a reliable indicator of the wetland boundary.

Results and Discussion

Soils of the Wetland Investigation Area

The Natural Resource Conservation Service-mapped soils of the wetland investigation area are (Figure 4):

		Percent
Soil	Drainage class	Hydric
Alluvial land, wet		
(Af)	Poorly Drained	100%
Elburn silt loam	Somewhat	
(EfB)	Poorly Drained	5%
Griswold loam		
(GwC)	Well Drained	0%
Plano silt loam		
(PnB)	Well Drained	0%

Wisconsin Wetland Inventory Map of the Investigation Area

The Wisconsin Wetlands Inventory (W.W.I.) identifies tree-dominated wetlands (T3K) following the Yahara River. Mapped wetland boundaries matched the field-identified wetland boundaries along the river closely (Figure 5).

The industrial site wetlands were not identified on the W.W.I. map. Discrepancies between the W.W.I. and field-identified wetland boundaries reflect the greater accuracy of field methods over interpretation of wetland boundaries from aerial photographs, which is the method used in the W.W.I.

Wetlands

Overview of Wetlands

The industrial site wetlands occupied closed depressions. The riverside wetlands were the bottoms of steep stream banks and flat benches just above the ordinary high water mark

of the river. The storm water basin wetland was deep, steep-sided basin with inlet and outlet pipes.

The wetlands supported open grassy vegetation in some areas, and brush and trees in others. The storm water basin contained open water and cattails.

Wetland ID Number (Figure 2)	Wetland Type	Wetland Quality (Susceptibility to Stormwater Runoff Impacts)	Approximate Area Delineated
Wetlands 1, 3 & 4	Fresh (Wet) Meadow	Medium	0.55
Wetland 1	Floodplain Forest	Medium	1
Wetland 2	Shallow Marsh (storm water basin)	Poor	0.2 Total: 1.75

	Wetlands (Plots 1A, 2A, 3A,
	4A & 5A)
Normal Circumstances	
Present?	Yes
Significant Disturbance?	No
	Yes, for all wetland plots since
	no hydric soil indicators were
Naturally Problematic?	observed.

Wetland Boundary Characteristics

In many areas there were no strong vegetative transitions to mark the boundaries, however the distribution of upland plant populations, like honeysuckle and black cherry, delineated the boundaries.

In other areas the boundaries were marked by vegetative transitions from ground layer vegetation heavily dominated by reed canary grass (*Phalaris arundinacea*-FacW) among other species, in the wetlands to ground layer vegetation dominated by Kentucky blue grass (*Poa pratensis*-FacU), and tall fescue, among other species, in the uplands.

Wetland Vegetation

❖ The wetlands were dominated by broad-leaved catteails (*Typha latifolia*-Obl), reed canary grass (*Phalaris arundinacea*-FacW) in the ground layer; by red osier dogwood (*Cornus alba*-FacW), silver maple (*Acer saccharinum*-FacW), green ash (*Fraxinus pennsylvanica*-FacW) and box elder (*Acer negundo*-FacW) in the sapling/shrub layer; and by silver maple, box elder and black willow (*Salix nigra*-Obl) in the tree layer.

- ❖ Hydrophytic plant dominance was 100% in all wetland sample plots.
- ❖ All wetland sample plots met the FAC-Neutral Test.

Wetland Hydrology

- ❖ The industrial site and storm water basin wetlands' chief water source is surface runoff from surrounding developed areas. The streamside wetlands' chief water source is overspill from the Yahara River. All of the wetlands probably saturate in the spring and throughout the year following rainy periods.
- * Rainfall for the preceding 3 months, for both fieldwork dates, was higher than normal (see analysis below). In addition, 2.6 inches of rain was recorded at the nearby Dane County Regional Airport weather station in the month of April prior to fieldwork. No rain was recorded in the month of June prior to fieldwork.
- ❖ As a result of higher than usual antecedent rainfall, the investigator did expect to directly observe a shallow water table and soil saturation in the wetlands. Accordingly, shallow soil saturation was observed in 4 of 5 wetland sample plots (1A, 2A, 4A & 5A).
- ❖ All wetland sample plots showed the two secondary hydrology indicators, "Geomorphic Position" (because plots were located on depressions, low benches and stream banks by the river) and "FAC Neutral Test".

Prior Rainfall Analysis:

(USDA Field Office Climate Data – WETS Station: Dane County Regional Airport, Wisconsin.)

For April Fieldwork:

For April	For April Fleidwork:						
		ce will have on (inches)					
	less than:	more than:	2017 precipitation:	Condition	Conditi on value (Dry=1, Normal =2, Wet=3)	Month weight value	Product of previous two columns
January	0.81	1.51	2.76	Wet	3	1	3
February	0.69	1.56	1.94	Wet	3	2	6
March	1.28	2.77	2.83	Wet	3	3	9
						Sum	: 18

For	J	une	Fie	ld	work:
-----	---	-----	-----	----	-------

	30% chanc	e will have					
	precipitation	on (inches)					
	less than:	more than:	2017 precipitation:	Condition	Conditi on value (Dry=1, Normal =2, Wet=3)	Month weight value	Product of previous two columns
March	1.28	2.77	2.83	Wet	3	1	3
April	2.58	3.89	5.30	Wet	3	2	6
May	2.11	3.91	2.83	Normal	2	3	6
						Sum	: 15

(If sum is 6-9, prior period dry; 10-14, prior period normal; 15-18, prior period wet. From USDA, Natural Resource Conservation Service. 1997. Hydrology Tools for Wetland Determination. Part 650. <u>Engineering</u> Field Handbook.)

Wetland Soils

- ❖ The soil surface layers in the wetland sample plots were comprised of 10 YR 2/1 & 2/2-colored silt loam and silty clay loam.
- ❖ B-horizons in riverside wetlands were not observed at the soil depths (24-30 inches) examined because these sites occupied alluvial landforms comprised of deep, dark-colored sediments.
- ❖ Wetland soil profiles in the industrial site were only inspected to depths of 12-14 inches due to the abundance of rocks. These soils were probably disturbed during development of the site.
- ❖ None of the wetland plots showed hydric soil indicators but professional judgment was used to assume the soils were hydric based on hydrophytic vegetation and wetland hydrology indicators.

Uplands

Overview of Uplands

The uplands (non-wetlands) were the (1) old buildings and paved areas of the industrial site; (2) the un-mowed grassy and brushy areas surrounding the buildings and paved areas; (3) the upper riverbanks; and (4) the mowed turf areas on the high-lying grounds adjoining the stream bank (Figure 2).

	Uplands (Plots 1B, 1C, 1D, 2B,
	2C, 3B, 3C, 4B, 4C, 5B & 5C)
Normal Circumstances	Not for Plots 1C, 1D, 2B, 3B &
Present?	3C due to regular mowing.
	Not for Plots 1C, 1D, 2B, 3B &
Significant Disturbance?	3C due to regular mowing.

Naturally Problematic?	Not applicable to uplands.

Upland Vegetation

- ❖ The un-mowed industrial site uplands were dominated by garlic mustard (*Alliaria petiolata*-FacU), Kentucky bluegrass (*Poa pratensis*-FacU), tall fescue (*Schedonorus arundinaceus*-FacU) and Canada goldenrod (*Solidago Canadensis*-FacU) in the ground layer, and by box elder and cottonwood (*Populus deltoides*-Fac) in the sapling and tree layers.
- ❖ The mowed turf uplands were dominated by Kentucky blue grass and tall fescue. The upper stream bank uplands were dominated by garlic mustard and white avens (*Geum canadense*-Fac) in the ground layer; by box elder and honeysuckle (*Lonicera X bella*-FacU) in the sapling/shrub layer; and by box elder and American elm (*Ulmus americana*-FacW) in the tree layer.
- ❖ Dominance values for hydrophytes were below 50% in most upland sample plots.
- ❖ Three of 11 upland sample plots (1B, 2C & 4B) showed dominance by hydrophytic vegetation (but they did not meet the FAC-Neutral test). However, the absence of hydric soil and wetland hydrology indicators at these sites strongly suggested they were capable of supporting upland vegetation.

Upland Hydrology

- No hydrology indicators were noted in any of the upland sample plots.
- ❖ All parts of the uplands occupied high-lying or sloping ground where water would be unlikely to linger for long periods.

Upland Soils

- ❖ The soil surface layers in the upland sample plots were comprised of 10 YR 2/2, 3/2 & 2/1-colored silt loam.
- ❖ B-horizons were not observed at the soil depths examined (24-30 inches) in most upland sample plots, probably because these sites occupied areas where fill was placed in the distant past. This would not be unusual in an area surrounded by urban development. The unusually high number of rocks observed in upland soil profiles also suggested the soils consisted of old fill.
- ❖ Soil subsurface layers (B-horizons), when observed, consisted of 10 YR 3/3-colored sandy or silty clay loam.
- ❖ No upland sample plot showed hydric soil indicators.

Conclusion

The wetland boundary marked in the field is the best estimate of the location of the boundary based on the available vegetation, hydrology and soil evidence on April 19th and June 17th of 2017. Wetland boundaries can change over time with changes in vegetation, precipitation, or regional hydrology. The wetlands identified for this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corp of Engineers, state regulation under the jurisdiction of Wisconsin Department of Natural Resources, and local jurisdiction under your local county, town, city or village. The U.S. Army Corps of Engineers and/or the Wisconsin DNR have authority to make the final decision regarding the wetland boundary. Personnel from these agencies may adjust the boundary upon field inspection.

Activities within or close to the delineated wetland boundaries generally require permits from the Army Corps of Engineers, WDNR or local authorities. If the client proceeds with any work within or close to the delineated wetland boundaries without authorization or permits from the appropriate regulatory authorities, Scott Taylor or Taylor Conservation LLC shall not be responsible or liable for any resulting damages.

Scott Taylor is an **Assured Wetland Delineator** under Wisconsin Department of Natural Resources guidelines (http://dnr.wi.gov/topic/wetlands/assurance.html). Taylor's wetland delineations are considered dependable by the WDNR for purposes of Wisconsin wetland and waterway permits, shoreland-wetland zoning or other state-mandated local wetland programs. Therefore Taylor's clients do not require concurrence letters from WDNR before project planning or permit applications that are based on Taylor's wetland delineations. However, concurrence from the Army Corps of Engineers is still necessary. The WDNR and Army Corps have final authority over wetlands in Wisconsin. They may adjust Taylor's wetland boundaries. Assurance does not change decisions about wetland fill. Assurance is not a guarantee of accuracy or relief from landowner responsibility in the event an error occurs and wetlands are filled. While it is unlikely for a professional whose work is assured, inadvertent wetland fill that may result from errors must be remedied.

References

Hurt, G.W. & Vasilas, L.M. 2016. <u>Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 8.1</u>. Natural Resource Conservation Service, United States Department of Agriculture.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner, US Army Corp of Engineers, 2014. State of Wisconsin 2014 Wetland Plant List.

US Army Corps of Engineers, Waterways Experiment Station. 1987. Corps of Engineers Wetlands Delineation Manual. Wetlands Research Program Technical Report Y-87-1.

USDA, Natural Resource Conservation Service. 1997. Hydrology Tools for Wetland Determination. Part 650. <u>Engineering Field Handbook.</u>

Wisconsin Department of Administration, Coastal Management Program. 1995. <u>Basic</u> Guide to Wisconsin's Wetlands and their Boundaries.

Figures

Figure 1: Landscape Overview.

Source: Imagery - National Agricultural Imagery Program, 2013; Roads & Waters - Wisconsin Department of Natural Resources.



Figure 2: Investigation Area, Wetlands & Sample Plots.

Source: Wisconsin Regional Orthophotography Consortium, 2010.

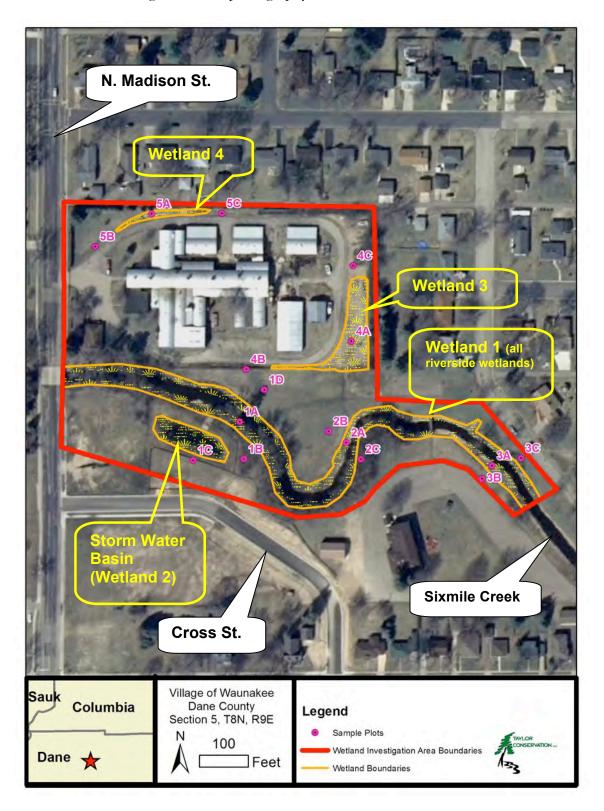


Figure 3: Topography.

Source: U.S. Geological Survey 7.5-Minute Quadrangle Map, Waunakee Quadrangle.

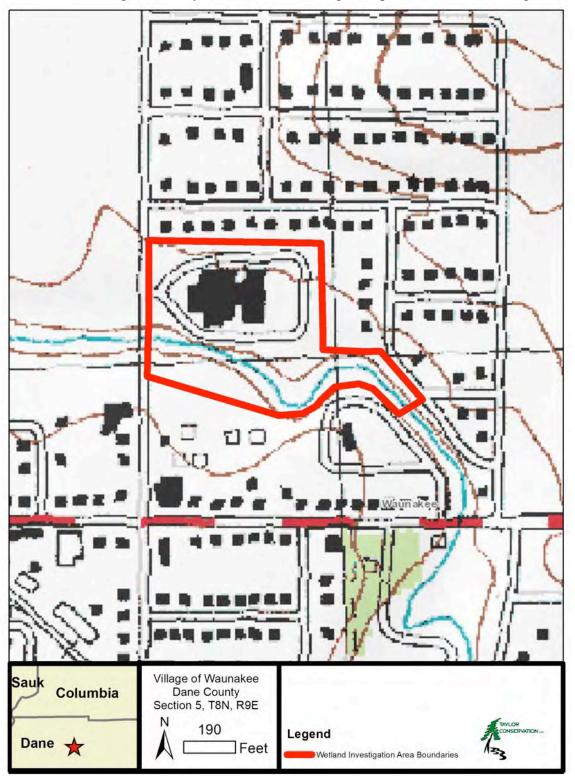


Figure 4: Soils.
Source: Natural Resource Conservation Service.

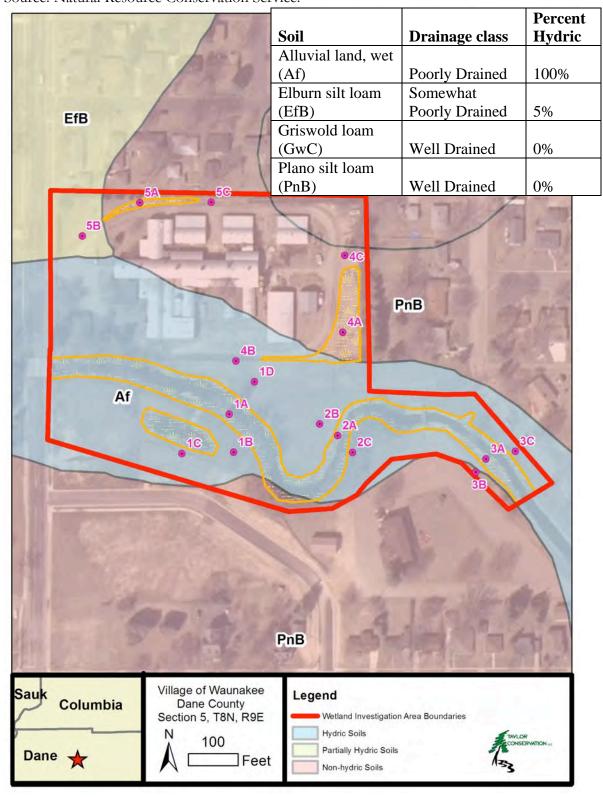
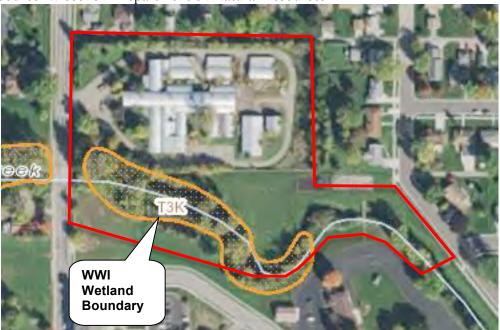
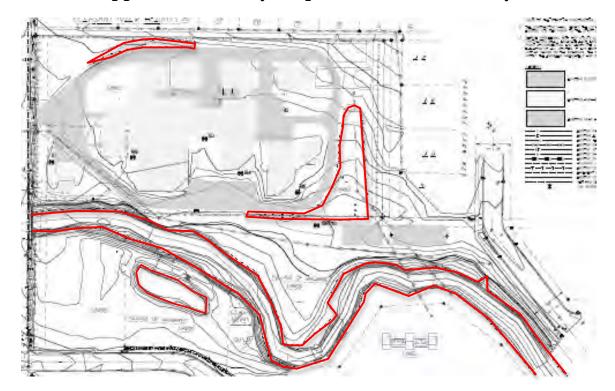


Figure 5: Wisconsin Wetland Inventory Map.

Source: Wisconsin Department of Natural Resources.



Appendix I: Survey Map of Wetland Boundary.



Appendix II: Investigation Area Photos

Sixmile Creek



Storm Water Basin



Wetland - Plot 1A



Upland Plot 1B





Wetland - Plot 2A



Upland - Plot 2B



Wetland-Plot 3A







Wetland – Plot 4A



Upland – Plot 4C



Upland - Plot 5C



Appendix III: Data Sheets

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Waunakee Libra	ary		City/County:	Waunakee, Dane Co.	Sampli	ng Date: 19-Apr-17
Applicant/Owner: Waunakee	e Library Board			State: Wiscons	Sampling Point:	01a
Investigator(s): Scott Taylo	r		Section, To	ownship, Range: S. 5		r. 9E
Landform (hillslope, terrace	, etc.): Toeslope		 Local relief (co	oncave, convex, none	: concave	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA):	LRR K		43.193247		89.449872	Datum: NAD83
			43.193247		NWI classification:	
Soil Map Unit Name: Alluvia	al land, wet (Ar)				NWI Classification.	13K
Are climatic/hydrologic con	ditions on the site ty	pical for this time of y	ear? Ye	s ○ No ④ (If I	no, explain in Remark	•
Are Vegetation , So	il , or Hydrolo	ogy significant	ly disturbed?	Are "Normal Circ	umstances" present?	Yes No
Are Vegetation \Box , So	il 🗹 , or Hydrolo	ogy 🗌 naturally p	roblematic?	(If needed, expla	ain any answers in Re	marks.)
Summary of Finding	gs - Attach site	map showing s	ampling p	oint locations, t	ransects, impo	rtant features, etc.
Hydrophytic Vegetation Pro		No O				
Hydric Soil Present?	Yes 💿	No O		e Sampled Area n a Wetland?	es 💿 No 🔾	
Wetland Hydrology Presen	t? Yes 💿	No O				
Remarks: (Explain alterna	ative procedures here	or in a separate repo	rt.)			
Hydrology						
Wetland Hydrology Indicat	tors:			Sec	ondary Indicators (minin	num of 2 required)
Primary Indicators (minim	um of one required;	check all that apply)			Surface Soil Cracks (B6))
Surface Water (A1)		Water-Stained Lea	. ,		Drainage Patterns (B10)
✓ High Water Table (A2)		Aquatic Fauna (B1	•		Moss Trim Lines (B16)	
Saturation (A3)		☐ Marl Deposits (B15	•		Dry Season Water Table	e (C2)
☐ Water Marks (B1) ☐ Sediment Deposits (B2)		Hydrogen Sulfide (• ,	Dt- (C2)	Crayfish Burrows (C8)	····-! Imagan, (CO)
Drift deposits (B3)		Oxidized Rhizosphe Presence of Reduc		Roots (C3)	Saturation Visible on Ae Stunted or Stressed Pla	
Algal Mat or Crust (B4)		Recent Iron Reduc	. ,	s (C6)	Geomorphic Position (D	` '
☐ Iron Deposits (B5)		☐ Thin Muck Surface			Shallow Aquitard (D3)	-,
☐ Inundation Visible on Aeri	al Imagery (B7)	Other (Explain in R	• •		Microtopographic Relief	(D4)
Sparsely Vegetated Conca	ave Surface (B8)		toma.re)	✓	FAC-neutral Test (D5)	
Field Observations:						
Surface Water Present?	Yes O No 💿	Depth (inches):	0			
Water Table Present?	Yes 💿 No 🔾	Depth (inches):	8			
Saturation Present? (includes capillary fringe)	Yes ● No ○	Depth (inches):	0	Wetland Hydrolog	y Present? Yes	● No ○
Describe Recorded Data (s	tream gauge, monito	oring well, aerial photo	os, previous ins	spections), if available	:	
Remarks:						
The plot met the criteria of be likely.	Geomorphic Position	ı since it occupied a k	ow bench by a	stream where prolong	ged, frequent saturat	ion or inundation would

VEGETATION - Use scientific names of plants

(0)	Absolute	Dominant Species 2	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 2826)	% Cover	Species?	Status	Number of Dominant Species
1. Salix nigra	20	~	OBL	That are OBL, FACW, or FAC:
2. Acer saccharinum		✓	FACW	Total Number of Dominant
3				Species Across All Strata: 7 (B)
4				
5				Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6				macric obl, mem, or me
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 2,826 sf)	30 =	= Total Cover		Total % Cover of: Multiply by:
	15		FACW	OBL species <u>20</u> x 1 = <u>20</u>
	20	✓	FACW	FACW species <u>125</u> x 2 = <u>250</u>
2. 1//h	10		FACW	FAC species $35 \times 3 = 105$
4			TACV	FACU species $5 \times 4 = 20$
4	20	<u> </u>	FACW	UPL species $0 \times 5 = 0$
0. 4	10		FAC	Column Totals: 185 (A) 395 (B)
7 Rhamnus cathartica	5		FAC	
i _ Kilailiilus CaulaiuCa				Prevalence Index = B/A = 2.135
Herb Stratum (Plot size: 78.5)	80=	= Total Cover		Hydrophytic Vegetation Indicators:
1 Phalaris arundinacea	40	✓	FACW	Rapid Test for Hydrophytic Vegetation
2. Hydrophyllum virginianum		✓	FAC	✓ Dominance Test is > 50%
			FACW	✓ Prevalence Index is ≤3.0 ¹
3. Impatiens capensis 4. Acer saccharinum	<u> </u>	Ī	FACW	Morphological Adaptations ¹ (Provide supporting
F. Janisara y halla			FACU	data in Remarks or on a separate sheet)
6			17100	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
7				¹ Indicators of hydric soil and wetland hydrology must
8				be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
9				
11				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
12	0			at broadt noight (BBH), rogardiood of holght.
12		□ = Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size:)		- Total Cover		greater than 3.28 ft (1m) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	= Total Cover		
				Hydrophytic
				Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate she	a t \			
The plot was in a brushy, wooded area. Most of the herb lay	-	were green	and arowin	og and most of the woody species had begun leaf out
suggesting the growing season had begun. Since it was very				
observed.	, ,	5 5	,	

Sampling Point: 01a

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 01a

Depth		Matrix			ox Features		absence of indicators.)	
(inches)	Color (ı		<u>%</u>	Color (moist)	%Type_1	Loc2	Texture	Remarks
0-30	10YR	2/1	100				Silt Loam	
							<u>-</u>	
								-
								
							-	
							-	
								_
	centration D:	=Denletion	RM=Redi	ıced Matrix CS=Covere	d or Coated Sand Gra	nins 21 oca	tion: PL=Pore Lining. M=	=Matrix
	indicators:	-Берісцої	i. Iti – Iteat	acca Flatfix, c5=covered	a or coated sand Gre	iii b Loca		
ri c Soii i Histosol (Polyvalua Ralovi	Surface (S8) (LRR R			blematic Hydric Soils: ³
•	pedon (A2)			MLRA 149B)	Surface (30) (LKK K	,)) (LRR K, L, MLRA 149B)
Black Hist				Thin Dark Surfa	ce (S9) (LRR R, MLR	A 149B)		dox (A16) (LRR K, L, R)
	Sulfide (A4)			Loamy Mucky M	lineral (F1) LRR K, L)			at or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loamy Gleyed M	1atrix (F2)			7) (LRR K, L, M)
	Below Dark S	Surface (Δ1	1)	Depleted Matrix	(F3)			Surface (S8) (LRR K, L)
	k Surface (A1		/	Redox Dark Sur	face (F6)			ce (S9) (LRR K, L)
	ck Mineral (S			Depleted Dark S	Surface (F7)			e Masses (F12) (LRR K, L, R)
	eyed Matrix (S			Redox Depression	ons (F8)			plain Soils (F19) (MLRA 149B)
Sandy Re		77)						A6) (MLRA 144A, 145, 149B)
	Matrix (S6)						Red Parent Mate	` ,
	ace (S7) (LRF	R MIRA	149R)					ark Surface (TF12)
			-				✓ Other (Explain i	n Remarks)
dicators of	hydrophytic	vegetation	n and wetla	nd hydrology must be pr	esent, unless disturb	ed or proble	ematic.	
rictive L	ayer (if obse	erved):						
Гуре:								
epth (inc	hes):						Hydric Soil Present?	? Yes ● No O
narks:								
vdric ind	icators obse	erved hov	vever prof	essional iudament w	as used to assume	the soil w	vas hydric based on th	e vegetation and hydrology
ators. No	B-horizon	was note	d; the soi	consisted of deep al	luvial deposits.			

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Waunakee Library	City/Co	unty: Waunakee, Dane Co.	Sampling Date: 19-Apr-17
Applicant/Owner: Waunakee Library Board		State: Wiscons	Sampling Point: 01b
Investigator(s): Scott Taylor	Sect	ion, Township, Range: S. 5	T. 8N R. 9E
Landform (hillslope, terrace, etc.): Summit		lief (concave, convex, none	
Subregion (LRR or MLRA): LRR K	Lat.: 43.1932	47 Long.:	89.449872 Datum: NAD83
Soil Map Unit Name: Alluvial land, wet (Af)	13.1332		NWI classification: T3K
Are climatic/hydrologic conditions on the site	typical for this time of year?	Yes ○ No • (If	no, explain in Remarks.)
Are Vegetation $\;$	rology significantly distur	ped? Are "Normal Circ	umstances" present? Yes No
Are Vegetation $\ \square$, Soil $\ \square$, or Hyd	rology 🔲 naturally problema	tic? (If needed, expl	ain any answers in Remarks.)
Summary of Findings - Attach si	te map showing sampli	ng point locations, t	transects, important features, etc.
Hydrophytic Vegetation Present? Yes			
Hydric Soil Present? Yes		Is the Sampled Area within a Wetland?	es O No 💿
Wetland Hydrology Present? Yes	No 💿		
(January-Wet; February-Wet; March-Wet),	was found to be above average.	In the month of fieldwork (.	April), total precipitation was 2.6 inches to date.
Hydrology			
Wetland Hydrology Indicators:		Sec	ondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one require			Surface Soil Cracks (B6)
Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9)		Drainage Patterns (B10)
Saturation (A3)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15)		Moss Trim Lines (B16) Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres along	Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron (0		Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Till	· —	Geomorphic Position (D2)
☐ Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	orier (Explain in Remaine)		FAC-neutral Test (D5)
Field Observations:			
Surface Water Present? Yes No			
Water Table Present? Yes No	Depth (inches):0		y Present? Yes ○ No •
Saturation Present? (includes capillary fringe) Yes No	Depth (inches): 0	Wetland Hydrolog	y Present? Yes ∨ No ♥
Describe Recorded Data (stream gauge, modern Remarks: No hydrology indicators. The plot sat on a high sat on a hi			

VEGETATION - Use scientific names of plants

veget Atton - use scientific names of pla	Sampling Point: 01b			
Tree Stratum (Plot size: 2826)	Absolute % Cover		Indicator Status	Dominance Test worksheet: Number of Dominant Species
1 Ulmus pumila	5	✓	FACU	That are OBL, FACW, or FAC: 3 (A)
2. Salix nigra		<u></u>	OBL	
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Species Across Air Strata.
5		П		Percent of dominant Species
6		\Box		That Are OBL, FACW, or FAC: 60.0% (A/B)
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 2,826 sf)		= Total Cover		Total % Cover of: Multiply by:
4. Acon postundo	60		EAC	OBL species <u>5</u> x 1 = <u>5</u>
1 Acer negundo	15	✓	FACU FACU	FACW species 10 x 2 = 20
2. Lonicera x bella	40			FAC species $75 \times 3 = 225$
3 Fraxinus pennsylvanica 4 Rubus occidentalis			UPL	FACU species <u>55</u> x 4 = <u>220</u>
•			UPL	UPL species $\frac{10}{10}$ x 5 = $\frac{50}{10}$
5				Column Totals: 155 (A) 520 (B)
6 7				Prevalence Index = B/A = 3.355
		= Total Cover		·
Herb Stratum (Plot size: 78.5		- 10001 331 2		Hydrophytic Vegetation Indicators:
1 Geum canadense	15	✓	FAC	Rapid Test for Hydrophytic Vegetation
2. Alliaria petiolata	30	✓	FACU	✓ Dominance Test is > 50%
3. Rubus occidentalis			UPL	Prevalence Index is ≤3.0 ¹
4. Glechoma hederacea	-		FACU	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6				Flobicinatic Hydrophytic vegetation (Explain)
7				¹ Indicators of hydric soil and wetland hydrology must
8				be present, unless disturbed or problematic.
9				Definitions of Vegetation Strata:
9 10				T NAS - de relación (7.0 cm) ou mana in diamenta.
11				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
11 12				
		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)	•			, ,
1				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
2				Size, and woody planto less than 3.20 it tail.
3				Woody vine - All woody vines greater than 3.28 ft in
4				height.
	=	= Total Cover		
				l
				Hydrophytic Vegetation
				Present? Yes No
Remarks: (Include photo numbers here or on a separate she	eet.)			

The plot was in a brushy, wooded area. Most of the herb layer species were green and growing and most of the woody species had begun leaf out, suggesting the growing season had begun. Since it was very early in the growing season, it is possible that some species were present but not observed. Although the site was dominated by hydrophytic vegetation, the absence of hydric soil indicators and the absence of wetland hydrology indicators strongly suggest this site would be capable of supporting upland vegetation. Also note the FAC Neutral Test was not met and the P-Index was > 3.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 01b

Indicator Solid Continue Solid	Depth (inches)		Matrix			Redox Featu			- .	=	
pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix drifc Soil Indicators: Histor Soil Indicators Polyvalue Below Surface (S8) (LRR R, MLRA 1498) Histor Epipedon (A2)					Color (moist)		Type ¹	LOC ²			
Histosol (A1))-14	10YR	3/2						Silt Loam	——————————————————————————————————————	.5
Indicators: Histosol (A1)											
Indicators: Histosol (A1)											
Indicators: Histosol (A1)									-	· · · · · · · · · · · · · · · · · · ·	
Indicators: Histosol (A1)											
Indicators: Histosol (A1)											
Indicators: Histosol (A1)											
Histosol (A1)											
Indicators: Histosol (A1)									-		
Histosol (A1)											
Histosol (A1)											
Histosol (A1)											
Histosol (A1)											
Histosol (A1)											
Indicators: Histosol (A1)			. Danistia	- DM Dad				21	tion. DI Douglining	M Matrix	
Histosol (A1)			=Depletio	II. KM=Reut	iced Matrix, CS=Cov	rered or Coale	a Sana Gra	IIIS -LOCA			
MLRA 149B) Alstic Epipedon (A2) Black Histic (A3) Alstid Epipedon (A2) Alstid Epipedon (A2) Alstid Histic (A3) Alstid Histic (A1) Alstid Histic (A3) Bark Surface (S7) (LRR R, L, R) Alstid Histic (A3) Bark Surface (S7) (LRR R, L, R) Alstid Histic (S4) Bark Surface (S7) (LRR R, L, R) Alstid Histic (S4) Bark Surface (S7) Alstid Histic (S4) Bark Surface (S7) (LRR R, L) Bark Surface (S7) (LRR R, L) Alstid Histic (S4) Bark Surface (S7) Alstid Histic (S4) Bark Surface (S					Determine 5	ala Cf :	C0) (LDD D		Indicators for	Problematic Hy	dric Soils: 3
Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L, R) Depleted Dark Surface (F1) Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Top (A Surface (S9)		•			☐ Polyvalue B MI RA 149B	elow Surface ()	S8) (LRR R,		2 cm Muck	(A10) (LRR K, L, I	MLRA 149B)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) LRR K, L) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No Stratified (A4) Stratified (A4) Stratified Layers (A5) Dark Surface (A12) Dark Surface (S7) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tron-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) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): Dark Surface (F6) Type: Depth (inches): Type: Dark Surface (F6) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surf						•	RR R MIRA	149R)	Coast Prairi	e Redox (A16) (LI	RR K, L, R)
Dark Surface (S7) (LRR K, L, M) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Dark Surface (F7) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S9) (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) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Dark Surface (S7) (LRR R, MLRA 149B) Hydric Soil Present? Yes No								(1150)	5 cm Mucky	Peat or Peat (S3) (LRR K, L, R)
Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox Depressions (F8) Seripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Wesic Spodic (TA6) (MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Wesic Spodic (TA6) (MLRA 149B) Wesic Spodic (TA6)						☐ Dark Surfac	e (S7) (LRR K, L,	M)
Thick Dark Surface (A12) Redox Dark Surface (F6) Tron-Manganese Masses (F12) (LRR K, L, R) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): 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) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Hydric Soil Present? Yes No No Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 149B) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? Yes No Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 149B)									Polyvalue B	elow Surface (S8)	(LRR K, L)
Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Dark Surface (S7) (LRR R, MLRA 149B) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Depth (inches): Depth (i				11)					☐ Thin Dark S	urface (S9) (LRR	K, L)
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Opeth (inches): Depth (inches): D							7)		☐ Iron-Manga	nese Masses (F12	?) (LRR K, L, R)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No •						-	')		Piedmont F	oodplain Soils (F1	.9) (MLRA 149B)
Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Idicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Itrictive Layer (if observed): Type: Depth (inches): Depth (i			S4)		Redux Depi	ESSIONS (FO)			Mesic Spodi	c (TA6) (MLRA 14	14A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Itrictive Layer (if observed): Type: Depth (inches): Depth (inche									Red Parent	Material (F21)	
Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Depth (inc	•								☐ Very Shallo	w Dark Surface (T	F12)
Type:	Dark Surf	ace (S7) (LR	R R, MLRA	149B)					Other (Expl	ain in Remarks)	
trictive Layer (if observed): Type: Depth (inches): marks: hydric Soil Present? Yes No No No No No No No No	ndicators o	f hydrophytic	vegetatio	n and wetla	nd hydrology must b	e present, unl	less disturbe	ed or proble	ematic.		
Type:											
Depth (inches): Hydric Soil Present? Yes No • No		ayei (ii obs	_								
marks: nydric indicators. The unusual abundance of rocks suggests the soil might have formed in artificial fill material. The soil pit was only dug to 1		has).							Hydric Soil Pres	ent? Yes	No ●
hydric indicators. The unusual abundance of rocks suggests the soil might have formed in artificial fill material. The soil pit was only dug to 1		nes):							-		
es due to a dense layer of rocks.					ce of rocks sugge	sts the soil n	night have	formed in	n artificial fill mater	ial. The soil pit	was only dug to 14
	es aue to	a dense ia	ayer of ro	CKS.							

Project/Site: Waunakee Library			City/County:	Waunakee, Dane C	co.	Sampling Date: 19-Apr-17
Applicant/Owner: Waunakee Library Boa	ard			State: Wis	consi Sampling	Point: 01c
Investigator(s): Scott Taylor			Section, To	ownship, Range: S	 s . 5 т.	8N R. 9E
Landform (hillslope, terrace, etc.): S	ummit		Local relief (c	oncave, convex, n	one): flat	Slope: 0.0 % / 0.0
Subregion (LRR or MLRA): LRR K		Lat.:	43.193247	Long	-89.449872	Datum: NAD83
Soil Map Unit Name: Alluvial land, we	+ (Af)		13.173217			fication: None
	. ,				_	
Are climatic/hydrologic conditions on	the site typ	ical for this time of y	ear? Ye	s O No 💿	(If no, explain in	•
Are Vegetation ✓ , Soil ∠ ,	or Hydrolo	gy Significant	tly disturbed?	Are "Normal	Circumstances"	present? Yes O No 💿
Are Vegetation \square , Soil \square ,	or Hydrolo	gy 🗌 naturally į	problematic?	(If needed, e	xplain any answ	ers in Remarks.)
Summary of Findings - Atta		map showing s	sampling p	oint location	s, transects	, important features, etc.
' ' '		No 💿				
		No 💿		e Sampled Area n a Wetland?	Yes O No 🖲	
Wetland Hydrology Present?	Yes 🔾	No 💿				
regularly mowed. Hydrology						
Wetland Hydrology Indicators:	roquirod: (chack all that apply)				ors (minimum of 2 required)
Primary Indicators (minimum of one Surface Water (A1)	required, c	Water-Stained Lea	avos (PO)		Surface Soil C Drainage Patt	
High Water Table (A2)		Aquatic Fauna (B1	` '		Moss Trim Lir	
Saturation (A3)		Marl Deposits (B1	-			/ater Table (C2)
☐ Water Marks (B1)		Hydrogen Sulfide	•		Crayfish Burro	,
Sediment Deposits (B2)		Oxidized Rhizosph	. ,	Roots (C3)	Saturation Vis	sible on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Reduc	ced Iron (C4)		Stunted or St	ressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduc	ction in Tilled Soil	ls (C6)	Geomorphic F	Position (D2)
☐ Iron Deposits (B5)		☐ Thin Muck Surface	e (C7)		Shallow Aquit	` '
Inundation Visible on Aerial Imagery		Other (Explain in I	Remarks)			phic Relief (D4)
Sparsely Vegetated Concave Surface	(88)				FAC-neutral T	est (D5)
Field Observations: Surface Water Present? Water Table Present? Saturation Present?	No •	Depth (inches):	-	. Wetland Hydr	ology Present?	Yes ○ No •
(includes capillary fringe) Yes	No 💿	Depth (inches):	0			
Describe Recorded Data (stream gau	ge, monitor	ring well, aerial photo	os, previous ins	spections), if availa	able:	
Remarks:						
No hydrology indicators. The plot occ	upied a hig	h bench, well elevat	ed above the n	earby wetland sar	nple plot 1A.	

(Distriction	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC: 0 (A)
2	0			
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				Species Across Air Strata.
5				Percent of dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/B)
6				
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)	=	= Total Cover	•	Total % Cover of: Multiply by:
	0			OBL species 0 x 1 = 0
1				FACW species $0 \times 2 = 0$
2				FAC species <u>5</u> x 3 = <u>15</u>
3				FACU species 135 x 4 = 540
4				UPL species $0 \times 5 = 0$
5	0			·
6	0			Column Totals: <u>140</u> (A) <u>555</u> (B)
7	0			Prevalence Index = B/A = 3.964
	0 =	= Total Cover		·
Herb Stratum (Plot size: 78.5				Hydrophytic Vegetation Indicators:
1 Poa pratensis	95	✓	FACU	Rapid Test for Hydrophytic Vegetation
2. Elymus repens	20		FACU	☐ Dominance Test is > 50%
S. Taurana afficiencia		$\overline{\Box}$	FACU	☐ Prevalence Index is ≤3.0 ¹
A. Mantana maisu		П	FACU	Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet)
5. Trifolium pratense			FACU	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
6. Viola sororia			FAC	1
7				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8	0			
9	0			Definitions of Vegetation Strata:
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12.		П		
12.		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size:)	110	- rotal core		greater than 3.28 ft (1m) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2.	0			size, and woody plants less than 3.28 ft tall.
3.	0			
1	0			Woody vine - All woody vines greater than 3.28 ft in height.
4				neight.
	=	= Total Cover	'	
				Hydrophytic Vegetation
				Present? Yes O No •
Demontor /Turkinda uhata mumbana hana ay ay a a annonto aha				
Remarks: (Include photo numbers here or on a separate she	-			
The plot was in a mowed turf area. It is possible some plant noted were group and growing suggesting the growing so			ut not obs	served due to close mowing. All of the herb layer species
noted were green and growing, suggesting the growing sea	son nau be	guii.		

Sampling Point: 01c

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 01c

(inches)		atrix	Redox Features		
	Color (mo		Color (moist) % Type 1 Loc		Remarks
0-24	10YR	2/2 100		Silt Loam	many rocks
					P
					•
			durand Matrice CC. Covered on Control Cond Covins	Loophian, Dl. Dana Lining M. N.	
		epietion. KM=Re	duced Matrix, CS=Covered or Coated Sand Grains 2	-	
lydric Soil I			Debarba D.L. O. C. (22) (122 2	Indicators for Probl	ematic Hydric Soils: 3
☐ Histosol (A			☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	2 cm Muck (A10)	(LRR K, L, MLRA 149B)
☐ Histic Epip			☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)	Coast Prairie Redo	ox (A16) (LRR K, L, R)
☐ Black Histi ☐			Loamy Mucky Mineral (F1) LRR K, L)	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)	Dark Surface (S7)	(LRR K, L, M)
_	Layers (A5)		Depleted Matrix (F3)	Polyvalue Below S	Surface (S8) (LRR K, L)
_	Below Dark Surfa	ace (A11)	Redox Dark Surface (F6)	☐ Thin Dark Surface	(S9) (LRR K, L)
_	k Surface (A12)		Depleted Dark Surface (F7)	☐ Iron-Manganese N	Masses (F12) (LRR K, L, R)
_	ck Mineral (S1)		Redox Depressions (F8)	Piedmont Floodpla	ain Soils (F19) (MLRA 149B)
_	yed Matrix (S4)		Redox Depressions (10)	Mesic Spodic (TA6	5) (MLRA 144A, 145, 149B)
Sandy Red				Red Parent Mater	al (F21)
Stripped M				Very Shallow Dark	Surface (TF12)
	ace (S7) (LRR R,	MLRA 149B)		Other (Explain in	Remarks)
Dark Surfa		getation and wet	land hydrology must be present, unless disturbed or p	roblematic.	
	hydrophytic veg				
³ Indicators of		ed):			
Indicators of	hydrophytic veg	ed):			
Indicators of estrictive La	ayer (if observ	ed):		Hydric Soil Present?	Yes O No •
Bindicators of estrictive La Type: Depth (inch	ayer (if observ	ed):		Hydric Soil Present?	Yes ○ No ●
Bindicators of estrictive Lateral Type: Depth (incharmarks:	nes):				Yes ○ No ●
Indicators of estrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes O No •
Indicators of estrictive La Type: Depth (inchemarks:	nes):		nce of rocks suggests the soil might have forme		Yes O No •
Indicators of estrictive La Type: Depth (inchemarks:	nes):		nce of rocks suggests the soil might have forme		Yes O No •
Indicators of estrictive La Type: Depth (inchemarks:	nes):		nce of rocks suggests the soil might have forme		Yes ○ No •
Indicators of estrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes ○ No ●
Bindicators of estrictive Lateral Type: Depth (incharmarks:	nes):		nce of rocks suggests the soil might have forme		Yes ○ No •
Indicators of estrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes O No •
Indicators of estrictive La Type: Depth (inchemarks:	nes):		nce of rocks suggests the soil might have forme		Yes O No •
Bindicators of estrictive Lateral Type: Depth (incharmarks:	nes):		nce of rocks suggests the soil might have forme		Yes O No •
Indicators of estrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes O No •
Bindicators of estrictive Lateral Type: Depth (incharmanks:	nes):		nce of rocks suggests the soil might have forme		Yes ○ No ●
Indicators of estrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes ○ No ●
³ Indicators of Restrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes ○ No ●
³ Indicators of Restrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes ○ No ●
³ Indicators of Restrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes O No •
³ Indicators of Restrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes O No O
³ Indicators of Restrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have form		Yes O No O
Indicators of estrictive La Type: Depth (inch	nes):		nce of rocks suggests the soil might have forme		Yes O No •

Project/Site: Waunakee Library			City/County:	Waunakee, Dane Co.	Sampli	ing Date: 19-Apr-17
Applicant/Owner: Waunakee Lib	rary Board			State: Wisco	nsi Sampling Point:	01d
Investigator(s): Scott Taylor			Section, To	ownship, Range: S.		R. 9E
Landform (hillslope, terrace, et	c.): Backslope		- '	oncave, convex, non		Slope: 2.0 % / 1.1 °
Subregion (LRR or MLRA): LF	RR K	Lat.:	43.193247	Long.:	-89.449872	Datum: NAD83
Soil Map Unit Name: Alluvial la			13.1332.17		NWI classification:	
	,				•	
Are climatic/hydrologic condition	ons on the site typ	oical for this time of yo	ear? Ye	s O No 💿 (I	f no, explain in Remark	-
Are Vegetation $lacksquare$, Soil	, or Hydrolo	gy 🗌 significant	ly disturbed?	Are "Normal Ci	rcumstances" present?	Yes No •
Are Vegetation $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$, or Hydrolo	gy 🗌 naturally p	roblematic?	(If needed, exp	olain any answers in Re	emarks.)
Summary of Findings	- Attach site	map showing s	ampling p	oint locations,	transects, impo	ortant features, etc.
Hydrophytic Vegetation Preser		No 💿	7-11-	Complet Ame		
Hydric Soil Present?		No •		e Sampled Area n a Wetland?	Yes O No 💿	
Wetland Hydrology Present?	Yes 🔾	No 💿				
Remarks: (Explain alternative Plot was in a mowed turf are precipitation for the previous	a. Using the Natu	ral Resource Conserva	ation Service w	•	•	•
total precipitation was 2.6 incregularly mowed.						
regularly mowed.						
Hydrology						
Wetland Hydrology Indicators	:			S	econdary Indicators (minii	mum of 2 required)
Primary Indicators (minimum	of one required;	check all that apply)			Surface Soil Cracks (B6	5)
Surface Water (A1)		Water-Stained Lea	ves (B9)		Drainage Patterns (B10	0)
High Water Table (A2)		Aquatic Fauna (B13	3)		Moss Trim Lines (B16)	
Saturation (A3)		Marl Deposits (B15	5)	L	Dry Season Water Tab	le (C2)
☐ Water Marks (B1)		Hydrogen Sulfide (` '	L	Crayfish Burrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizosphe		Roots (C3)	Saturation Visible on A	5 , . ,
Drift deposits (B3)		Presence of Reduc	. ,	L	Stunted or Stressed Pla	• •
☐ Algal Mat or Crust (B4)		Recent Iron Reduc		s (C6)	Geomorphic Position (I	D2)
☐ Iron Deposits (B5)	magan, (P7)	☐ Thin Muck Surface	(-)	L	Shallow Aquitard (D3)	((D.4)
Inundation Visible on Aerial IrSparsely Vegetated Concave 9		Other (Explain in R	Remarks)	L	☐ Microtopographic Relie	et (D4)
Sparsely vegetated Coricave s	Surface (Bo)			L	FAC-neutral Test (D5)	
Field Observations:						
	es O No 💿	Depth (inches):	0			
Water Table Present? You	es O No 💿	Depth (inches):	0		- V	O N- 0
Saturation Present? (includes capillary fringe)	es O No 💿	Depth (inches):	0	Wetland Hydrolo	ogy Present? Yes	○ No •
Describe Recorded Data (strea	am gauge, monito	ring well, aerial photo	s, previous ins	spections), if availab	le:	
Remarks:						
No hydrology indicators. The p	olot was well eleva	ated above the nearby	y wetland samı	ple plot 1A.		

(Distriction	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That are OBL, FACW, or FAC:0(A)
2				Total Number of Dominant
3	0			Species Across All Strata:1(B)
4	0			
5	0			Percent of dominant Species That Are OBL_FACW_or_FAC: 0.0% (A/B)
6	0			That Are OBL, FACW, or FAC: 0.0% (A/B)
7	0			Prevalence Index worksheet:
C II (CI I C I C I (Dist circu	0 =	= Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1				FACW species
2				FAC species $0 \times 3 = 0$
3				FACU species $110 \times 4 = 440$
4				UPL species $0 \times 5 = 0$
5				·
6	0			Column Totals: <u>110</u> (A) <u>440</u> (B)
7	0	Ш		Prevalence Index = B/A = <u>4.000</u>
Herb Stratum (Plot size: _78.5)	0 =	= Total Cover		Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
1. Poa pratensis	95	<u>~</u>	FACU	Dominance Test is > 50%
2. Schedonorus arundinaceus			FACU	Prevalence Index is ≤3.0 ¹
3. Glechoma hederacea	5		FACU	Morphological Adaptations ¹ (Provide supporting
4	0			data in Remarks or on a separate sheet)
5	0			Problematic Hydrophytic Vegetation ¹ (Explain)
6	0			
7				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8				
9				Definitions of Vegetation Strata:
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12		П		Osalian/shash Masaharlanda lasa than Oir DDI and
	110 =	= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)		_		9.00.0. 0.20 1. (111.) 0.111
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	= Total Cover		
				Hydrophytic Vegetation
				Present? Yes No •
Remarks: (Include photo numbers here or on a separate she	et.)			
The plot was in a mowed turf area. It is possible some plant	-	ere nresent h	ut not obs	served due to close mowing. All of the herh laver species
noted were green and growing, suggesting the growing sea			at not obs	served due to close moving. All of the herb layer species

Sampling Point: 01d

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 01d

		Matrix			Redox Featu						
(inches)	Color (m		<u>%</u>	Color (moist) %	Type ¹	Loc ²	Texture			marks
0-30	10YR	2/1	100					Silt Loam		many rocks	
								-			
								-			
pe: C=Con	centration. D=	Depletion.	. RM=Redu	uced Matrix, CS=Co	vered or Coate	d Sand Grai	ns ²Loca	tion: PL=Pore Lining.	M=Ma	atrix	
	Indicators:	•		·				Indicators for			
Histosol (Polyvalue F	Selow Surface (S8) (LRR R.					
-	pedon (A2)			MLRA 149E		, (,		2 cm Muck (
Black Hist				Thin Dark 9	Surface (S9) (L	.RR R, MLRA	(149B)	Coast Prairie			
_	Sulfide (A4)			Loamy Muc	ky Mineral (F1)) LRR K, L)		5 cm Mucky			
	Layers (A5)			Loamy Gle	ed Matrix (F2)			☐ Dark Surface		-	-
_	Below Dark Su	ırface (A1	1)	Depleted M	atrix (F3)			Polyvalue Be			
_	k Surface (A12		,	Redox Darl	Surface (F6)			Thin Dark Su			
_	ick Mineral (S1)			Depleted D	ark Surface (F7	7)					(LRR K, L, R)
_	eyed Matrix (S4			Redox Dep	ressions (F8)						(MLRA 149B)
Sandy Re		,									A, 145, 149B)
_	Matrix (S6)							Red Parent I Very Shallov			2)
_	ace (S7) (LRR	R, MLRA 1	149B)					Other (Expla		-	12)
	f hydrophytic y	rogotation	and watlar	ad bydrology must	ho procent unl	occ dicturbo	d or proble		111111111111111111111111111111111111111	.cmarks)	
Indicators of	i ilyulopilyuc v		and Wedai	id Hydrology must	be present, uni	ess distuibe	a or proble	illauc.			
		rved):									
estrictive L	ayer (if obser	/						Hydric Soil Prese	nt?	Yes 🔾	No •
	ayer (if obsei							nyuric Soil Prese	entr	yes ∪	NO S
strictive L											
estrictive L Type: Depth (inc											
Type: Depth (inc	hes):		abundano	e of rocks sugge	sts the soil m	night have	formed in	n artificial fill mater	ial.		
strictive L Type: Depth (inc	hes):		abundano	e of rocks sugge	sts the soil m	night have	formed in	n artificial fill mater	ial.		
strictive L Type: Depth (inc	hes):		abundano	e of rocks sugge	sts the soil m	night have	formed in	n artificial fill mater	ial.		
strictive L Type: Depth (inceptnarks:	hes):		abundand	e of rocks sugge	sts the soil m	night have	formed in	n artificial fill mater	ial.		
strictive L Type: Depth (inc	hes):		abundand	te of rocks sugge	sts the soil n	night have	formed ii	n artificial fill mater	ial.		
strictive L Type: Depth (inceptnarks:	hes):		abundand	ce of rocks sugge	sts the soil m	night have	formed in	n artificial fill mater	ial.		
Type: Depth (incemarks:	hes):		abundand	e of rocks sugge	sts the soil m	night have	formed ii	n artificial fill mater	ial.		
Type: Depth (incemarks:	hes):		abundand	e of rocks sugge	sts the soil n	night have	formed in	n artificial fill mater	ial.		
Type: Depth (inc	hes):		abundand	e of rocks sugge	sts the soil n	night have	formed in	n artificial fill mater	ial.		
Type: Depth (incesting)	hes):		abundand	e of rocks sugge	sts the soil n	night have	formed in	n artificial fill mater	ial.		
Type: Depth (incesting)	hes):		abundand	te of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
estrictive L Type: Depth (inc emarks:	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
estrictive L Type: Depth (inc	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
Type:	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
Type: Depth (inc Remarks:	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
estrictive L Type: Depth (inc	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
estrictive L Type: Depth (inc	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
estrictive L Type: Depth (inc	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
Type: Depth (incesting)	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		
Type: Depth (inc	hes):		abundand	ce of rocks sugge	ests the soil n	night have	formed in	n artificial fill mater	ial.		

Project/Site: Waunakee Libra	ary		City/County:	Waunakee, Dane Co.	Samplii	ng Date: 19-Apr-17
Applicant/Owner: Waunakee	e Library Board			State: Wiscons	Sampling Point:	02a
Investigator(s): Scott Taylo	r		Section, To	ownship, Range: S. 5		r. 9E
Landform (hillslope, terrace	, etc.): Toeslope		_ Local relief (co	oncave, convex, none)	: concave	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA):	LRR K	l at .	_			
		Lal.:	43.193247	Long.: -	89.449872	
Soil Map Unit Name: Alluvia	al land, wet (Af)				NWI classification:	<u>T3K</u>
Are climatic/hydrologic con	ditions on the site typ	pical for this time of y	ear? Ye	s O No 💿 (If r	no, explain in Remark	•
Are Vegetation $\ \ \ \ $, So	il 🗌 , or Hydrolo	ogy 🗌 significant	ly disturbed?	Are "Normal Circ	umstances" present?	Yes No
Are Vegetation, So	il 🗸 , or Hydrolo	ogy 🗌 naturally p	roblematic?	(If needed, expla	nin any answers in Re	marks.)
Summary of Finding	gs - Attach site	map showing s	ampling p	oint locations, t	ransects, impo	rtant features, etc.
Hydrophytic Vegetation Pro	esent? Yes •	No O				
Hydric Soil Present?	Yes 💿	No O		e Sampled Area n a Wetland?	es 💿 No 🔾	
Wetland Hydrology Presen	_{t?} Yes ⊙	No O		a victiana.		
Remarks: (Explain alterna		or in a separate repo	rt.)			
Hydrology						
Wetland Hydrology Indicat	ors:			Sec	ondary Indicators (minin	num of 2 required)
Primary Indicators (minim	um of one required;	check all that apply)			Surface Soil Cracks (B6))
Surface Water (A1)		Water-Stained Lea	ves (B9)		Drainage Patterns (B10))
High Water Table (A2)		Aquatic Fauna (B1	•		Moss Trim Lines (B16)	
Saturation (A3)		Marl Deposits (B15	•		Dry Season Water Table	e (C2)
Water Marks (B1)		Hydrogen Sulfide (` ,		Crayfish Burrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizospho		Roots (C3)	Saturation Visible on Ae	• , , ,
Drift deposits (B3)		Presence of Reduc	. ,		Stunted or Stressed Pla	• ,
☐ Algal Mat or Crust (B4)☐ Iron Deposits (B5)		Recent Iron Reduc		s (C6)	Geomorphic Position (D	(2)
Inundation Visible on Aeri	al Imageny (R7)	☐ Thin Muck Surface	` ,		Shallow Aquitard (D3)	(D4)
Sparsely Vegetated Conca		Other (Explain in R	Remarks)		Microtopographic Relief FAC-neutral Test (D5)	(04)
Sparsely regetated correct	ive surface (56)				TAC ficultal Test (D3)	
Field Observations:	Yes O No O	5 4 6 1)	2			
Surface Water Present?		Depth (inches):	0			
Water Table Present?	Yes ● No ○	Depth (inches):	20	Wetland Hydrolog	v Present? Yes	● No ○
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	10	wedalia nyarolog	y Present? Tes	C 110 C
Describe Recorded Data (s	tream gauge, monito	ring well, aerial photo	os, previous ins	spections), if available	:	
Remarks:						
The plot met the criteria of be likely.	Geomorphic Positior	n since it occupied a k	ow bench by a	stream where prolong	ged, frequent saturati	ion or inundation would

(Diet size)	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	<u>Species:</u>	Status	Number of Dominant Species
1				That are OBL, FACW, or FAC:(A)
2				Total Number of Dominant
3	0			Species Across All Strata:1 (B)
4	0			
5	0			Percent of dominant Species That Are OBL_FACW_or_FAC: 100.0% (A/B)
6	0			That Are OBL, FACW, or FAC:100.0% (A/B)
7				Prevalence Index worksheet:
		Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1				FACW species 100 x 2 = 200
2	0			FAC species $0 \times 3 = 0$
3	0			·
4				FACU species $\frac{12}{2}$ x 4 = $\frac{48}{2}$
5				UPL species $0 \times 5 = 0$
6				Column Totals: <u>112</u> (A) <u>248</u> (B)
7	0			Prevalence Index = B/A = 2.214
		Total Cover		Prevalence index – b/A – <u>2.214</u>
Herb Stratum (Plot size: 78.5)		- Iotai covei		Hydrophytic Vegetation Indicators:
A Blade to a discount	100	✓	FACW	Rapid Test for Hydrophytic Vegetation
1. Pnaiaris arundinacea 2. Glechoma hederacea	10		FACU	✓ Dominance Test is > 50%
- Allie de meliele				✓ Prevalence Index is ≤3.0 ¹
3. Alliaria petiolata			FACU	☐ Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6				
7	0			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8				
9				Definitions of Vegetation Strata:
0				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
1				at breast height (DBH), regardless of height.
2.				at broadt holght (BBH), rogardiodd o'r holght.
Z				Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size:)	112 =	Total Cover		greater than 3.28 ft (1m) tall
	0			Herb - All herbaceous (non-woody) plants, regardless of
1	0			size, and woody plants less than 3.28 ft tall.
2				
3				Woody vine - All woody vines greater than 3.28 ft in
4				height.
	=	Total Cover	•	
				Hydrophytic
				Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate she	•			
Γhe plot was in an open, grassy area. All of the herb layer s				
very early in the growing season, it is possible that some sp	ecies were _l	present but i	not observ	ed.

Sampling Point: 02a

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 02a

Profile Desci Depth	iption: (De	scribe to	the depth	needed to d		the indiction that the indiction the indiction that		onfirm the	absence of indicators.)	
(inches)	Color	(moist)	%	Color (moist)	%	Type ¹	Loc ²		Remarks
0-16	10YR	2/1	100						Silt Loam	
16-30	10YR	2/1	95	7.5YR	4/6	5		PL	Silty Clay Loam	
10-30	TUTK			7.51K		· —	_ 	- FL	Silty Clay Loain	
										= -
	-	-								
vpe: C=Con	centration. [======================================	n. RM=Red	uced Matrix.	CS=Covere	ed or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=N	– ————————————————————————————————————
	Indicators:									
Histosol (Poly	value Belov	v Surface	(S8) (LRR F	₹.		lematic Hydric Soils: 3
_ `	pedon (A2)				value belov A 149B)	. Januace	(JU) (LINIT	٠,		(LRR K, L, MLRA 149B)
Black Hist				Thin	Dark Surfa	ace (S9) (LRR R, MLF	RA 149B)		ox (A16) (LRR K, L, R)
_	ic (A3) Sulfide (A4)	١					L) LRR K, L			or Peat (S3) (LRR K, L, R)
_)			ny Gleyed I	•		•	Dark Surface (S7) (LRR K, L, M)
_	Layers (A5)	C	141		eted Matrix		,		Polyvalue Below S	Surface (S8) (LRR K, L)
_	Below Dark		11)		ox Dark Sur				☐ Thin Dark Surface	e (S9) (LRR K, L)
_	k Surface (A				eted Dark !	. ,			☐ Iron-Manganese	Masses (F12) (LRR K, L, R)
_ ′	ıck Mineral (•			ox Depressi	•	<i>'</i>)		Piedmont Floodpl	lain Soils (F19) (MLRA 149B)
Sandy Gle	eyed Matrix ((S4)		Reut	ox Depress	ions (Fo)			Mesic Spodic (TA	6) (MLRA 144A, 145, 149B)
」Sandy Re	dox (S5)								Red Parent Mater	rial (F21)
Stripped	Matrix (S6)								Very Shallow Dar	k Surface (TF12)
Dark Surf	ace (S7) (LR	R R, MLRA	149B)						✓ Other (Explain in	
Indicators o	f hydrophytic	c vegetation	n and wetla	nd hydrology	must be p	resent, ur	nless disturl	ped or probl		,
	ayer (if obs					·				
Type:	ayer (ii obs	serveu).								
Depth (inc	hes).								Hydric Soil Present?	Yes No
	1103).									
emarks:										
hydric ind	icators obs	erved (th	e redox co	oncentration	ns began	too deep	to meet	the criteria	of a hydric indicator) h	owever professional judgment
is used to uvial depos		e soii was	nyarıc ba	sed on the	vegetatioi	n and ny	arology in	aicators. r	no B-norizon was noted;	the soil consisted of deep
iviai uepos	oito.									

Project/Site: Waunakee Library		City/County:	Waunakee, Dane C	o. Samp	oling Date: 19-Apr-17
Applicant/Owner: Waunakee Library Board			State: Wise	consi Sampling Point:	02b
Investigator(s): Scott Taylor		Section, To	wnship, Range: S	. 5 т. 8N	R. 9E
Landform (hillslope, terrace, etc.): Backsl	lope	_	oncave, convex, no		Slope: 2.0 % / 1.1°
Subregion (LRR or MLRA): LRR K	Lat.:	43.193247	Long.	: -89.449872	Datum: NAD83
Soil Map Unit Name: Alluvial land, wet (Af				NWI classification	······································
		Ve	s O No 💿	_	
Are climatic/hydrologic conditions on the s		-		(If no, explain in Rema	, w
		tly disturbed?		Circumstances" present	••
		problematic?		xplain any answers in F	•
Summary of Findings - Attach		sampling po	oint locations	s, transects, imp	ortant features, etc.
Hydrophytic Vegetation Present? Yes		Te the	Campled Area		
Hydric Soil Present? Yes			Sampled Area n a Wetland?	Yes O No 💿	
Wetland Hydrology Present? Yes	O No •				
Hydrology					
Wetland Hydrology Indicators:				Secondary Indicators (mir	nimum of 2 required)
Primary Indicators (minimum of one requ	uired; check all that apply)			Surface Soil Cracks (E	
Surface Water (A1)	Water-Stained Lea	aves (B9)		Drainage Patterns (B:	·
High Water Table (A2)	Aquatic Fauna (B1	13)		Moss Trim Lines (B16	5)
Saturation (A3)	Marl Deposits (B15	5)		Dry Season Water Ta	` '
Water Marks (B1)	Hydrogen Sulfide	` ,		Crayfish Burrows (C8	•
Sediment Deposits (B2)	Oxidized Rhizosph		Roots (C3)	Saturation Visible on	• , , ,
☐ Drift deposits (B3) ☐ Algal Mat or Crust (B4)	Presence of Reduc	,	(26)	Stunted or Stressed F	• •
Iron Deposits (B5)	Recent Iron Reduc		s (C6)	Geomorphic Position Shallow Aguitard (D3	` '
Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface☐ Other (Explain in F			Microtopographic Rel	'
Sparsely Vegetated Concave Surface (B8)	Utici (Explain iii i	Kemarks)		FAC-neutral Test (D5)	
Field Observations:					,
	Depth (inches):	0			
	Depth (inches):	0	Wetland Hydro	alogy Present? Yes	s ○ No •
Saturation Present? (includes capillary fringe) Yes No	Depth (inches):	0	WGuuna nya.	nogy riesche.	
Describe Recorded Data (stream gauge, n	nonitoring well, aerial photo	os, previous ins	pections), if availa	ble:	
Remarks:					
No hydrology indicators. The plot occupied	d a gentle slope, well eleva	ited above the i	nearby wetland sa	mple plot 2A.	

(DL) de de	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC:0(A)
2	0			Total Number of Dominant
3	0			Species Across All Strata: 2 (B)
4	0			
5	0			Percent of dominant Species That Are OBL_FACW_or_FAC: 0.0% (A/B)
6				That Are OBL, FACW, or FAC: 0.0% (A/B)
7				Prevalence Index worksheet:
		= Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1	0			FACW species 0 x 2 = 0
2	0			·
3				FAC species $0 \times 3 = 0$
4				FACU species $165 \times 4 = 660$
5				UPL species $0 \times 5 = 0$
6.				Column Totals: <u>165</u> (A) <u>660</u> (B)
7	0			Dravalanca Indox - P/A - 4 000
		= Total Cover		Prevalence Index = B/A = 4.000
Herb Stratum (Plot size: 78.5		- Total Cover		Hydrophytic Vegetation Indicators:
1 Poa pratensis	95	✓	FACU	Rapid Test for Hydrophytic Vegetation
roa pratensis Schedonorus arundinaceus	60	✓	FACU	☐ Dominance Test is > 50%
Clashama hadarassa	10		FACU	Prevalence Index is ≤3.0 ¹
			FACU	$oxedsymbol{oxed}$ Morphological Adaptations 1 (Provide supporting
4				data in Remarks or on a separate sheet)
5				☐ Problematic Hydrophytic Vegetation ¹ (Explain)
6				1
7				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8				
9	0			Definitions of Vegetation Strata:
10	0			Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11	0			at breast height (DBH), regardless of height.
12				Carling/about Mandy plants land than 2 in DDI and
	165 =	= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				9.00.0
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	= Total Cover		
				Hydrophytic
				Vegetation Present? Yes ○ No ●
				Present? Yes O NO S
Remarks: (Include photo numbers here or on a separate she	et.)			
The plot was in a mowed turf area. It is possible some plant	t species we	ere present b	ut not obs	served due to close mowing. All of the herb layer species
noted were green and growing, suggesting the growing sea	son had be	gun.		

Sampling Point: 02b

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 02b

ches) Color (1-13 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	2/2 100 3/3 100	educed Matrix, CS=Covered or Coated Sand Grains 2Loca Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
e: C=Concentration. D ric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark S Thick Dark Surface (A1 Sandy Muck Mineral (S Sandy Gleyed Matrix (S	=Depletion. RM=R	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Silty Clay Loam Silty Clay Loam Indicators for Properture Care Muck (A1	=Matrix blematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
C=Concentration. D c Soil Indicators: stosol (A1) stic Epipedon (A2) ack Histic (A3) vdrogen Sulfide (A4) ratified Layers (A5) epleted Below Dark S anck Dark Surface (A1 andy Muck Mineral (S andy Gleyed Matrix (S	=Depletion. RM=R	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	ation: PL=Pore Lining. M Indicators for Pro 2 cm Muck (A1	=Matrix bblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
c Soil Indicators: stosol (A1) stic Epipedon (A2) ack Histic (A3) rdrogen Sulfide (A4) ratified Layers (A5) epleted Below Dark S ick Dark Surface (A1 ndy Muck Mineral (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
Soil Indicators: cosol (A1) cic Epipedon (A2) ck Histic (A3) lrogen Sulfide (A4) atified Layers (A5) oleted Below Dark S ck Dark Surface (A1 dy Muck Mineral (S dy Gleyed Matrix (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
Soil Indicators: tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4) atified Layers (A5) oleted Below Dark S ck Dark Surface (A1 ady Muck Mineral (S ady Gleyed Matrix (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
c Soil Indicators: stosol (A1) stic Epipedon (A2) ack Histic (A3) rdrogen Sulfide (A4) ratified Layers (A5) epleted Below Dark S ick Dark Surface (A1 ndy Muck Mineral (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4) atified Layers (A5) pleted Below Dark S ick Dark Surface (A1) andy Muck Mineral (S andy Gleyed Matrix (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
et soil Indicators: stosol (A1) stic Epipedon (A2) sck Histic (A3) drogen Sulfide (A4) atified Layers (A5) pleted Below Dark Sick Dark Surface (A1) andy Muck Mineral (Sindy Gleyed Matrix (Sindy Gley	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
c Soil Indicators: stosol (A1) stic Epipedon (A2) ack Histic (A3) vdrogen Sulfide (A4) ratified Layers (A5) epleted Below Dark S sick Dark Surface (A1 andy Muck Mineral (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
c Soil Indicators: stosol (A1) stic Epipedon (A2) ack Histic (A3) vdrogen Sulfide (A4) ratified Layers (A5) epleted Below Dark S sick Dark Surface (A1 andy Muck Mineral (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
c Soil Indicators: stosol (A1) stic Epipedon (A2) ack Histic (A3) vdrogen Sulfide (A4) ratified Layers (A5) epleted Below Dark S nick Dark Surface (A1 andy Muck Mineral (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
istosol (A1) istic Epipedon (A2) iack Histic (A3) ydrogen Sulfide (A4) ydrogen Sulfide (A4) cratified Layers (A5) epleted Below Dark S hick Dark Surface (A1 andy Muck Mineral (S andy Gleyed Matrix (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
c Soil Indicators: stosol (A1) stic Epipedon (A2) ack Histic (A3) vdrogen Sulfide (A4) ratified Layers (A5) epleted Below Dark S nick Dark Surface (A1 andy Muck Mineral (S	, ,	Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	Indicators for Pro 2 cm Muck (A1 Coast Prairie R	oblematic Hydric Soils: 3 0) (LRR K, L, MLRA 149B)
stosol (A1) stic Epipedon (A2) ack Histic (A3) drogen Sulfide (A4) atified Layers (A5) pleted Below Dark S ack Dark Surface (A1) andy Muck Mineral (S andy Gleyed Matrix (S	Surface (A11)	MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Loamy Mucky Mineral (F1) LRR K, L)	2 cm Muck (A1 Coast Prairie R	0) (LRR K, L, MLRA 149B)
ck Histic (A3) drogen Sulfide (A4) atified Layers (A5) pleted Below Dark S ick Dark Surface (A1 andy Muck Mineral (S andy Gleyed Matrix (S	Surface (A11)	☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) ☐ Loamy Mucky Mineral (F1) LRR K, L)	Coast Prairie R	
drogen Sulfide (A4) atified Layers (A5) pleted Below Dark S ick Dark Surface (A1 ndy Muck Mineral (S ndy Gleyed Matrix (S	Gurface (A11)	Loamy Mucky Mineral (F1) LRR K, L)		edox (A16) (LRR K, L, R)
ratified Layers (A5) epleted Below Dark S ick Dark Surface (A1 ndy Muck Mineral (S ndy Gleyed Matrix (S	Surface (A11)		3 CITI MUCKY PE	eat or Peat (S3) (LRR K, L, R)
epleted Below Dark S hick Dark Surface (Al andy Muck Mineral (S andy Gleyed Matrix (S	Surface (A11)	Loamy (-leved Matrix (E))	Dark Surface (S7) (LRR K, L, M)
hick Dark Surface (Al andy Muck Mineral (S andy Gleyed Matrix (S	Surface (A11)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Polyvalue Belo	w Surface (S8) (LRR K, L)
ndy Muck Mineral (S ndy Gleyed Matrix (S	2)	Redox Dark Surface (F6)	☐ Thin Dark Surfa	ace (S9) (LRR K, L)
ndy Gleyed Matrix (Depleted Dark Surface (F7)	☐ Iron-Manganes	se Masses (F12) (LRR K, L, R)
	•	Redox Depressions (F8)	_	dplain Soils (F19) (MLRA 149B)
	o 4)	, , ,	_	TA6) (MLRA 144A, 145, 149B)
tripped Matrix (S6)			Red Parent Ma	
ark Surface (S7) (LRI	R R. MI RA 149B)		_ `	Park Surface (TF12)
	•	tland hydrology must be present, unless disturbed or probl	Other (Explain	in Remarks)
		tiana nyarology must be present, unless disturbed of probl	lemauc.	
ictive Layer (if obso pe:	ervea):			
pth (inches):			Hydric Soil Present	? Yes O No 💿
arks:				
ric indicators. The	unusual abund	ance of rocks suggests the soil might have formed i	in artificial fill material	•
		33		

Project/Site: Waunakee Library			City/County:	Waunakee, Dane C	Co. Sa	ampling Date: 19-Apr-17
Applicant/Owner: Waunakee Library Bo	ard			State: Wis	consi Sampling Po	oint: 02c
Investigator(s): Scott Taylor			Section, To	ownship, Range: \$	 s. 5 т. 8N	R. 9E
Landform (hillslope, terrace, etc.):	Shoulder		_ Local relief (co	oncave, convex, n	one): convex	Slope: 5.0 % / 2.9°
Subregion (LRR or MLRA): LRR K		Lat.:	43.193247	Long	·· -89.449872	Datum: NAD83
Soil Map Unit Name: Alluvial land, w	et (Af)		1011702 17		NWI classifica	
	. ,			s O No 💿	_	
Are climatic/hydrologic conditions on	the site typica	al for this time of y	/ear? Yes	s ○ No ●	(If no, explain in Re	•
Are Vegetation . , Soil .	, or Hydrology	significant	tly disturbed?	Are "Normal	Circumstances" pre	sent? Yes No
Are Vegetation , Soil .	, or Hydrology	naturally p	problematic?	(If needed, e	xplain any answers	in Remarks.)
Summary of Findings - Att	ach site m	ap showing s	sampling p	oint location	s, transects, i	mportant features, etc.
Hydrophytic Vegetation Present?		0				
Hydric Soil Present?		o		Sampled Area	Yes \bigcirc No $ullet$	
Wetland Hydrology Present?	Yes O No	o				
Hydrology						
Wetland Hydrology Indicators:						() ()
Primary Indicators (minimum of one	e required: che	eck all that annly)			Surface Soil Crac	(minimum of 2 required)
Surface Water (A1)	<u> </u>	Water-Stained Lea	aves (B9)		Drainage Patterns	• •
High Water Table (A2)		Aquatic Fauna (B1	` ,		Moss Trim Lines	
Saturation (A3)		Marl Deposits (B1	5)		Dry Season Wate	er Table (C2)
Water Marks (B1)		Hydrogen Sulfide	Odor (C1)		Crayfish Burrows	(C8)
Sediment Deposits (B2)		Oxidized Rhizosph	neres along Living	Roots (C3)	Saturation Visible	e on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Redu	` ,		Stunted or Stress	
Algal Mat or Crust (B4)	L	Recent Iron Redu		s (C6)	Geomorphic Posit	
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imagery	(B7) _	Thin Muck Surface			Shallow AquitardMicrotopographic	` '
Sparsely Vegetated Concave Surface	· · ·	Other (Explain in I	Remarks)		FAC-neutral Test	
_ sparse, regeater same same	()					(23)
Field Observations: Surface Water Present? Yes	No •	Depth (inches):	0			
Water Table Present? Yes						
		Depth (inches):		Wetland Hydro	ology Present?	Yes O No •
(includes capillary fringe) Yes		Depth (inches):				
Describe Recorded Data (stream gau	age, monitoring	g well, aerial photo	os, previous ins	pections), if availa	able:	
Remarks:						
No hydrology indicators. The plot oc	cupied a steep) slope, well elevat	ed above the n	earby wetland sai	mple plot 2A.	

VEGETATION - OSE SCIENTIFIC Harries of plan	its			Sampling Point: 02c
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	Dominance Test worksheet:
1	0			Number of Dominant Species That are OBL, FACW, or FAC:
2 3				Total Number of Dominant
4				Species Across All Strata:3(B)
5	0			Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)
6				
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 2,826 sf)	:	= Total Cover		Total % Cover of: Multiply by: OBL species 0 x 1 = 0
1 Acer negundo	60	✓	FAC	FACW species $40 \times 2 = 80$
2. Ulmus americana	30	✓	FACW	FAC species 65 x 3 = 195
3. Lonicera x bella	10		FACU	FACU species $60 \times 4 = 240$
4				UPL species $\frac{5}{25}$ x 5 = $\frac{25}{25}$
5				N
6				Column Totals: <u>170</u> (A) <u>540</u> (B)
7	 100 :			Prevalence Index = B/A = 3.176
Herb Stratum (Plot size: 78.5)		- Total Cover		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation
1 _ Alliaria petiolata	50	✓	FACU	✓ Dominance Test is > 50%
2. Phalaris arundinacea	10		FACW	Prevalence Index is ≤3.0 ¹
3. Viola sororia	5		FAC	
4. Leonurus cardiaca	5		UPL	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5	0			Problematic Hydrophytic Vegetation ¹ (Explain)
6				
7	0			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8 9				Definitions of Vegetation Strata:
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11	0			at breast height (DBH), regardless of height.
12		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2				size, and woody plants less than 3.28 ft tall.
3				Woody vine - All woody vines greater than 3.28 ft in
4				height.
		= Total Cover		
				Hydrophytic Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate she The plot was in a brushy, wooded area. Most of the herb lay	•	were green a	and growir	ng and most of the woody species had begun leaf out,

suggesting the growing season had begun. Since it was very early in the growing season, it is possible that some species were present but not observed. Although the site was dominated by hydrophytic vegetation, the absence of hydric soil indicators and the absence of wetland hydrology indicators strongly suggest this site would be capable of supporting upland vegetation. Also note the FAC Neutral Test was not met and the P-Index was > 3.

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 02c

	iption: (Des		the depth	needed to document the i		nfirm the a	absence of indicators.)	
Depth (inches)	Color (Matrix	%	Color (moist)	eatures % Type ¹	Loc2	Texture	Remarks
0-20	10YR	2/2	100	Color (Illoist)	70 Type	LUC-	Silt Loam	Remarks
		-						
20-30	10YR	3/3					Silty Clay Loam	-
		-						
		=Depletio	n. KM=Kedi	uced Matrix, CS=Covered or C	Loated Sand Grai	ns ²Loca		
	Indicators:			Determine D. L. C. C.	(CO) (LDD -		Indicators for Prob	lematic Hydric Soils: 3
Histosol (-			Polyvalue Below Surf MLRA 149B)	ace (S8) (LRR R,			(LRR K, L, MLRA 149B)
	pedon (A2)			Thin Dark Surface (St	9) (LRR R, MLRA	\ 149B)	Coast Prairie Red	ox (A16) (LRR K, L, R)
Black Hist	Sulfide (A4)			Loamy Mucky Minera		- ,	5 cm Mucky Peat	or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loamy Gleyed Matrix			Dark Surface (S7) (LRR K, L, M)
	Below Dark S	Surface (A	11\	Depleted Matrix (F3)				Surface (S8) (LRR K, L)
	k Surface (A1		11)	Redox Dark Surface (Thin Dark Surface	
	ick Mineral (S			Depleted Dark Surface				Masses (F12) (LRR K, L, R)
_	eyed Matrix (S			Redox Depressions (I				ain Soils (F19) (MLRA 149B)
Sandy Re		54)						6) (MLRA 144A, 145, 149B)
_	Matrix (S6)						Red Parent Mater	
_	ace (S7) (LRF	R R. MI RA	149B)				☐ Very Shallow Dar	
							Other (Explain in	Remarks)
			n and wetia	nd hydrology must be presen	t, uniess disturbe	a or proble	ematic.	
	ayer (if obs	erved):						
Type:							Hydric Soil Present?	Yes ○ No ●
Depth (inc	hes):						Hydric 3011 Present:	TES UND U
emarks:								
hydric ind	icators.							

Project/Site: Waunakee Libra	ary		City/County:	Waunakee, Dane Co.	Sampli	ng Date: 19-Apr-17
Applicant/Owner: Waunakee	Library Board			State: Wiscons	Sampling Point:	03a
Investigator(s): Scott Taylo	r		Section, To	ownship, Range: S. 5		r. 9E
Landform (hillslope, terrace	, etc.): Toeslope			oncave, convex, none)		Slope: 0.0 % / 0.0 °
			_			-
Subregion (LRR or MLRA):	LRR K	Lat.:	43.193247	Long.: -	89.449872	Datum: NAD83
Soil Map Unit Name: Alluvia	al land, wet (Af)				NWI classification:	None
Are climatic/hydrologic con	ditions on the site typ	oical for this time of y	ear? Ye	s O No 💿 (If i	no, explain in Remark	•
Are Vegetation, Soi	i , or Hydrolo	gy significant	ly disturbed?	Are "Normal Circ	umstances" present?	Yes 💿 No 🔾
Are Vegetation, Soi	il 🗸 , or Hydrolo	ogy naturally r	roblematic?	(If needed, expla	ain any answers in Re	marks.)
Summary of Finding					-	•
Hydrophytic Vegetation Pro	esent? Yes •	No O				
Hydric Soil Present?	Yes 💿	No O		e Sampled Area n a Wetland?	es • No O	
Wetland Hydrology Present	_{t?} Yes ⊙	No O	Wich	i u wedana:		
Remarks: (Explain alterna		or in a separate repo	rt.)			
Hydrology						
Wetland Hydrology Indicat	ors:			Sec	ondary Indicators (minin	num of 2 required)
Primary Indicators (minim	um of one required;	check all that apply)			Surface Soil Cracks (B6))
Surface Water (A1)		Water-Stained Lea	ves (B9)		Drainage Patterns (B10)
High Water Table (A2)		Aquatic Fauna (B13	3)		Moss Trim Lines (B16)	
Saturation (A3)		Marl Deposits (B15	5)		Dry Season Water Table	e (C2)
Water Marks (B1)		Hydrogen Sulfide (` ,		Crayfish Burrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizosphe	eres along Living	Roots (C3)	Saturation Visible on Ae	
Drift deposits (B3)		Presence of Reduc	` '		Stunted or Stressed Pla	` '
Algal Mat or Crust (B4)		Recent Iron Reduc	ction in Tilled Soil	s (C6)	Geomorphic Position (D	2)
☐ Iron Deposits (B5)	al Imaa aan (DZ)	☐ Thin Muck Surface	` ,		Shallow Aquitard (D3)	(0.4)
Inundation Visible on AeriSparsely Vegetated Conca		Other (Explain in R	Remarks)		Microtopographic Relief	(D4)
Sparsely vegetated Conca	ive Surface (B8)			V	FAC-neutral Test (D5)	
Field Observations:	0 0					
Surface Water Present?	Yes No •	Depth (inches):	0			
Water Table Present?	Yes ○ No •	Depth (inches):	0		V (● No ○
Saturation Present? (includes capillary fringe)	Yes ● No ○	Depth (inches):	16	Wetland Hydrolog	y Present? Yes	
Describe Recorded Data (s	tream gauge, monito	ring well, aerial photo	os, previous ins	pections), if available	:	
Remarks:						
The plot met the criteria of be likely.	Geomorphic Position	ı since it occupied a k	ow bench by a	stream where prolone	ged, frequent saturat	ion or inundation would

vegeration - use scientific names of piai	its			Sampling Point: 03a
(Diet size)	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	- Species:	Status	Number of Dominant Species
1				That are OBL, FACW, or FAC:3(A)
2				Total Number of Dominant
3				Species Across All Strata:3(B)
4				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 100.0% (A/B)
6				Prevalence Index worksheet:
7		- Total Cayor		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 2,826 sf)	0	= Total Cover		OBL species 0 x 1 = 0
1 Fraxinus pennsylvanica	5	✓	FACW	FACW species $100 \times 2 = 200$
2. Rhamnus cathartica	2	✓	FAC	
3	0			· — —
4	_			l '
5	0			UPL species $0 \times 5 = 0$
6	0			Column Totals: 112 (A) 236 (B)
7	0			Prevalence Index = $B/A = \underline{2.107}$
Herb Stratum (Plot size: 78.5	7	= Total Cover		Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
1 Phalaris arundinacea			FACW	✓ Dominance Test is > 50%
2. Urtica dioica			FAC	✓ Prevalence Index is ≤3.0 ¹
3. Impatiens capensis			FACW	☐ Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6				¹ Indicators of hydric soil and wetland hydrology must
7				be present, unless disturbed or problematic.
8				Definitions of Vegetation Strata:
9				-
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
11 12				
		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				, ,
1				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
2				oize, and woody planto less than 6.20 it tail.
3				Woody vine - All woody vines greater than 3.28 ft in
4				height.
	0	= Total Cover		
				Hydrophytic
				Vegetation
				11656nti
Downwise (Tricked whete we whose horse or an a consent chart	a t \			
Remarks: (Include photo numbers here or on a separate she	•	ocios woro gro	on and ar	owing and the weedy species had begun leaf out
The plot was in a predominantly open, grassy area. The her suggesting the growing season had begun. Since it was ver				
observed.	,,	J :	,	

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 03a

Depth (inches)	Matrix		Redox Features		
	Color (moist)	%	Color (moist) % Type 1 Loc²	Texture Remarks	
0-30	10YR 2/1	100		Silt Loam	
	-	-			
				-	
				-	
e. C=Conc	rentration D=Denleti	on RM=Redi	uced Matrix, CS=Covered or Coated Sand Grains ² Loca	ation: PI =Pore Lining M=Matrix	
	ndicators:	on reference	leed Flatha, es—covered of coded sund drains Loca		3
ri c So ii 11 Histosol (<i>P</i>			Polyvalue Below Surface (S8) (LRR R,	Indicators for Problematic Hydric Soils	
•	edon (A2)		MLRA 149B)	2 cm Muck (A10) (LRR K, L, MLRA 149B)	
Black Histi			☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)	
	Sulfide (A4)		Loamy Mucky Mineral (F1) LRR K, L)	5 cm Mucky Peat or Peat (S3) (LRR K, L,	R)
	_ayers (A5)		Loamy Gleyed Matrix (F2)	Dark Surface (S7) (LRR K, L, M)	
	Below Dark Surface (A11)	Depleted Matrix (F3)	Polyvalue Below Surface (S8) (LRR K, L)	
	Surface (A12)	(11)	Redox Dark Surface (F6)	☐ Thin Dark Surface (S9) (LRR K, L)	
	ck Mineral (S1)		Depleted Dark Surface (F7)	☐ Iron-Manganese Masses (F12) (LRR K, L	
	yed Matrix (S4)		Redox Depressions (F8)	Piedmont Floodplain Soils (F19) (MLRA 1	
Sandy Red				Mesic Spodic (TA6) (MLRA 144A, 145, 14	19B)
	latrix (S6)			Red Parent Material (F21)	
SUIDDEU M	()	A 149B)		Very Shallow Dark Surface (TF12)	
	ace (S7) (LRR R, MLR	- /		✓ Other (Explain in Remarks)	
Dark Surfa	ace (S7) (LRR R, MLR				
Dark Surfa	hydrophytic vegetati	on and wetla	nd hydrology must be present, unless disturbed or probl	ematic.	
Dark Surfa		on and wetla	nd hydrology must be present, unless disturbed or probl	ematic.	
Dark Surfa	hydrophytic vegetati	on and wetla	nd hydrology must be present, unless disturbed or probl		.
Dark Surfalicators of rictive Larype:	hydrophytic vegetation	on and wetla	nd hydrology must be present, unless disturbed or probl	Hydric Soil Present? Yes No)
Dark Surfa	hydrophytic vegetation	on and wetla	nd hydrology must be present, unless disturbed or probl)
Dark Surfa	hydrophytic vegetationyer (if observed):			Hydric Soil Present? Yes No	
Dark Surfadicators of crictive Late Type:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	nd hydrology must be present, unless disturbed or problems. Fessional judgment was used to assume the soil was consisted of deep alluvial deposits.	Hydric Soil Present? Yes No	
Dark Surfa licators of rictive La ype: epth (inch narks: ydric indi	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfa licators of rictive La ype: epth (inch narks: ydric indi	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfalicators of rictive Larype:epth (incharks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfa icators of rictive La ype: epth (inch arks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfa licators of rictive La ype: epth (inch narks: ydric indi	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfa licators of rictive La Type: Depth (inch narks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfa licators of rictive La Type: Depth (inch narks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfa dicators of rictive La Type: Depth (inch narks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfadicators of crictive Late Type:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfadicators of trictive La Type:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfadicators of trictive La Type: Depth (inchmarks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfadicators of trictive La Type: Depth (inchmarks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfa dicators of trictive La Type: Depth (inch marks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfadicators of trictive La Type:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfadicators of trictive La Type:Depth (inch narks:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	
Dark Surfadicators of crictive Lasype:	hydrophytic vegetation yer (if observed): nes): cators observed he	owever prof	essional judgment was used to assume the soil v	Hydric Soil Present? Yes No	

	State: Wi Section, Township, Range: Local relief (concave, convex, r	s . 5 r . 8N r . 9E
Landform (hillslope, terrace, etc.): Shoulder	_	
	Local relief (concave, convex, r	
Subregion (LRR or MLRA): RR K Lat.: 4		none): convex Slope: 1.0 % / 0.6 c
	43.193247 Long	g.: -89,449872
Soil Map Unit Name: Plano silt loam (PnB)		NWI classification: None
<u></u>	ear? Yes O No •	
Are climatic/hydrologic conditions on the site typical for this time of ye		(If no, explain in Remarks.) Circumstances" present? Yes \(\circ\) No \(\circ\)
Are Vegetation ✓ , Soil , or Hydrology significantly	ly disturbed? Are "Normal	Circumstances" present? Yes V No V
Are Vegetation . , Soil . , or Hydrology . naturally pr	oroblematic? (If needed,	explain any answers in Remarks.)
Summary of Findings - Attach site map showing sa	ampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	To the Committed Asses	
Hydric Soil Present? Yes No •	Is the Sampled Area within a Wetland?	Yes ○ No •
Wetland Hydrology Present? Yes ○ No •		
Hydrology		
Wetland Hydrology Indicators:		Country Indiana (visitary 42 varied)
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leav	ves (B9)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13	• •	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	5)	Dry Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide O	Odor (C1)	Crayfish Burrows (C8)
	eres along Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift deposits (B3)	ed Iron (C4)	Stunted or Stressed Plants (D1)
	tion in Tilled Soils (C6)	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Thin Muck Surface ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Page 1)		☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4)
Inundation visible on Aerial Imagery (B/) Sparsely Vegetated Concave Surface (B8) Other (Explain in Re	Remarks)	FAC-neutral Test (D5)
		The headal rest (83)
Field Observations: Surface Water Present? Yes No Depth (inches):	0	
., , ,		
Saturation Precent?	Wetland Hyd	rology Present? Yes O No 💿
(includes capillary fringe) Yes V No Depth (inches):		
Describe Recorded Data (stream gauge, monitoring well, aerial photos	os, previous inspections), if avai	lable:
Remarks:		
	ed above the nearby wetland sa	imple plot 3A.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 2826)	% Cover	Species?	Status	Number of Dominant Species
1 Acer saccharinum	40	~	FACW	That are OBL, FACW, or FAC: 1 (A)
2.	0			
				Total Number of Dominant
3				Species Across All Strata: (B)
4				Dercent of deminant Charles
5				Percent of dominant Species That Are OBL, FACW, or FAC:50.0% (A/B)
6	0			That Are obl., TACW, of TAC.
7	0			Prevalence Index worksheet:
	40	= Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1	0			
2				FACW species $40 \times 2 = 80$
3.				FAC species $\underline{5}$ x 3 = $\underline{15}$
				FACU species $100 \times 4 = 400$
4				UPL species $0 \times 5 = 0$
5				Column Totals: <u>145</u> (A) <u>495</u> (B)
6	0			Column lotals: <u>145</u> (A) <u>495</u>
7	0			Prevalence Index = B/A = <u>3.414</u>
		= Total Cover		Hydrophytic Vegetation Indicators:
Herb Stratum (Plot size: 78.5				
1 Poa pratensis	100	✓	FACU	Rapid Test for Hydrophytic Vegetation
2. Viola sororia			FAC	Dominance Test is > 50%
				Prevalence Index is ≤3.0 ¹
3				☐ Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6	0			
7	0			¹ Indicators of hydric soil and wetland hydrology must
8				be present, unless disturbed or problematic.
9				Definitions of Vegetation Strata:
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12				Sapling/shrub - Woody plants less than 3 in. DBH and
And the state of t	105	= Total Cover		greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				
1				Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0	= Total Cover		
				Hedroub die
				Hydrophytic Vegetation
				Present? Yes No •
Demandra /Turalisala whate missibase have as an a consiste should	-1 \			
Remarks: (Include photo numbers here or on a separate she	•			
The plot was in a mowed turf area. The silver maples were				
mowing. All of the herb and tree layer species noted were g	reen and g	nowing, sugg	esung the	growing season nad begun.

Sampling Point: 03b

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 03b

· · ·		atrix	Redox Features	_
(inches)	Color (mo	ist) %	Color (moist) % Type 1 Loc2	Texture Remarks
0-14	10YR	2/2 100		Silt Loam
14-24	10YR	3/3 100		Silty Clay Loam
			·	·
ype: C=Conc	entration. D=De	epletion. RM=Rec	duced Matrix, CS=Covered or Coated Sand Grains ² Loc	ration: PL=Pore Lining. M=Matrix
ydric Soil Ir	ndicators:			Indicators for Problematic Hydric Soils: 3
Histosol (A	1)		Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epip	edon (A2)		MLRA 149B)	Coast Prairie Redox (A16) (LRR K, L, MLRA 1498)
Black Histic	c (A3)		☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)	5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Loamy Mucky Mineral (F1) LRR K, L)	Dark Surface (S7) (LRR K, L, M)
Stratified L	ayers (A5)		Loamy Gleyed Matrix (F2)	Polyvalue Below Surface (S8) (LRR K, L)
Depleted E	Below Dark Surfa	ace (A11)	Depleted Matrix (F3)	☐ Thin Dark Surface (S9) (LRR K, L)
Thick Dark	Surface (A12)		Redox Dark Surface (F6)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Muc	ck Mineral (S1)		Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gle	ed Matrix (S4)		Redox Depressions (F8)	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Red	ox (S5)			Red Parent Material (F21)
Stripped M	latrix (S6)			Very Shallow Dark Surface (TF12)
Dark Surfa	ce (S7) (LRR R,	MLRA 149B)		Other (Explain in Remarks)
Indicators of	hydrophytic veg	jetation and wetla	and hydrology must be present, unless disturbed or prob	lematic.
estrictive La	yer (if observ	ed):		
Type:	,			
				Hydric Soil Present? Yes ○ No ●
	es):			
Depth (inch	es):			
Depth (inch				
Depth (inch				
Depth (inch				

Project/Site: Waunakee Library		City/County:	Waunakee, Dane Co	Sampling I	Date: 19-Apr-17
Applicant/Owner: Waunakee Library Boar	rd		State: Wisc	onsi Sampling Point:	03 c
Investigator(s): Scott Taylor		Section, To	wnship, Range: S	 . 5 T . 8N	r. 9E
Landform (hillslope, terrace, etc.): Ba	ackslope	- '	oncave, convex, no		Slope: 5.0 % / 2.9°
Subregion (LRR or MLRA): LRR K	Lat.:	43.193247	Long.	-89.449872	Datum: NAD83
Soil Map Unit Name: Alluvial land, wet				NWI classification: No	one
Are climatic/hydrologic conditions on tl	he site typical for this time of ve	ear? Yes	s O No 💿	— If no, explain in Remarks.)	
		ly disturbed?		ircumstances" present?	Yes ○ No •
	, , ,	roblematic?		plain any answers in Rema	rke)
Summary of Findings - Atta			-	-	-
Hydrophytic Vegetation Present?	Yes O No 💿			· · ·	·
Hydric Soil Present?	Yes O No 💿		Sampled Area a Wetland?	Yes ○ No ●	
Wetland Hydrology Present?	Yes O No 💿	Within	i d Wedana:		
The plot was in a mowed turf area. U precipitation for the previous 3 month total precipitation was 2.6 inches to d regularly mowed.	ns (January-Wet; February-Wet	; March-Wet),	was found to be a	bove average. In the month	of fieldwork (April),
Hydrology Wetland Hydrology Indicators: Primary Indicators (minimum of one r	required; check all that apply)		-	Secondary Indicators (minimum	of 2 required)
Surface Water (A1)		(DO)		Surface Soil Cracks (B6) Drainage Patterns (B10)	
High Water Table (A2)	☐ Water-Stained Leav	` '		Moss Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B15	•		Dry Season Water Table (C	2)
Water Marks (B1)	Hydrogen Sulfide C	•		Crayfish Burrows (C8)	-,
Sediment Deposits (B2)	Oxidized Rhizosphe	. ,	Roots (C3)	Saturation Visible on Aerial	Imagery (C9)
☐ Drift deposits (B3)	Presence of Reduce	ed Iron (C4)		Stunted or Stressed Plants	(D1)
Algal Mat or Crust (B4)	Recent Iron Reduct	tion in Tilled Soils	s (C6)	Geomorphic Position (D2)	
Iron Deposits (B5)	☐ Thin Muck Surface	(C7)		Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (E	Other (Explain in R	emarks)		Microtopographic Relief (D4	1)
Sparsely Vegetated Concave Surface (E	38)			FAC-neutral Test (D5)	
Field Observations:					
Surface Water Present? Yes	No Depth (inches):	0			
Water Table Present? Yes	No • Depth (inches):	0		logy Present? Yes	N. O
Saturation Present? (includes capillary fringe) Yes	No Depth (inches):	0	Wetland Hydro	logy Present? Yes ∪	NO ©
Describe Recorded Data (stream gaug	e, monitoring well, aerial photo	s, previous ins	pections), if availa	ble:	
Remarks:					
No hydrology indicators. The plot occu	ipied a steep slope, well elevate	ed above the n	earby wetland san	nple plot 3A.	

(Distriction	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC: 0 (A)
2	0			
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				Species Across Air Strata.
5				Percent of dominant Species
				That Are OBL, FACW, or FAC: 0.0% (A/B)
6				
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)	0 =	= Total Cover		Total % Cover of: Multiply by:
	0			OBL species
1				FACW species $0 \times 2 = 0$
2				FAC species $\underline{5}$ x 3 = $\underline{15}$
3				FACU species <u>115</u> x 4 = <u>460</u>
4				UPL species $0 \times 5 = 0$
5	0			•
6	0			Column Totals: <u>120</u> (A) <u>475</u> (B)
7	0			Prevalence Index = B/A =3.958_
	0 =	= Total Cover		·
Herb Stratum (Plot size: 78.5				Hydrophytic Vegetation Indicators:
1. Poa pratensis	95	✓	FACU	Rapid Test for Hydrophytic Vegetation
2 Schedonorus arundinaceus	20		FACU	Dominance Test is > 50%
O. Miele corerie			FAC	☐ Prevalence Index is \leq 3.0 ¹
		Ē	TAC	☐ Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				☐ Problematic Hydrophytic Vegetation ¹ (Explain)
6				1
7	0			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8	0			
9	0			Definitions of Vegetation Strata:
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12.				
12.		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size:)	120	- 10001 00101		greater than 3.28 ft (1m) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2.	0			size, and woody plants less than 3.28 ft tall.
3.	0			
1	0			Woody vine - All woody vines greater than 3.28 ft in height.
4				neight.
	=	= Total Cover		
				Hydrophytic Vegetation
				Present? Yes O No •
Demontor /Turkinda uhata mumbana hana ay ay a a annonto aha	-11			
Remarks: (Include photo numbers here or on a separate she	-			
The plot was in a mowed turf area. It is possible some plant			ut not obs	served due to close mowing. All of the herb layer species
noted were green and growing, suggesting the growing sea	son nau be	guii.		

Sampling Point: 03c

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 03c

Depth (inches)		Matrix			Rec	dox Featı	ures			
	Color (%	Color	moist)	%	Type ¹	Loc2	Texture	Remarks
0-18	10YR	2/2	100						Silt Loam	flecks 10yr3/3 material & many rocks
18-24	10YR		95	10YR	4/6	5	C	PL	Silty Clay Loam	
				-						·
				-	-	-		-	-	*
										-
									-	
									-	-
									p-	
Type: C=Cond	centration. D	=Depletio	n. RM=Redi	ıced Matrix.	CS=Covere	ed or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M	=Matrix
Hydric Soil I										
Histosol (A				Poly	value Belov	v Surface	(S8) (I RR I	₹.		oblematic Hydric Soils: 3
_ `	pedon (A2)			MLR	A 149B)	· Surruce	(50) (1.111)	4	_ `	0) (LRR K, L, MLRA 149B)
Black Histi				Thin	Dark Surfa	ace (S9) (LRR R, MLI	RA 149B)		edox (A16) (LRR K, L, R)
	Sulfide (A4)			Loar	ny Mucky N	1ineral (F1	L) LRR K, L)		eat or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loar	ny Gleyed I	Matrix (F2)			S7) (LRR K, L, M)
	Below Dark S	Surface (A	11)	Dep	eted Matrix	(F3)				w Surface (S8) (LRR K, L)
	k Surface (A1		,	Red	ox Dark Sur	rface (F6)				ace (S9) (LRR K, L)
	ck Mineral (S			Dep	eted Dark :	Surface (F	7)			se Masses (F12) (LRR K, L, R)
	yed Matrix (S			Red	ox Depressi	ions (F8)				dplain Soils (F19) (MLRA 149B)
Sandy Red		,								TA6) (MLRA 144A, 145, 149B)
Stripped M									Red Parent Ma	teriai (F21) Park Surface (TF12)
	ace (S7) (LRF	R R, MLRA	149B)						Other (Explain	` '
■ Dark Surfa			and wetla	ad bydrology	must he n	recent ur	aloce dictur	ned or probl	` '	iii keilidiks)
	hydronhytic	vegetation	i ai iu wedai	ia riyarology	must be p	reserie, ui	iicaa diaturi	oca or probl	Cinauc.	
³ Indicators of										
³ Indicators of Restrictive La										
³ Indicators of Restrictive La Type:	ayer (if obs								Hydric Soil Present	? Yes No 🖲
³ Indicators of Restrictive La	ayer (if obs								Hydric Soil Present	:? Yes ○ No •
³ Indicators of Restrictive La Type:	ayer (if obs								Hydric Soil Present	? Yes O No •
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began	too deep t	to meet t	the criteria	a of a hydi	-	Yes No No suggests
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began aterial.	too deep t	to meet t	the criteria	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began aterial.	too deep t	to meet t	the criteria	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio ficial fill m	ons began aterial.	coo deep t	to meet t	the criterio	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began aterial.	too deep t	to meet t	the criteria	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio ficial fill m	ons began aterial.	too deep t	to meet t	the criteria	a of a hydr	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio ficial fill m	ons began aterial.	too deep t	to meet t	the criteria	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratic ficial fill m	ons began aterial.	too deep t	to meet t	the criteri	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratic ficial fill m	ons began aterial.	too deep t	to meet t	the criteri	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio ficial fill m	ons began aterial.	too deep t	to meet 1	the criteri	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began aterial.	too deep t	to meet t	the criteria	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began aterial.	too deep t	to meet t	the criteria	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks:	hes):	erved):	oncentratio	ons began aterial.	too deep t	to meet t	the criteri	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratic ficial fill m	ons began aterial.	too deep t	to meet t	the criteri	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratic ficial fill m	ons began aterial.	too deep t	to meet t	the criterio	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentration ficial fill m	ons began aterial.	too deep t	to meet t	the criteri	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began aterial.	coo deep t	to meet f	the criteri	a of a hydi	-	
³ Indicators of Restrictive La Type: Depth (inch Remarks: No hydric indi	hes):	erved):	oncentratio	ons began aterial.	too deep t	to meet t	the criteri	a of a hydi	-	

Project/Site: Waunakee Librar	У		City/County:	Waunakee, Dane Co.	Samplii	ng Date: 09-Jun-17
Applicant/Owner: Waunakee l	ibrary Board			State: Wisconsi	Sampling Point:	04a
Investigator(s): Scott Taylor			Section, To	ownship, Range: S. 5		R. 9E
Landform (hillslope, terrace,	etc.): Toeslope		- '	oncave, convex, none)		Slope: 0.0 % / 0.0 °
	LRR K	l at i	-			Datum: NAD83
-		Lat	43.193247	Long.: 8	9.449872	
Soil Map Unit Name: Plano s	ilt Ioam (PnB)				NWI classification:	None
Are climatic/hydrologic condi	tions on the site typ	pical for this time of y	ear? Ye	s ○ No ④ (If n	o, explain in Remark	•
Are Vegetation , Soil	, or Hydrolo	gy 🗌 significant	ly disturbed?	Are "Normal Circu	umstances" present?	Yes No
Are Vegetation, Soil	, or Hydrolo	gy 🗌 naturally p	roblematic?	(If needed, expla	in any answers in Re	marks.)
Summary of Findings	s - Attach site	map showing s	ampling p	oint locations, t	ransects, impo	rtant features, etc.
Hydrophytic Vegetation Pres		No O				
Hydric Soil Present?	Yes 💿	No O		: Sampled Area n a Wetland? Ye	es 💿 No 🔾	
Wetland Hydrology Present?	Yes 💿	No O				
Remarks: (Explain alternati	ve procedures here	or in a separate repo	rt.)			
Hydrology						
Wetland Hydrology Indicato	rs:			Seco	ondary Indicators (minin	num of 2 required)
Primary Indicators (minimu	m of one required;	check all that apply)			Surface Soil Cracks (B6))
Surface Water (A1)		Water-Stained Lea	ves (B9)		Drainage Patterns (B10))
✓ High Water Table (A2)		Aquatic Fauna (B1	•		Moss Trim Lines (B16)	
Saturation (A3)		☐ Marl Deposits (B15	•		Dry Season Water Table	e (C2)
Water Marks (B1)		Hydrogen Sulfide (` ,		Crayfish Burrows (C8)	wiel Images (CO)
Sediment Deposits (B2) Drift deposits (B3)		Oxidized Rhizospho		` ′	Saturation Visible on Ae Stunted or Stressed Pla	• , , ,
Algal Mat or Crust (B4)		☐ Presence of Reduce ☐ Recent Iron Reduce	` '		Geomorphic Position (D	` '
Iron Deposits (B5)		Thin Muck Surface		(0)	Shallow Aguitard (D3)	2)
Inundation Visible on Aerial	Imagery (B7)	Other (Explain in R	` '		Microtopographic Relief	(D4)
Sparsely Vegetated Concav	e Surface (B8)	outer (Explain in t	cinario)		FAC-neutral Test (D5)	
Field Observations:						
	Yes O No 💿	Depth (inches):	0			
Water Table Present?	Yes No	Depth (inches):	8			
Saturation Present?	Yes • No O	Depth (inches):	0	Wetland Hydrolog	y Present? Yes	● No ○
(includes capillary fringe)						
Describe Recorded Data (str	eam gauge, monito	ring weii, aeriai photo	os, previous ins	pections), if available:		
Remarks:						
The soil was saturated to the frequent saturation or inund			omorphic Posit	ion since it occupied t	he bottom of a close	d basin where prolonged,

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC:7 (A)
2.	0			
3				Total Number of Dominant
				Species Across All Strata: 7 (B)
4				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 100.0% (A/B)
6				
7	0			Prevalence Index worksheet:
(Plat size: 2 926 cf	0	= Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 2,826 sf)				OBL species 100 x 1 = 100
1. Cornus alba	15	✓	FACW	FACW species <u>25</u> x 2 = <u>50</u>
2. Viburnum dentatum	5	✓	FAC	
3. Salix babylonica	5	✓	FAC	FAC species $10 \times 3 = 30$
4. Salix discolor	E	✓	FACW	FACU species $0 \times 4 = 0$
F. Frankria namentralica		<u></u>	FACW	UPL species $0 \times 5 = 0$
				Column Totals: 135 (A) 180 (B)
6		H		
7				Prevalence Index = B/A = 1.333
Herb Stratum (Plot size: 78.5 sf)	35	= Total Cover		Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
1. Typha latifolia	60	✓	OBL	✓ Dominance Test is > 50%
2. Symphyotrichum puniceum var. puniceum	40	✓	OBL	✓ Prevalence Index is ≤3.0 ¹
3	0			I _
4	0			Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6				
7				¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
8				Definitions of Vegetation Strata:
9				J
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12	0			Sapling/shrub - Woody plants less than 3 in. DBH and
(0)	100	= Total Cover		greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				, ,
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0	= Total Cover		
				Hydrophytic
				Vogetation
				Present? Yes • No ·
Remarks: (Include photo numbers here or on a separate she	et.)			
The plot was in a cattail marsh surrounded by patchy brush	-			
The plot was in a cattain maistribunided by paterly brasin	•			

Sampling Point: 04a

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 04a

Depth (inches)		Matrix			Res	dox Featu	ıres			
	Color (%	Color ((moist)	%	Type 1	Loc2	Texture	Remarks
0-6	10YR	2/2	100						Silt Loam	
6-14	10YR	4/3	95	10YR	4/6	5	C	PL	Sandy Loam	_
		- 1/3							- Suriay Louin	-
									-	
									-	
									-	
					-	-				
pe: C=Cond	centration. D	=Depletio	n. RM=Redu	iced Matrix,	CS=Covere	ed or Coate	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=	Matrix
dric Soil I	indicators:								Indicators for Prob	lematic Hydric Soils: 3
Histosol (A	A1)			Poly	value Belov	w Surface	(S8) (LRR F	.,) (LRR K, L, MLRA 149B)
Histic Epip	pedon (A2)				A 149B)					lox (A16) (LRR K, L, R)
Black Histi	ic (A3)				Dark Surfa					t or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)				ny Mucky N	•			Dark Surface (S7	
Stratified I	Layers (A5)			Loar	ny Gleyed I	Matrix (F2)			Surface (S8) (LRR K, L)
Depleted I	Below Dark S	Surface (A	11)	L Dep	leted Matrix	k (F3)				
	k Surface (A1			Red	ox Dark Su	rface (F6)				e (S9) (LRR K, L)
	ıck Mineral (S			Dep	leted Dark	Surface (F	7)			Masses (F12) (LRR K, L, R)
,	eyed Matrix (Redox Depressions (F8)						lain Soils (F19) (MLRA 149B)
Sandy Red		,								(6) (MLRA 144A, 145, 149B)
_	Matrix (S6)								Red Parent Mate	` '
- ··	ace (S7) (LRI	R R. MLRA	149B)						Very Shallow Da	
	(-: / (-:		-						Other (Explain in	Remarks)
		vegetatio	n and wetlar	nd nydrology	must be p	resent, ur	iless disturi	ed or probl	ematic.	
ndicators of	f hydrophytic									
ndicators of	f hydrophytic ayer (if obs	erved):							Hydric Soil Present?	w
ndicators of strictive La Type:	ayer (if obs	erved):								
ndicators of	ayer (if obs	erved):							Tryuric Son Tresent.	Yes ● No O
ndicators of strictive La Type: Depth (inch	ayer (if obs	erved):							nyune son rresents	Yes ♥ No ∪
ndicators of strictive La Type: Depth (inchemarks:	hes):	o 14 inch	es due to t	he abunda	nce of roo	cks. No h	ydric indi	cators obse		onal judgment was used to
ndicators of strictive La Type: Depth (inch marks:	ayer (if obs	o 14 inch	es due to t	he abunda getation a	nce of roo	cks. No h	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inch marks:	hes):	o 14 inch	es due to t I on the ve	he abunda getation a	nce of roo	cks. No h ogy indica	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inch marks:	hes):	o 14 inch	es due to t I on the ve	he abunda getation a	nce of roo	cks. No h	ydric indi ators.	cators obse		
ndicators of strictive La Type: Depth (inch marks: plot was	hes):	o 14 inch	es due to t I on the ve	he abunda getation a	nce of roo	cks. No h ogy indica	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inchemarks: plot was	hes):	o 14 inch	es due to t I on the ve	he abunda getation a	nce of roo	cks. No h ogy indica	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inchemarks: plot was	hes):	o 14 inch	es due to t I on the ve	he abunda getation a	nce of roo	cks. No h	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inch marks: plot was	hes):	o 14 inch	es due to t	he abunda getation a	nce of roc	cks. No h ogy indica	ydric indi ators.	cators obse		
ndicators of strictive La Type: Depth (inchemarks: plot was	hes):	o 14 inch	es due to t	he abunda getation a	nce of roo	cks. No h	ydric indi ators.	cators obse		
ndicators of strictive La Type: Depth (inch marks: plot was	hes):	o 14 inch	es due to t	he abunda getation a	nce of roo	cks. No h	ydric indi ators.	cators obse		
ndicators of strictive La Type: Depth (inch marks:	hes):	o 14 inch	es due to t	he abunda getation a	nce of roo	cks. No h ogy indica	ydric indi ators.	cators obse		
ndicators of strictive La Type: Depth (inchemarks:	hes):	o 14 inch	es due to t	he abunda getation a	nce of roo	cks. No h ogy indica	ydric indi ators.	cators obse		
indicators of instrictive La Type: Depth (inchemarks: e plot was	hes):	o 14 inch	es due to t	he abunda getation a	nce of roc	cks. No h	ydric indi	cators obse		
indicators of instrictive La Type: Depth (inchemarks: e plot was	hes):	o 14 inch	es due to t	he abunda getation a	nce of roc	cks. No h	ydric indi	cators obse		
indicators of instrictive La Type: Depth (inchemarks: e plot was	hes):	o 14 inch	es due to t	the abunda getation a	nce of roc	cks. No h	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inchemarks:	hes):	o 14 inch	es due to t	he abunda getation a	nce of roc	cks. No h	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inchemarks:	hes):	o 14 inch	es due to t I on the ve	he abunda getation a	nce of roc	cks. No h	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inch marks:	hes):	o 14 inch	es due to t	he abunda getation a	nce of roc	cks. No h	ydric indi	cators obse		
ndicators of strictive La Type: Depth (inch marks:	hes):	o 14 inch	es due to t	he abunda getation a	nce of roc	cks. No h	ydric indi	cators obse		

Project/Site: Waunakee Library			City/County:	Waunakee, Dane Co.	Sampli	ng Date: 09-Jun-17
Applicant/Owner: Waunakee Library	Board			State: Wisco	nsi Sampling Point:	04b
Investigator(s): Scott Taylor			Section, To	ownship, Range: S.		r. 9E
Landform (hillslope, terrace, etc.):	Footslope			oncave, convex, non		Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR	-	lat·	43.193247		89.449872	Datum: NAD83
			43.133247			
Soil Map Unit Name: Alluvial land,	wet (Af)				NWI classification:	None
Are climatic/hydrologic conditions	on the site typ	oical for this time of ye	ear? Ye	s O No 💿 (I	f no, explain in Remark	•
Are Vegetation $\ \ \ \ \ \ \ \ \ \ $, Soil $\ \ \ \ \ \ \ \ \ \ \ \ \ $, or Hydrolo	gy 🗌 significant	ly disturbed?	Are "Normal Cir	rcumstances" present?	Yes No
Are Vegetation \Box , Soil \Box	, or Hydrolo	gy 🗌 naturally p	roblematic?	(If needed, exp	lain any answers in Re	marks.)
Summary of Findings - A	ttach site	map showing s	ampling po	oint locations,	transects, impo	rtant features, etc.
Hydrophytic Vegetation Present?		No O				
Hydric Soil Present?	Yes 🔾	No 💿		e Sampled Area n a Wetland?	Yes O No 💿	
Wetland Hydrology Present?	Yes 🔾	No •				
Remarks: (Explain alternative pr	ocedures here	or in a separate repo	rt.)			
Hydrology						
Wetland Hydrology Indicators:				Se	econdary Indicators (minir	num of 2 required)
Primary Indicators (minimum of	one required;	check all that apply)			Surface Soil Cracks (B6)
Surface Water (A1)		Water-Stained Lea	ves (B9)		Drainage Patterns (B10)
High Water Table (A2)		Aquatic Fauna (B13	•	L	Moss Trim Lines (B16)	
Saturation (A3)		Marl Deposits (B15	•	L	Dry Season Water Tabl	e (C2)
Water Marks (B1)		Hydrogen Sulfide (. ,		☐ Crayfish Burrows (C8)	
Sediment Deposits (B2)		Oxidized Rhizosphe		Roots (C3)	Saturation Visible on A	
Drift deposits (B3)		Presence of Reduc	` ,	(as)	Stunted or Stressed Pla	
☐ Algal Mat or Crust (B4)☐ Iron Deposits (B5)		Recent Iron Reduc		s (C6) L	Geomorphic Position (DShallow Aguitard (D3)	02)
Inundation Visible on Aerial Imag	erv (R7)	☐ Thin Muck Surface	` ,		Strailow Aquitard (D3)Microtopographic Relief	: (D4)
Sparsely Vegetated Concave Surf		U Other (Explain in R	Remarks)		FAC-neutral Test (D5)	(04)
Sparsely regented contains sum	zec (50)				_ TAC ficultal fest (D3)	
Field Observations:			_			
Surface Water Present? Yes		Depth (inches):	0			
Water Table Present? Yes	○ No •	Depth (inches):	0	Wetland Hydrolo	Voc.	○ No ●
Saturation Present? (includes capillary fringe) Yes		Depth (inches):	0	-		
Describe Recorded Data (stream	gauge, monito	ring well, aerial photo	os, previous ins	pections), if availab	le:	
Remarks:						
No hydrology indicators. The lack	of wetland hy	drology indicators sug	ggested the sw	ale does not collect	large volumes of surfa	ce runoff water.

vegetation - use scientific names of plai	iius			Sampling Point: 04b
Tree Stratum (Plot size: 78.5 sf	Absolute % Cover	C12	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1 Acer negundo	100	✓	FAC	That are OBL, FACW, or FAC:
2	0			Total Newhord & Description
3	0			Total Number of Dominant Species Across All Strata: 3 (B)
4				
5	0			Percent of dominant Species That Are OBL FACW, or FAC: 66.7% (A/B)
6				That Are OBL, FACW, or FAC: 66.7% (A/B)
7	0			Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)	:	= Total Cover		Total % Cover of: Multiply by: OBL species
1	0			FACW species 25 x 2 = 50
2	0			FAC species $140 \times 3 = 420$
3	0			FACU species $85 \times 4 = 340$
4	0			l
5	0			l
6	0			Column Totals: <u>250</u> (A) <u>810</u> (B)
7	0			Prevalence Index = B/A = 3.240
Herb Stratum (Plot size: 78.5 sf)	0 =	= Total Cover		Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
1 Alliaria petiolata		✓	FACU	✓ Dominance Test is > 50%
2. Solidago gigantea			FACW	Prevalence Index is ≤3.0 ¹
3. Geum canadense			FAC	Morphological Adaptations ¹ (Provide supporting
4. Viola sororia			FAC	data in Remarks or on a separate sheet)
5. Acer negundo	4.5		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
6. Glechoma hederacea	-		FACU	¹ Indicators of hydric soil and wetland hydrology must
7				be present, unless disturbed or problematic.
8				Definitions of Vegetation Strata:
9				
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
11				at breast neight (DBH), regardless of height.
12				Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size: _78.5 sf)	130 =	= Total Cover		greater than 3.28 ft (1m) tall
1 Vitis riparia	20	✓	FAC	Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3.	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	20 =	= Total Cover		
				Hydrophytic Vegetation Present? Yes No
Remarks: (Include photo numbers here or on a separate she The plot was in a wooded area with an herbaceous groundl indicators and the absence of wetland hydrology indicators FAC Neutral Test was not met and the P-Index was > 3.	ayer. Althou			

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 04b

(inches)		atrix	Redox Features	
	Color (mo	ist) %	Color (moist) % Type 1 Loc	Z ² Texture Remarks
0-30	10YR	2/1 100		Silt Loam
ype: C=Cond	centration. D=De	epletion. RM=Re	educed Matrix, CS=Covered or Coated Sand Grains ² L	Location: PL=Pore Lining. M=Matrix
ydric Soil I	ndicators:			Indicators for Problematic Hydric Soils: 3
Histosol (A	A1)		Polyvalue Below Surface (S8) (LRR R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epip	edon (A2)		MLRA 149B)	Coast Prairie Raday (A16) (LDD K. L. D)
Black Histi	ic (A3)		☐ Thin Dark Surface (S9) (LRR R, MLRA 149B)) Coast Plaine Redux (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Loamy Mucky Mineral (F1) LRR K, L)	Dark Surface (S7) (LRR K, L, K)
Stratified I	Layers (A5)		Loamy Gleyed Matrix (F2)	Polyvalue Below Surface (S8) (LRR K, L)
Depleted I	Below Dark Surfa	ace (A11)	Depleted Matrix (F3)	☐ Thin Dark Surface (S9) (LRR K, L)
Thick Dark	Surface (A12)		Redox Dark Surface (F6)	
_	ck Mineral (S1)		Depleted Dark Surface (F7)	Iron-Manganese Masses (F12) (LRR K, L, R)
	yed Matrix (S4)		Redox Depressions (F8)	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Red				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Stripped M				Red Parent Material (F21)
_	ace (S7) (LRR R,	MLRA 149B)		Very Shallow Dark Surface (TF12)
		-		Other (Explain in Remarks)
Indicators of	nyaropnytic veg	jetation and we	tland hydrology must be present, unless disturbed or pr	roblematic.
	yer (if observ	ed):		
estrictive La				_
estrictive La				Hydric Soil Present? Yes No •
	nes):			
Type: Depth (inch	nes):			
Type: Depth (inch Remarks:				
Type: Depth (inchemarks:				I
Type: Depth (inchemarks:				
Type: Depth (inchemarks:				
Type: Depth (inch emarks:				
Type: Depth (inchemarks:				
Type: Depth (inch Remarks:				
Type: Depth (inch Remarks:				
Type: Depth (inch Remarks:				
Туре:				
Type: Depth (inch Remarks:				

Project/Site: Waunakee Library			City/County:	Waunakee, Dane C	Co. Sa	ampling Date: 09-Jun-17
Applicant/Owner: Waunakee Library B	oard			State: Wis	consi Sampling Po	int: 04c
Investigator(s): Scott Taylor			Section, To	ownship, Range: S	s. 5 t. 8N	r. 9E
Landform (hillslope, terrace, etc.):	Footslope		Local relief (co	oncave, convex, n	one): convex	Slope: 2.0 % / 1.1 °
Subregion (LRR or MLRA): LRR K		Lat.:	43.193247	Lona	.: 89.449872	Datum: NAD83
Soil Map Unit Name: Plano silt loam	(DnP)		13.1732.17		NWI classifica	
	,			O O	_	Hone
Are climatic/hydrologic conditions or	1 the site ty	pical for this time of y	year? Ye	s O No 🗨	(If no, explain in Re	•
Are Vegetation, Soil	, or Hydrold	ogy Significan	tly disturbed?	Are "Normal	Circumstances" pres	sent? Yes No
Are Vegetation , Soil	, or Hydrold	ogy 🗌 naturally	problematic?	(If needed, e	xplain any answers	in Remarks.)
Summary of Findings - Att	ach site	map showing s	sampling p	oint location	s, transects, ir	mportant features, etc.
Hydrophytic Vegetation Present?	Yes 🔾	No •				
Hydric Soil Present?		No O		Sampled Area n a Wetland?	Yes \bigcirc No $ullet$	
Wetland Hydrology Present?	Yes 🔾	No 💿				
Hydrology						
Wetland Hydrology Indicators:		abaal all that analy)				(minimum of 2 required)
Primary Indicators (minimum of on Surface Water (A1)	<u>e requirea;</u>		(DO)		Surface Soil Crack	
High Water Table (A2)		☐ Water-Stained Lea ☐ Aquatic Fauna (B1	. ,		☐ Drainage Patterns ☐ Moss Trim Lines (
Saturation (A3)		Marl Deposits (B1	-		Dry Season Wate	•
Water Marks (B1)		Hydrogen Sulfide	•		Crayfish Burrows	• •
Sediment Deposits (B2)		Oxidized Rhizosph	. ,	Roots (C3)	Saturation Visible	on Aerial Imagery (C9)
☐ Drift deposits (B3)		Presence of Redu	iced Iron (C4)		Stunted or Stress	ed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Redu	ction in Tilled Soil	s (C6)	Geomorphic Posit	tion (D2)
☐ Iron Deposits (B5)		☐ Thin Muck Surface	e (C7)		Shallow Aquitard	` '
☐ Inundation Visible on Aerial Imagery		Other (Explain in	Remarks)		Microtopographic	
Sparsely Vegetated Concave Surface	3 (B8)				FAC-neutral Test	(D5)
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Yes	No 💿	Depth (inches): Depth (inches):	0	Wetland Hydr	ology Present?	Yes ○ No •
(Includes capillary Intige)				> .c		
Describe Recorded Data (stream ga	uge, monito	oring well, aerial phot	os, previous ins	pections), if availa	able:	
Remarks:						
No hydrology indicators. The plot w	as well elev	ated above the nearb	oy wetland sam	ole plot 4A.		

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover		Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC: 1 (A)
2	0			
3				Total Number of Dominant
				Species Across All Strata:3 (B)
4				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 33.3% (A/B)
6				
7	0			Prevalence Index worksheet:
Carling (Short Charles (Plot size: 2,826 sf	0	= Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 2,826 sf)				OBL species
1 Populus deltoides	10	\checkmark	FAC	FACW species $5 \times 2 = 10$
2	0			FAC species $20 \times 3 = 60$
3	0			
4				· ·
5				UPL species $\frac{5}{}$ x 5 = $\frac{25}{}$
6				Column Totals: <u>190</u> (A) <u>735</u> (B)
7				Prevalence Index = B/A = 3.868
		= Total Cover		· ———
Herb Stratum (Plot size: 78.5 sf)		- Total Cover		Hydrophytic Vegetation Indicators:
1 Poa pratensis	90	✓	FACU	Rapid Test for Hydrophytic Vegetation
0. 0.1. 1		<u>~</u>	FACU	☐ Dominance Test is > 50%
				Prevalence Index is ≤3.0 ¹
3. Solidago canadensis			FACU	Morphological Adaptations ¹ (Provide supporting
4. Viola sororia	5		FAC	data in Remarks or on a separate sheet)
5. Daucus carota	5		UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
6. Parthenocissus quinquefolia	10		FACU	
7. Acer negundo	5		FAC	Indicators of hydric soil and wetland hydrology must
8. Juglans nigra	5		FACU	be present, unless disturbed or problematic.
9 Phalaris arundinacea	5		FACW	Definitions of Vegetation Strata:
10				Troe Weedy plants 2 in (7.6 cm) or more in diameter
11				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
12				at a south to give (2211), rogarations of morgina
12				Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size:)	180	= Total Cover		greater than 3.28 ft (1m) tall
1.	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
	0			
3	0			Woody vine - All woody vines greater than 3.28 ft in
4				height.
	0	= Total Cover		
				Hydrophytic
				Vegetation Present? Yes ○ No ●
				L
Remarks: (Include photo numbers here or on a separate she				
The plot was in an open, grassy area with scattered tree say	olings.			

Sampling Point: 04c

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 04c

Silt Loam chunks 10YR 4/1 10YR 4/1 90 10YR 4/6 10 C PL Silty Clay Loam Flecks 4/1 Silt Loam flecks 4/1 Silt Loam chunks 10YR 4/1 Silt Loam chunks 10YR 4/1 Silt Loam flecks 4/1 Silt Loam chunks 10YR 4/1 Silt Loam flecks 4/1 Silt Loam chunks 10YR 4/1 Silt Loam chunks 10YE 4/1 Silt Loam chunks 10Y	Depth		Matrix				lox Featı			_		
e: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains e: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains life Soil Indicators: life Soil Indicators for Problematic Hydric Soils: life Soil Indicators of Problematic Hydric Soils: life Soi	(inches)				Color (moist)	%_	Type ¹	Loc²			
e: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix Indicators: Histosol (A1)	0-6	10YR	2/2	100						Silt Loam	chunks 10YR 4/1	
e: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix Indicators: Indicators: Indicators for Problematic Hydric Soils: 3 Histosol (A1) Histosol (A2) Histosol (A2) Black Histo: (A3) Coast Prairie Redox (A16) (LRR K, L, R) Sort Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Dark Surface (A12) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S6) Dark Surface (S7) (LRR K, L) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 149A, 145, 149B) dicators of Problematic Hydric Soils: 3 Indicators for Problematic Hydric Soils: 3 Indicators for Problematic Hydric Soils: 3 Thin Dark Surface (C53) (LRR K, L, R) Dark Surface (F3) (LRR K, L, R) Polyvalue Below Surface (S3) (LRR K, L) Tinn-Manganese Masses (F12) (LRR K, L) Inn-Manganese Masses (F12) (LRR K, L) Pledmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **rictive Layer (if observed):** "Peepth (inches): Depth (inches): Depth (inches): Dark Surface (F7) Dark S	6-14	10YR	4/1	90	10YR	4/6	10	C	PL	Silty Clay Loam		
Indicators: Indicators for Problematic Hydric Soils: 3	14-24	10YR	2/1	100						Silt Loam	flecks 4/1	
Indicators: Indicators for Problematic Hydric Soils: 3												
Indicators: Indicators for Problematic Hydric Soils: 3												
Indicators: Indicators for Problematic Hydric Soils: 3										-		
Indicators: Indicators for Problematic Hydric Soils: 3												
Indicators: Indicators for Problematic Hydric Soils: 3												
Indicators: Indicators for Problematic Hydric Soils: 3												
Indicators: Indicators for Problematic Hydric Soils: 3	ne: C-Con	centration D	-Depletio	n DM-Dedi	ıcad Mətriy	CS-Covere	d or Coate	ed Sand Gr	aine 2l oca	ation: DI – Dore Lining	M-Matrix	
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (F2) Depleted Below Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Redox Depressions (F8) Stripped Matrix (S4) Stripped Matrix (S6) Depleted Matrix (S6) Depleted Dark Surface (F7) Redox Depressions (F8) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Five Image: Thin Dark Surface (S9) (LRR K, L) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Dark Surface (S7) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (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) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Extrictive Layer (if observed): Type: Depth (inches): Dept			-pchicu0	NII-REUL	iceu Platitik,	COVEI E	.a or Coale	ca Jana Ul	unio -LUCC			
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox Depressions (F8) Bepleted Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) Wery Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Extictive Layer (if observed): Type: Depth (inches): Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Trin Dark Surface (S9) (LRR K, L) Tron-Manganese Masses (F12) (LRR K, L) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Trictive Layer (if observed): Type: Depth (inches): De	Histosol (A1)					v Surface ((S8) (LRR I	₹,	_		
Black Histic (A3) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Diark Surface (S9) (LRR K						,	oo (CO) (I D D - M'') A 140D)	`	, , , , ,	
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Medox (S5) Sandy Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) 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) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Trictive Layer (if observed): Type: Dark Surface (S7) (LRR R, MLRA 149B) Hydric Soil Present? Yes No No									-			
Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) No Other (Explain in Remarks) No Other (Explain in Remarks) No Other (S7) (LRR R, MLRA 149B) This pedmont Floodplain Soils (F19) (LRR K, L) Stripped Matrix (S4) Stripped Matrix (S4) Stripped Matrix (S4) Stripped Matrix (S6) Dark Surface (F7) Piedmont Floodplain Soils (F19) (LRR K, L) New Stripped Matrix (S4) Stripped Matrix (S4) Stripped Matrix (S4) Stripped Matrix (S4) Stripped Matrix (S6) Dark Surface (F7) Piedmont Floodplain Soils (F19) (LRR K, L) New Stripped Matrix (S4) Stripped Matrix (S4) Stripped Matrix (S6) Dark Surface (F7) Piedmont Floodplain Soils (F19) (LRR K, L) New Stripped Matrix (S4) S)			
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Citicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Unusual sequence of soil horizons suggests this soil profile may have been disturbed. This would be expected since the site occupied an)				
Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (F7) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Citators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Circitive Layer (if observed): Surjace (S7) (LRR R, MLRA 149B) Depth (inches): Depth (inches): De				11)								
Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Crictive Layer (if observed): Depth (inches): Depth (inches): Unusual sequence of soil horizons suggests this soil profile may have been disturbed. This would be expected since the site occupied an							. ,	7)				
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Crictive Layer (if observed): Depth (inches): Depth (inches): Depth (inches): Depth (solid Present? Yes No One No Coupled an No Coupled												
Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Crictive Layer (if observed): Opeth (inches):			64)		☐ Kedox Depressions (F8)							
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)												
dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Trictive Layer (if observed): Type: Depth (inches): Thanks: unusual sequence of soil horizons suggests this soil profile may have been disturbed. This would be expected since the site occupied an		. ,								Very Shallow	Dark Surface (TF12)	
trictive Layer (if observed): Type: Depth (inches): Depth (inches): Depth sequence of soil horizons suggests this soil profile may have been disturbed. This would be expected since the site occupied an	Dark Surf	ace (S7) (LRF	R R, MLRA	149B)						Other (Explai	in in Remarks)	
Type:				n and wetla	nd hydrology	must be p	resent, un	nless disturl	oed or probl	ematic.		
hepth (inches): Hydric Soil Present? Yes No \ No \ harks: unusual sequence of soil horizons suggests this soil profile may have been disturbed. This would be expected since the site occupied an	trictive L Type:	ayer (if obse	erved):									
unusual sequence of soil horizons suggests this soil profile may have been disturbed. This would be expected since the site occupied an		hes):								Hydric Soil Prese	nt? Yes $lacktriangle$ No $lacktriangle$	
	marks:											
			f soil hor	izons sugg	ests this so	oil profile	may have	e been dis	sturbed. Th	nis would be expecte	ed since the site occupied an	
	ou la la la	u.										

Project/Site: Waunakee Library			City/County:	Waunakee, Dane Co.	Samplii	ng Date: 09-Jun-17
Applicant/Owner: Waunakee Library	Board			State: Wiscons	Sampling Point:	05a
Investigator(s): Scott Taylor			Section, To	ownship, Range: S. 5		r. 9E
Landform (hillslope, terrace, etc.):	Toeslope			oncave, convex, none		Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR	<	Lat.:	43.193247	Long.:	39.449872	Datum: NAD83
Soil Map Unit Name: Plano silt loa	m (PnR)				NWI classification:	None
		to decide a state of the	2 Va	s O No 💿 (Tf		
Are climatic/hydrologic conditions				(2.1	no, explain in Remark	s.) Yes • No O
Are Vegetation, Soil	, or Hydrolo	ogy	ly disturbed?	Are "Normal Circ	umstances" present?	res 🙂 No 🔾
Are Vegetation , Soil 🗸	, or Hydrolo	gy 🗌 naturally p	roblematic?	(If needed, expl	ain any answers in Re	marks.)
Summary of Findings - A			ampling po	oint locations,	transects, impo	rtant features, etc.
Hydrophytic Vegetation Present?		No O	To Alex	Commission Asses		
Hydric Soil Present?		No O		e Sampled Area n a Wetland?	es 💿 No 🔾	
Wetland Hydrology Present?	Yes 💿	No O				
(March-Wet; April-Wet; May-Nor naturally problematic since it wa	,,		•	` ,	, инеге was по ргестр	itation to date. The soil was
Hydrology						
Wetland Hydrology Indicators:				Sec	ondary Indicators (minin	num of 2 required)
Primary Indicators (minimum of	one required;	check all that apply)			Surface Soil Cracks (B6))
Surface Water (A1)		Water-Stained Lea	` '		Drainage Patterns (B10))
✓ High Water Table (A2) ✓ Saturation (A3)		Aquatic Fauna (B1	•		Moss Trim Lines (B16)	(62)
Water Marks (B1)		Marl Deposits (B15	•		Dry Season Water Table Crayfish Burrows (C8)	e (C2)
Sediment Deposits (B2)		☐ Hydrogen Sulfide (☐ Oxidized Rhizosphe	. ,	Poots (C3)	Saturation Visible on Ae	erial Imagery (C9)
Drift deposits (B3)		Presence of Reduc		(C3)	Stunted or Stressed Pla	• , , ,
Algal Mat or Crust (B4)		Recent Iron Reduc	` ,	s (C6)	Geomorphic Position (D	* *
☐ Iron Deposits (B5)		Thin Muck Surface			Shallow Aquitard (D3)	
Inundation Visible on Aerial Imag	ery (B7)	Other (Explain in R	Remarks)		Microtopographic Relief	(D4)
Sparsely Vegetated Concave Surf	ace (B8)			✓	FAC-neutral Test (D5)	
Field Observations:						
Surface Water Present? Yes	O No 💿	Depth (inches):	0			
Water Table Present? Yes	● No ○	Depth (inches):	6			a 0
Saturation Present? (includes capillary fringe) Yes	● No ○	Depth (inches):	0	Wetland Hydrolog	y Present? Yes	● No ○
Describe Recorded Data (stream Remarks:	gauge, monito	ring well, aerial photo	os, previous ins	pections), if available	:	
The soil was saturated to the surf prolonged, frequent saturation or	•		omorphic Posit	ion since it occupied	the bottom of a closed	d depression where

(District)	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1				That are OBL, FACW, or FAC:
2	0			Total Number of Deminant
3	0			Total Number of Dominant Species Across All Strata: 2 (B)
4				(,
5				Percent of dominant Species
6				That Are OBL, FACW, or FAC: 100.0% (A/B)
				Burnel and Tarden and the sta
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 2,826 sf)	:	= Total Cover		Total % Cover of: Multiply by:
A Assurance to the contract of	10		FACW	OBL species 0 x 1 = 0
•		V	TACV	FACW species <u>90</u> x 2 = <u>180</u>
2				FAC species $0 \times 3 = 0$
3				FACU species $10 \times 4 = 40$
4	0			· ·
5	0			
6	0			Column Totals: <u>100</u> (A) <u>220</u> (B)
7	0			Prevalence Index = B/A =2.200
	10 :	= Total Cover		· · · · · · · · · · · · · · · · · · ·
Herb Stratum (Plot size: 78.5 sf)				Hydrophytic Vegetation Indicators:
1 Phalaris arundinacea	80	✓	FACW	Rapid Test for Hydrophytic Vegetation
2.				✓ Dominance Test is > 50%
Clashama hadamasa	10		FACU	✓ Prevalence Index is ≤3.0 ¹
•			FACU	☐ Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6	0			
7	0			1 Indicators of hydric soil and wetland hydrology must
8				be present, unless disturbed or problematic.
9				Definitions of Vegetation Strata:
10				Trace (Mandy plants 2 in 77 Care) as many in diameter
				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
11				at broadt height (BBH), regardless of height.
12				Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size:)	90 =	= Total Cover		greater than 3.28 ft (1m) tall
	0			Herb - All herbaceous (non-woody) plants, regardless of
1				size, and woody plants less than 3.28 ft tall.
2				0.25, 4.14 11004) pianto 1000 tilan 0.20 it tam
3	0			Woody vine - All woody vines greater than 3.28 ft in
4		Ш		height.
	0 =	= Total Cover		
				Hydrophytic
				Vegetation Present? Yes No ○
				Present? Yes No U
Remarks: (Include photo numbers here or on a separate shee	et.)			
The plot was in an open, grassy area with scattered tree sag	olinas.			
, , , , , , , , , , , , , , , , , , , ,	J -			

Sampling Point: 05a

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 05a

	iption: (Desc	cribe to t	he depth	needed to document	the indicator or	confirm the	absence of indicators.)	
Depth (inches)		Matrix			lox Features	1		
	Color (n			Color (moist)	% Type	¹ Loc ²	Texture	Remarks
0-14	10YR	2/2	100				Silt Loam	
							-	
¹ Type: C=Conc	centration. D=	Depletion	. RM=Redi	uced Matrix, CS=Covere	d or Coated Sand	Grains ² Loca	ation: PL=Pore Lining. M=I	Matrix
Hydric Soil I								lematic Hydric Soils: 3
Histosol (A				Polyvalue Below	Surface (S8) (LRI	₹ R,		
Histic Epip	pedon (A2)			MLRA 149B)			_ ` ` '	(LRR K, L, MLRA 149B)
☐ Black Histi				Thin Dark Surfa	ce (S9) (LRR R, M	LRA 149B)		ox (A16) (LRR K, L, R)
	Sulfide (A4)			Loamy Mucky M	lineral (F1) LRR K,	L)		or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loamy Gleyed N	latrix (F2)		☐ Dark Surface (S7	
	Below Dark Su	ırface (A1	1)	Depleted Matrix	(F3)			Surface (S8) (LRR K, L)
	k Surface (A12		•	Redox Dark Sur	face (F6)			e (S9) (LRR K, L)
	ck Mineral (S1			Depleted Dark S	Surface (F7)			Masses (F12) (LRR K, L, R)
	yed Matrix (S			Redox Depressi	ons (F8)			lain Soils (F19) (MLRA 149B)
Sandy Rec		,						6) (MLRA 144A, 145, 149B)
Stripped M							Red Parent Mater Very Shallow Dar	
	ace (S7) (LRR	R, MLRA	149B)				✓ Other (Explain in	
						المامينيين المممايين		Remarks)
			and wetta	nd hydrology must be p	resent, uniess disti	arbea or probl	emauc.	
Restrictive La	ayer (if obse	rved):						
Type:							Undeia Sail Decame?	Yes ● No ○
Depth (inch	nes):						Hydric Soil Present?	Yes No
Remarks:								
The plot was	only dug to	14 inche	s due to	the abundance of roc	ks. No hydric ir	dicators obs	served however professi	ional judgment was used to
assume the so	oil was hydr	ic based	on the ve	egetation and hydrolo	gy indicators.		·	

Project/Site: Waunakee Library			City/County:	Waunakee, Dane Co.	Sampli	ng Date: 09-Jun-17
Applicant/Owner: Waunakee Library	Board			State: Wiscon	nsi Sampling Point:	05b
Investigator(s): Scott Taylor			Section, To	ownship, Range: S.		r. 9E
Landform (hillslope, terrace, etc.):	Footslope			oncave, convex, none		Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR K		Lat.:	43.193247	Long.:	89.449872	Datum: NAD83
Soil Map Unit Name: Plano silt loar			1311732 17		NWI classification:	
	. ,					
Are climatic/hydrologic conditions of	on the site typ	oical for this time of y	ear? Yes	s ○ No ④ (If	no, explain in Remark	•
Are Vegetation, Soil	, or Hydrolo	gy significant	ly disturbed?	Are "Normal Cir	cumstances" present?	Yes No
Are Vegetation \square , Soil \square	, or Hydrolo	gy 🗌 naturally p	roblematic?	(If needed, exp	lain any answers in Re	marks.)
Summary of Findings - At	tach site	map showing s	ampling po	oint locations,	transects, impo	rtant features, etc.
Hydrophytic Vegetation Present?		No 💿	7-11-	Commission Association		
Hydric Soil Present?		No •		Sampled Area n a Wetland?	Yes ○ No ⊙	
Wetland Hydrology Present?	Yes 🔾	No 💿				
Using the Natural Resource Conse (March-Wet; April-Wet; May-Norn		•	•	•		•
Hydrology						
Wetland Hydrology Indicators:				Se	econdary Indicators (minir	
Primary Indicators (minimum of o	ne required;	check all that apply)			Surface Soil Cracks (B6	
Surface Water (A1)		Water-Stained Lea	` ,	L	Drainage Patterns (B10)
☐ High Water Table (A2)☐ Saturation (A3)		Aquatic Fauna (B1)	•		☐ Moss Trim Lines (B16)	- (C2)
Water Marks (B1)		Marl Deposits (B15	•	_	Dry Season Water Tabl	e (C2)
Sediment Deposits (B2)		☐ Hydrogen Sulfide (☐ Oxidized Rhizosphe	` ,	Poots (C2)	☐ Crayfish Burrows (C8)☐ Saturation Visible on Ae	orial Imageny (CQ)
Drift deposits (B3)		Presence of Reduc		Roots (C3)	Stunted or Stressed Pla	
Algal Mat or Crust (B4)		Recent Iron Reduc	. ,	s (C6)	Geomorphic Position (E	
☐ Iron Deposits (B5)		☐ Thin Muck Surface			Shallow Aquitard (D3)	-/
☐ Inundation Visible on Aerial Image	ry (B7)	Other (Explain in R	,		Microtopographic Relie	F (D4)
Sparsely Vegetated Concave Surface	ce (B8)	Outer (Explain in the	cerrains)		FAC-neutral Test (D5)	,
Field Observations:						
Surface Water Present? Yes) No ●	Depth (inches):	0			
Water Table Present? Yes	○ No ④	Depth (inches):	0			O O
Saturation Present? (includes capillary fringe) Yes	O No ●	Depth (inches):	0	Wetland Hydrolo	gy Present? Yes	○ No ●
Describe Recorded Data (stream g						
No hydrology indicators. The plot of	occupied a shi	allow swale, but it wa	is still moderati	eiy weii elevated abo	ove nearby wetland sa	пріє ріот 5А.

vegetation - use scientific names of pla	nts			Sampling Point: 05b
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	Dominance Test worksheet:
			Status	Number of Dominant Species
1				That are OBL, FACW, or FAC:
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 0.0% (A/B)
<u>6</u>				
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)	=	= Total Cover		Total % Cover of: Multiply by: OBL species
1	0			FACW species $0 \times 2 = 0$
2				
3				FAC species $\underline{5}$ x 3 = $\underline{15}$
4				FACU species $\frac{115}{2}$ x 4 = $\frac{460}{2}$
5				UPL species $0 \times 5 = 0$
6	_			Column Totals: <u>120</u> (A) <u>475</u> (B)
7	0			Prevalence Index = B/A = <u>3.958</u>
Herb Stratum (Plot size: 78.5 sf)	=	= Total Cover		Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
1 Poa pratensis		V	FACU	☐ Dominance Test is > 50%
2. Schedonorus arundinaceus		V	FACU	Prevalence Index is ≤3.0 ¹
3. Glechoma hederacea			FACU	Morphological Adaptations ¹ (Provide supporting
4. Rumex crispus			FAC	data in Remarks or on a separate sheet)
5. Taraxacum officinale			FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
6. Solidago canadensis			FACU	¹ Indicators of hydric soil and wetland hydrology must
7 Elymus repens			FACU	be present, unless disturbed or problematic.
8. Dactylis glomerata	-		FACU	Definitions of Vegetation Strata:
9				Definitions of regetation strata.
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12				Sapling/shrub - Woody plants less than 3 in. DBH and
	120=	= Total Cover		greater than 3.28 ft (1m) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2.	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	= Total Cover		
				Hydrophytic
				Vegetation
				Present? Yes No •
Remarks: (Include photo numbers here or on a separate she	eet.)			
The plot was in an open, grassy area.				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 05b

Profile Descr	iption: (Des	scribe to	the depth	needed to document	the indica	tor or cor	nfirm the a	absence of indicators.)	
Depth		Matrix			dox Featu				
(inches)	Color (%	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-9	10YR	2/2	100				-	Silt Loam	
9-20	10YR	3/3	100					Sandy Loam	flecks dark material
					-			-	-
		-							
1- 0.0									
		=Depletio	n. KM=Rec	luced Matrix, CS=Covere	ed or Coate	d Sand Grai	ns ² Loca	tion: PL=Pore Lining. M=	
Hydric Soil I								Indicators for Prob	olematic Hydric Soils: 3
Histosol (=			Polyvalue Belov MLRA 149B)	v Surface (S	58) (LRR R,		2 cm Muck (A10) (LRR K, L, MLRA 149B)
	pedon (A2)			☐ Thin Dark Surfa	ace (S9) (L	RR R. MIRA	149B)	Coast Prairie Rec	dox (A16) (LRR K, L, R)
☐ Black Hist				Loamy Mucky N				5 cm Mucky Pea	t or Peat (S3) (LRR K, L, R)
	Sulfide (A4) Layers (A5)			Loamy Gleyed				Dark Surface (S	7) (LRR K, L, M)
	Below Dark S	Surface (A	11)	Depleted Matrix					Surface (S8) (LRR K, L)
	k Surface (A1		11)	Redox Dark Su					te (S9) (LRR K, L)
	ıck Mineral (S			Depleted Dark	Surface (F7)			Masses (F12) (LRR K, L, R)
	eyed Matrix (S			Redox Depress	ions (F8)				olain Soils (F19) (MLRA 149B)
Sandy Re		- ,							A6) (MLRA 144A, 145, 149B)
	Matrix (S6)							Red Parent Mate	rk Surface (TF12)
	ace (S7) (LRI	R R, MLRA	149B)					Other (Explain in	
3Indicators of	f hydrophytic	vegetatio	n and wetla	and hydrology must be p	recent unl	acc dicturbe	ad or proble		i Kemara)
			ii ana wea	ina nyarology mast be p	reserie, urin	cos distarbe	a or proble	induc.	
Restrictive L	ayer (if obs	erved):							
Type:	I \-							Hydric Soil Present?	Yes ○ No ●
Depth (inc	nes):							,	100 0 110 0
Remarks:									
No hydric soil	l indicators.								

Project/Site: Waunakee Library			City/County:	Waunakee, Dane C	Sa	mpling Date: 09-Jun-17
Applicant/Owner: Waunakee Library Bo	ard			State: Wis	consi Sampling Poi	nt: 05c
Investigator(s): Scott Taylor			Section, To	ownship, Range: S	s. 5 t. 8N	R. 9E
Landform (hillslope, terrace, etc.):	Footslope		Local relief (co	oncave, convex, n	one): flat	Slope: 0.0 % / 0.0 °
Applicant/Owner: Waunakee Library Board State: Wisconsi Sampling Point: 05c Investigator(s): Scott Taylor Section, Township, Range: S. 5 T. 8N R. 9E						
	(DpP)		13.1732.17			
	. ,			O O	_	
Are climatic/hydrologic conditions or	the site ty	pical for this time of y	/ear? Ye	s U No 🖲	(If no, explain in Re	•
Are Vegetation, Soil	, or Hydrolo	ogy Significant	tly disturbed?	Are "Normal	Circumstances" pres	ent? Yes ♥ No U
Are Vegetation \square , Soil \square	, or Hydrolo	ogy 🗌 naturally [problematic?	(If needed, e	xplain any answers i	n Remarks.)
Summary of Findings - Att	ach site	map showing s	sampling p	oint location	s, transects, in	nportant features, etc.
Hydrophytic Vegetation Present?	Yes 🔾					
Hydric Soil Present?	Yes 🔾	No 💿			Yes O No 💿	
Wetland Hydrology Present?	Yes 🔾	No 💿				
Hydrology						
1	required:	check all that apply)				
	required,		aves (R9)			
			` '			
Saturation (A3)			-			•
☐ Water Marks (B1)		Hydrogen Sulfide	Odor (C1)		Crayfish Burrows ((C8)
Sediment Deposits (B2)		Oxidized Rhizosph	neres along Living	Roots (C3)	☐ Saturation Visible	on Aerial Imagery (C9)
Drift deposits (B3)		Presence of Redu	ced Iron (C4)		Stunted or Stresse	ed Plants (D1)
				s (C6)		
	(D7)				_ ' '	• •
		☐ Other (Explain in I	Remarks)			
sparsery regetated conteave surface	(50)				TAC ficultal Test (,03)
· · ·	No (•)	Donth (inches)	0			
		Depth (inches):	0	Wetland Hydro	ology Present?	res ○ No •
VAC	No 🖭	Depth (inches):	0			
Describe Recorded Data (stream ga	uge, monito	ring well, aerial photo	os, previous ins	pections), if availa	able:	
Remarks:						
No hydrology indicators. The plot wa	as well elev	ated above the nearb	oy wetland sam _l	ole plot 5A.		

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC:
2	0			
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Species Across All Strata: 5 (B)
				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 40.0% (A/B)
<u>6</u>				
7	0			Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 2,826 sf)	0 :	= Total Cover	•	Total % Cover of: Multiply by:
	20		FAC	OBL species 0 x 1 = 0
1 Populus deltoides		✓	FAC	FACW species $10 \times 2 = 20$
2. Morus alba		✓	FACU	FAC species <u>40</u> x 3 = <u>120</u>
3. Acer negundo		~	FAC	FACU species $175 \times 4 = 700$
4. Acer saccharinum	10		FACW	l •
5	0			ore species x s =
6				Column Totals: <u>225</u> (A) <u>840</u> (B)
7				Prevalence Index = B/A = 3.733
		= Total Cover		<u> </u>
Herb Stratum (Plot size: 78.5 sf)				Hydrophytic Vegetation Indicators:
1 Poa pratensis	80	✓	FACU	Rapid Test for Hydrophytic Vegetation
O. Callida and and the	70	V	FACU	☐ Dominance Test is > 50%
			FACU	Prevalence Index is ≤3.0 ¹
· .			FACU	Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6	0			
7	0			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8				
9				Definitions of Vegetation Strata:
10				Trac. Woody plants, 2 in (7.6 cm) or more in diameter
11				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
	0			at broadt Holghit (BBH), rogardiood of Holghit.
12				Sapling/shrub - Woody plants less than 3 in. DBH and
	160 :	= Total Cover		greater than 3.28 ft (1m) tall
	0			Herb - All herbaceous (non-woody) plants, regardless of
1	0			size, and woody plants less than 3.28 ft tall.
2				
3				Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 :	= Total Cover		
				Hydrophytic
				Vegetation Present? Yes ○ No ●
				riesent:
Remarks: (Include photo numbers here or on a separate she	et.)			
The plot was in a brushy area with a grassy ground layer.				

Sampling Point: 05c

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 05c

-	-	-	needed to document the i		firm the a	absence of indicators	5.)	
Depth (inches)	Matı Color (moist			eatures 1 Type 1	Loc ²	Texture	Remarks	
0-12	10YR 3/		Color (moise)	70 Туре	LUC	Sandy Loam	many rocks	
						- Sandy Loan		
								
ne: C-Concer	ntration D-Den	letion DM-Dedu	uced Matrix, CS=Covered or	Coated Sand Grai	nc 2l oca	tion: DI - Dore Lining N	M-Matrix	
		ietion, Kin-Keut	iceu Matrix, CS=Covered or	Coated Sand Grai	iis -Luca			2
dric Soil Ind Histosol (A1)			Doharalus Polous Cond	face (CO) (LDD D			oblematic riyane sons .	3
, ,	,		Polyvalue Below Surf MLRA 149B)	iace (30) (LKK K,			10) (LRR K, L, MLRA 149B)	
Histic Epiped			☐ Thin Dark Surface (S	9) (LRR R. MLRA	(149B)	Coast Prairie F	Redox (A16) (LRR K, L, R)	
Black Histic (Loamy Mucky Minera		,	5 cm Mucky P	eat or Peat (S3) (LRR K, L, R)
Hydrogen Su			Loamy Gleyed Matrix			Dark Surface	(S7) (LRR K, L, M)	
Stratified Lay			Depleted Matrix (F3)			Polyvalue Belo	ow Surface (S8) (LRR K, L)	
	elow Dark Surfac	e (A11)	Redox Dark Surface			Thin Dark Sur	face (S9) (LRR K, L)	
Thick Dark S			Depleted Dark Surface			☐ Iron-Mangane	ese Masses (F12) (LRR K, L, R	2)
Sandy Muck							odplain Soils (F19) (MLRA 149	
	ed Matrix (S4)		Redox Depressions ([6]			(TA6) (MLRA 144A, 145, 149	
Sandy Redox	x (S5)					Red Parent Ma		
Stripped Mat	trix (S6)						Dark Surface (TF12)	
Dark Surface	e (S7) (LRR R, M	ILRA 149B)				Other (Explain		
ndicators of hy	vdrophytic veget	tation and wetlar	nd hydrology must be preser	nt, unless disturbe	ed or proble		,	
				,				
=	er (if observed	1):						
Type:	`					Hydric Soil Presen	it? Yes O No •	
Depth (inches	s):					,		
marks:								
hydric soil in	ndicators. The	plot was only	dug to 12 inches due to	the abundance	of rocks.			

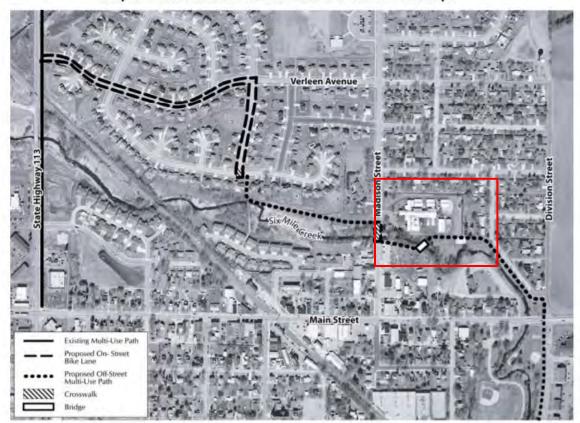
TRAIL CONNECTIVITY

This project will fulfill objectives set forth by planning documents for bike trails in the area.

Please see the excerpt from the "Waunakee-Westport Bicycle and Pedestrian Plan" which was adopted by Waunakee in February of 2005. It shows the desire for trail connectivity from STH 113 to Division Street. Our project site is highlighted by the red box. Our proposed design keeps the trail on the north side of Six Mile Creek from Madison Street to Pleasant Drive. This helps fill the objective plan for that was highlighted twelve years ago.

Waunakee-Westport Area Bicycle and Pedestrian Plan

System Recommendations



Map 6: North Six Mile Creek Path and Lanes Concept

In May of 2018, the Village commissioned Strand to investigate the feasibility of a trail along the Six Mile Creek Corridor. This would shift the previously planned out bike path from residential streets to the Six Mile Creek corridor. The Library site is in the far east of this map as shown in the green box and would provide the connection piece for this project.

