2013 Wetland Delineation & Monitoring Report

RUBBERT WETLAND MITIGATION SITE PHASE 2 WISDOT PROJECT I.D. 0695-12-13 WINNEBAGO COUNTY, WISCONSIN



Prepared for:

Mr. Gary Birch Wisconsin Department of Transportation Environmental Services 4802 Sheboygan Avenue, Room 451 Madison, WI 53707-7965

Prepared by:

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INTRODUCTION

Stantec Consulting Services Inc. (Stantec) performed vegetation community mapping and a wetland determination and delineation at the Wisconsin Department of Transportation (WisDOT) Rubbert Wetland Mitigation Site-Phase 2 in the Town of Clayton, Winnebago County, Wisconsin ("the Project"). The Project was constructed in 2012 by WisDOT to compensate for wetland impacts associated with upgrades to the U. S. Highway 45 (USH 45) corridor. The Project site is approximately 54.8 acres, and is located in Section 17, Township 20 North, Range 16 East (Figure 1). The site is bordered by Winnebago County Trunk II to the south, Rubbert Mitigation Site Phase 1 to the west, and agricultural lands to the east and north.

The Project site was constructed to restore wetland hydrology on drained agricultural land. Wetland hydrology was established through the construction of a berm as well as the removal of drain tile. The purpose and objective of the wetland determination and delineation was to identify the extent and spatial arrangement of wetlands within the Project site. In addition to the wetland delineation, a reconnaissance of the Project was conducted to develop a vegetation community map, and to determine the distribution and extent of invasive species. The wetland delineation and site reconnaissance was completed by Melissa Curran and Nik Bertagnoli of Stantec on August 15, 2013.

MITIGATION GOALS, OBJECTIVES, & PERFORMANCE STANDARDS

MITIGATION GOALS

The goals of the Rubbert Wetland Mitigation Site Phase 2 are to provide self-sustaining, passively managed wetlands within the existing landscape and to compensate for loss of wetland function caused by the USH 45 freeway conversion project.

MITIGATION OBJECTIVES

The Project objective was to create and restore converted wetlands to wet meadow and shallow marsh plant communities. This was accomplished through disabling drain tiles, excavating to intercept groundwater, and creating berms. Additionally, two fixed plate weirs and riprap spillways were installed to aid in restoration of the wetlands. Revegetation of the Project was accomplished through planting desired native species and through natural ingress from adjacent wetlands and the soils seed bank. In addition to wetland creation and restoration, the design of the Rubbert Site Phase 2 included on-site enhancement of upland and existing wetland communities.

VEGETATION SUCCESS CRITERIA

Vegetation success criteria will be applied throughout the post-construction monitoring phase to assess progress toward meeting the project objectives. The following lists the vegetation success criteria presented in the U.S. Army Corps of Engineers permit letter dated February 10, 2012 (Appendix A).

- 1. At least 75% of vegetative areal cover within the wetland communities of the mitigation site shall be composed of FAC, FACW or OBL species.
- 2. Herbaceous communities (including upland buffers) shall be dominated by 10 or more species of native grasses, sedges, rushes, forbs and/or ferns and shall achieve approximately 80% areal coverage by Year 5.
- 3. Control of invasive and/or non-native plant species shall be carried out for five full growing seasons. Control shall consist of mowing, burning, disking, mulching, biocontrol and/or herbicide treatments. By the third growing season, and areas one-quarter acre in size or larger that have greater than 50 percent areal cover of invasive and/or non-native species shall be treated and/or cleared and then reseeded. Follow-up control of invasive and/or non-native species shall be implemented as stated above. At the end of the fifth growing season, the vegetative community shall not contain greater than 5 percent vegetative areal cover of invasive and/or non-native species including but not limited to: reed canary grass (*Phalaris arundinacea*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), smooth brome (*Bromus inermis*), giant ragweed (*Ambrosia trifida*), common ragweed (*Ambrosia artemisiifolia*), quack grass (*Elytrigia repens*), black locust (*Robinia pseudoacacia*), sweet clovers (*Melilotus alba, M. officinalis*), non-native honeysuckles (*Lonicera x bella*), and non-native buckthorns (*Rhamnus*)

cathartica and R. frangula). The mitigation site shall have no purple loosestrife (Lythrum salicaria) present at the end of the monitoring period. Failure to meet any of the above criteria shall extend the permittee's responsibility for monitoring and control of invasive/non-native species within the compensation site.

MONITORING METHODS

WETLAND DELINEATION

Wetland determinations were based on the criteria and methods outlined in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual:*Northcentral and Northeast Region (2009), United States Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (1987), and subsequent guidance documents (USACE 1991, 1992), Guidelines for Submitting Wetland Delineations in Wisconsin to the St. Paul District Corps of Engineers (USACE 1996), and the *Basic Guide to Wisconsin's Wetlands and their Boundaries* (Wisconsin Department of Administration Coastal Management Program 1995).

The wetland determination involved the use of available resources to assist in the assessment such as USGS topographic maps, Natural Resources Conservation Service (NRCS) soil survey, Wisconsin Wetland Inventory (WWI) mapping, and aerial photography. In addition to these resources, climate data from the National Weather Service (NWS) and the United States Geological Survey (USGS) were also analyzed to help justify conclusions that were reached in the field.

On-site wetland determinations were made using the three criteria (vegetation, soil and hydrology) and technical approach defined in the NC/NE Regional Supplement. According to procedures described in the NC/NE Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

The wetland boundary was surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software.

VEGETATION COMMUNITY MAPPING

Vegetation data was collected at sample points located in each distinct community type and by using a meander survey technique to gather comprehensive species lists for each distinct vegetation community or homogenous stand. In combination, both methods provide a thorough understanding of the floristic quality of the Project and the vegetation's response to mitigation activities.

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Twelve sample points were placed in areas representative of each community type within the wetland mitigation area and associated upland buffer (Figure 4). Percent cover of herbaceous and woody vegetation was recorded for each sample point and dominance was determined through use of the 50/20 rule. Prevalence Index (PI) was used to determine the percentage of species FAC or wetter. If the PI was ≤ 3.0 , the vegetation was considered hydrophytic.

A meander survey was used to develop a comprehensive plant species list, and identify vegetation cover types present within the Project area. Boundaries of all plant communities/ stands were mapped, and representative photographs were taken. The mapped vegetation cover type boundaries were digitized onto aerial photography using GIS technology. Species lists were compiled for each plant community / stand and a mean Coefficient of Conservatism (C) and Floristic Quality Index (FQI) was calculated for native and non-native species.

The Floristic Quality Assessment (FQA) methodology was used to monitor and assess the wetland floristic quality at the site, following methodology developed by the Wisconsin Department of Natural Resources. This method is based on calculating an average Coefficient of Conservatism (C) and a Floristic Quality Index (FQI) for each community and/or stand using the following formula:

FQI = Mean $C(\sqrt{N})$

C= Coefficient of Conservatism

N= species richness (Identifiable Native & Non-native)

Because it utilizes measures of floristic diversity and quality, the FQI values can be used as one tool to evaluate the biological integrity and lack of disturbance in a particular site; however, they should be used in conjunction with other tools (such as functional assessments, assessments of wildlife habitat, etc.) to evaluate the integrity, quality, and value of a site. While FQI results must be carefully interpreted, especially in small sites or stands, which usually result in lower FQI values regardless of species composition, it is generally accepted that an FQI value of 35 and/or a mean C value of 4.0 indicates a site with very high floristic quality and integrity, while an FQI value of less than 20 and a mean C value of less than 2.5 indicates a site is degraded.

MONITORING RESULTS

SITE DESCRIPTION

The majority of the Project site is comprised of shallow marsh and less commonly wet meadow and upland buffer communities. The USGS Topographic Map (Figure 1) indicates the Project site is located in a relatively flat area adjacent to an intermittent waterway, known as Arrowhead River, which flows south along the western edge of the Project separating Phase 1 from the Phase 2.

Soils mapped on the Project site by the *NRCS Soil Survey of Winnebago County* include Menasha clay (Mn), Poy silty clay loam (Pt), and Neenah silty clay loam (NhA) (Figure 2). According to the NRCS List of Hydric Soils for Winnebago County, Menasha and Poy soils are hydric, while Neenah soils contain hydric inclusions. Menasha soils consist of very deep, poorly drained soils formed in clayey lacustrine deposits on glacial lake basins and stream terraces. The Poy series consists of very deep poorly drained soils that are moderately deep to sandy deposits. They formed primarily in clayey water-laid deposits overlying sandy deposits on glacial lake basins and stream terraces. The Neenah series consists of very deep, somewhat poorly drained soils formed in clayey lacustrine deposits on glacial lake basins and stream terraces. The wetlands identified on the Project are mostly located within the Menasha map units. It is important to note that the soil map was created prior to construction of the Project.

The Wisconsin Wetland Inventory (WWI) map does not indicate the presence of wetlands within the Project (Figure 3). However, it is important to note that the WWI wetland map was created prior to construction of the Project.

According to the NWS Oshkosh Weather Station 3.02 inches of rain were recorded in July, and up until the time of the delineation, 0.58 inches of rain had been recorded in August. Rainfall for July was considered a normal rainfall and August was below normal. According to the USGS' Waterwatch Data, stream flows near the Project were normal. Based on the recorded precipitation and stream flows present near the Project, it was assumed that direct observations of wetland hydrology (inundation or saturation to the surface) may be observed.

WETLAND DELINEATION

Two wetlands were identified and delineated within the Project. USACE data sheets were completed for twelve sample points along transects through the wetlands and adjacent uplands and are contained in Appendix B. The wetland boundaries and sample point locations are shown on Figure 4. The wetlands are summarized in Table 1 and described in detail in the following sections.

Table 1. Summary of the wetlands identified within the Project.

Wetland	Wetland Type	Adjacent Surface Waters	Acreage (on-site)
Wetland 1	WDNR: Shallow Marsh (E1K)/ Wet Meadow (E2K) WisDOT: SM & WM	Directly adjacent to the Arrowhead River	10.75 acres
Wetland 2	WDNR: Shallow Marsh (E1K)/ Wet Meadow (E2K)	Directly adjacent to the Arrowhead River	23.70 acres

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WisDOT: SM & WM		
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Wetland 1 (W-1)

Wetland 1 is a 10.75 acre wet meadow/shallow marsh located in the southwest parcel of the Project.

Vegetation

Dominant plant species identified within W-1include narrow-leaved cattail (*Typha angustifolia*), and barnyard grass (*Echinochloa crusgalli*). The dominant species within the wetland are comprised of hydrophytic vegetation (OBL, FACW, and/or FAC) and meet the hydrophytic vegetation criterion.

Hydrology

The wetland appears to have a seasonally inundated/saturated hydroperiod. Primary indicators of wetland hydrology included saturation. Secondary indicators of wetland hydrology included the FAC-neutral test and geomorphic position. Therefore, the wetland hydrology criterion was met.

Soils

Soils within the wetland are mostly mapped by the NRCS as Menasha clay loam (Figure 2). The soils observed at the sample points were not consistent with the Menasha series' characteristics. NRCS field indicators of hydric soil including F6 – Redox Dark Surface, F7 – Depleted Dark Surface, and TF2 – Red Parent Material were observed.

Wetland 2 (W-2)

Wetland 2 is a 23.70 acre wet meadow/shallow marsh located in the northeast parcel of the Project.

Vegetation

Dominant plant species identified within W-2 include narrow-leaved cattail, barnyard grass, northern water-plantain (*Alisma triviale*), heart's-ease (*Polygonum lapathifolium*), green foxtail (*Setaria viridis*), witch grass (*Panicum capillare*), Virginia wild-rye (*Elymus virginicus*), curly dock (*Rumex crispus*), and Kentucky bluegrass (*Poa pratensis*). The dominant species within the wetland are mostly comprised of hydrophytic vegetation (OBL, FACW, and/or FAC) and meet the hydrophytic vegetation criterion.

Hydrology

The wetland appears to have a seasonally inundated/saturated hydroperiod. Primary indicators of wetland hydrology included saturation. Secondary indicators of wetland hydrology included the FAC-neutral test and geomorphic position. Therefore, the wetland hydrology criterion was met.

Soils

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Soils within the wetland are mostly mapped by the NRCS as Menasha clay loam (Figure 2). The soils observed at the sample points were not consistent with the Menasha series' characteristics. NRCS field indicators of hydric soil including F6 – Redox Dark Surface and F7 – Depleted Dark Surface were observed.

Wetland Boundary

The wetland boundary was determined based on distinct differences in vegetation, hydrology, and topography consisting of the following: 1) Transition from a wet meadow/emergent wetland complex dominated by hydrophytes to an upland community dominated by upland species; 2) Transition from areas with sufficient evidence of wetland hydrology to areas that lacked wetland hydrology indicators; and 3) Transition from a depressional landscape to a gently sloping landscape.

Uplands

Uplands within the Project consist of a mesic prairie planting dominated by green foxtail, common ragweed (*Ambrosia artemisiifolia*), red clover (*Trifolium pratense*), quackgrass, common dandelion (*Taraxacum officinale*), heart's-ease, plantain (*Plantago major*), and curly dock.

Indicators of hydric soil and wetland hydrology were not observed at the upland data plots. Upland plots were located approximately 2-3 feet higher in elevation than the adjacent wetland plots. The uplands are located in a gently sloping landscape (~2-6%), and are not located in topographic positions that are conducive to wetland formation.

VEGETATION COMMUNITY MAPPING

Three vegetation communities or stands were identified and mapped within the Project (Figure 5), and includes, shallow marsh (SM), wet meadow (M), and upland buffer communities. Species lists for each community are provided in Appendix C and a brief description of each is provided below.

Shallow (SM)

The shallow marsh community comprises 30.79 acres of the Project site and is dominated by narrow-leaved cattail and less commonly soft-stem bulrush (*Schoenoplectus tabernaemontani*), barnyard grass and northern water-plantain. This community comprises the greatest acreage across the Property and is located centrally within the northern and southern units (Figure 5). A total of 27 species (22 native, 5 non-native) were identified within this community. Mean C is 2.8 for all species and FQI is 14.6 for all species, which is the highest value recorded at the Property. Invasive species of concern within this plant community includes reed canary grass, which currently comprises less than 5 percent of the areal coverage.

Wet Meadow (M)

The wet meadow community comprises 3.54 acres of the Project site and is dominated by northern water-plantain, barnyard grass, witch grass, heart's-ease, alsike clover (*Trifolium hybridum*) and red clover. This community is located along the perimeter of the shallow marsh community, adjacent to the upland buffer in three separate stands (Figure 5). A total of 32 species (18 native, 14 non-native) were identified within this community. Mean C is 1.4 for all species and FQI is 7.8 for all species, which is considered low from a floristic quality standpoint. The abundance of non-native species and the present of "weedy" native species contribute to the low mean C and FQI values. However, low values are expected for recently disturbed sites and it's assumed these values will increase over time as more conservative native species become established. Invasive species of concern include reed canary grass, which represents less than 1 percent cover.

Upland Buffer

The upland buffer comprises 24.26 acres of the site and is dominated by common ragweed, giant ragweed (*Ambrosia trifida*), pearl millet (*Pennisetum glaucum*), plantain, heart's-ease and green foxtail. The upland buffer is located along the perimeter berm of the Property and upland areas throughout the Property. A total of 44 species (19 native, 25 non-native) were identified within the upland buffer. Mean C is 1.0 for all species and FQI is 6.5 for all species, which is considered low from a floristic quality standpoint, and is the lowest for any community at the Property. Similar to the wet meadow community, the abundance of non-native species and the present of "weedy" native species contribute to the low mean C and FQI values. These values are expected to increase over time as more conservative native species become established. Invasive species of concern are minimal, represented by only reed canary grass with an estimated 5 percent areal coverage.

PERFORMANCE STANDARDS MET

Progress towards meeting the vegetation success criteria is discussed below.

- 1. At least 75% of vegetative areal cover within the wetland communities of the mitigation site shall be composed of FAC, FACW or OBL species.
 - Two sample points (W1-1w and W2-3w) were established in the wet meadow communities and four sample points (W1-3w, W1-2w, W2-1w and W2-2w) were established in the shallow marsh communities. The dominance test at sample point W2-3w suggests that 71.4% of the dominant species are OBL, FACW or FAC; whereas 100% of the dominant species are OBL, FACW or FAC at sample point W1-1w. The dominance test at all four sample points within the shallow marsh communities suggests that 100% of the dominant species are OBL, FACW or FAC.

- 2. Herbaceous communities (including upland buffers) shall be dominated by 10 or more species of native grasses, sedges, rushes, forbs and/or ferns and shall achieve approximately 80% areal coverage by Year 5.
 - Dominant species at the wet meadow sample points includes non-native barnyard grass, green foxtail, curly dock and Kentucky blue-grass, and native heart's-ease, witch grass, and Virginia wild-rye (Elymus virginicus). Native species areal cover currently does not meet the vegetation success criteria within the wet meadow communities, but it is expected to increase over time as early successional non-native species get replaced by conservative native species. Dominant species in all four sample points within the shallow marsh community was narrow-leaved cattail, which is an aggressive non-native species. Without aggressive control of this species, native species percent cover will not meet this success criterion. Dominant species within the upland buffer sample points includes common raqueed, green foxtail, common plantain, heat's-ease, dandelion, curly dock, red clover and quack grass. Native species areal cover currently does not meet the vegetation success criteria within the upland buffer communities, but similar to the wet meadow communities, it is expected to increase over time as early successional nonnative species get replaced by conservative native species.
- 3. Control of invasive and/or non-native plant species shall be carried out for five full growing seasons. By the third growing season, and areas one-quarter acre in size or larger that have greater than 50 percent areal cover of invasive and/or non-native species shall be treated and/or cleared and then reseeded. At the end of the fifth growing season, the vegetative community shall not contain greater than 5 percent vegetative areal cover of invasive and/or non-native species as noted above.
 - Currently the site is not meeting the established performance standard for percent cover of the target invasive species listed above. Aggressive non-native species such as reed canary grass contribute less than 5 percent of the wetland area and purple loosestrife, black locust, buckthorns and honeysuckles were not observed. However, giant ragweed, common ragweed, sweet clover and quack grass are present throughout the site and management of these species may be required in order to meet the established vegetation success criteria.

CONCLUSION

Stantec performed a wetland determination and delineation and habitat mapping of the WisDOT Rubbert Wetland Mitigation Site Phase 2 in the Town of Clayton, Winnebago County, Wisconsin. The Property is located in Section 17, Township 20 North, Range 16 East, Town of Clayton, Winnebago County, Wisconsin. The purpose and objective of the wetland determination and delineation was to identify the extent and spatial arrangement of wetlands within the Project. In addition to the wetland delineation, a reconnaissance of the Project was conducted to aid in the development of a vegetation community map, and to determine the distribution and extent of invasive species.

Two wetlands (totaling 34.45 acres) were identified on the Project. Wetlands and their boundaries were surveyed and mapped. Three distinct plant communities were observed at the site: wet meadow (M), shallow marsh (SM), and upland buffer. Aggressive non-native species such as reed canary grass contribute less than 5 percent of the wetland area and purple loosestrife, black locust, buckthorns and honeysuckles were not observed. However, giant ragweed, common ragweed, sweet clover and quack grass are present throughout the site and management of these species may be required in order to meet the established vegetation success criteria.

The information provided by Stantec regarding wetland boundaries is a scientific-based analysis of the wetland and upland conditions present on the site at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on wetland boundaries rests with the USACE and, in some cases, the WDNR or a local unit of government. As a result, there may be adjustments to boundaries based upon review by a regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to recent precipitation patterns and the season of the year. In addition, the physical characteristics of the site can change over time, depending on the weather, vegetation patterns, drainage activities on adjacent parcels, or other events. Any of these factors can change the nature and extent of wetlands on the site.

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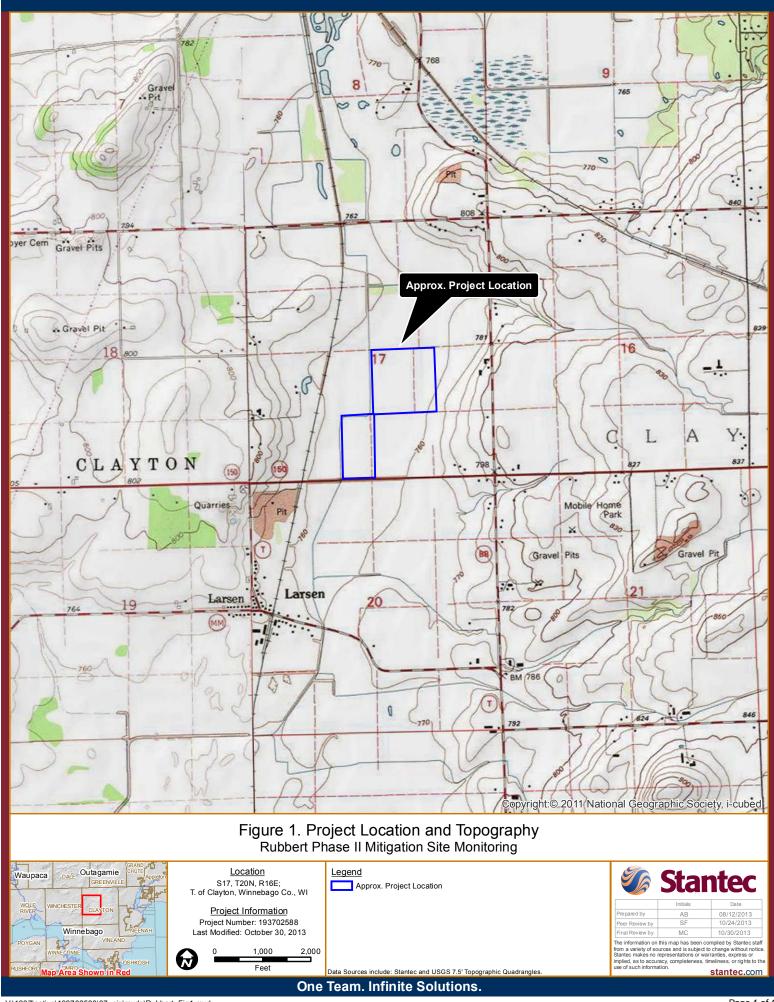
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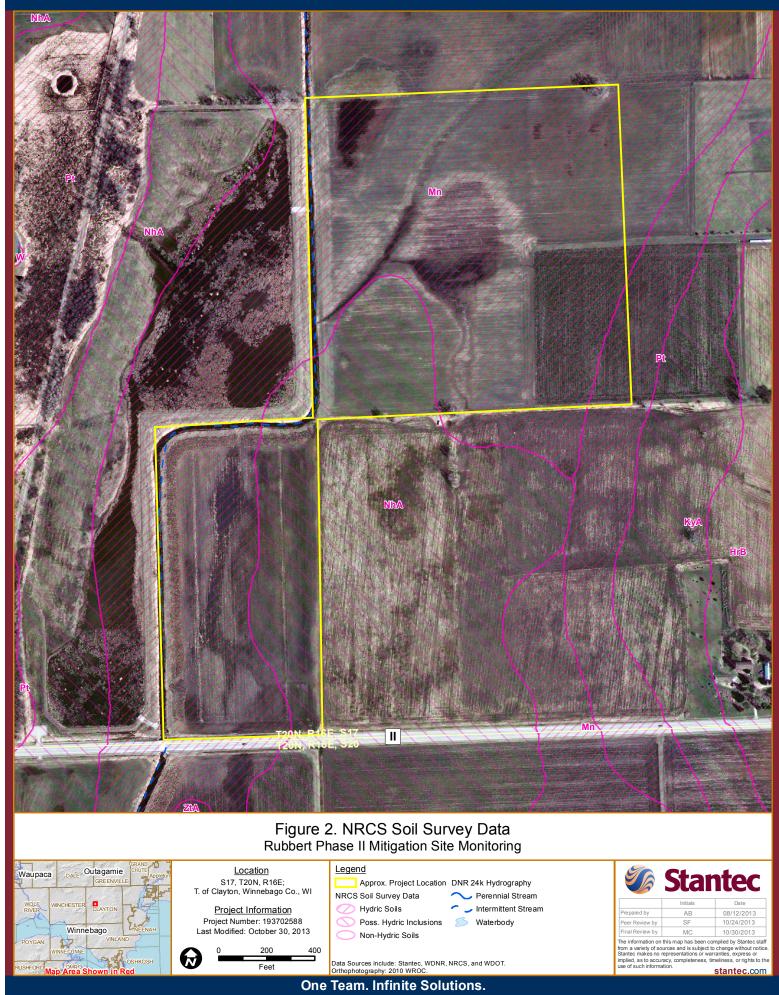
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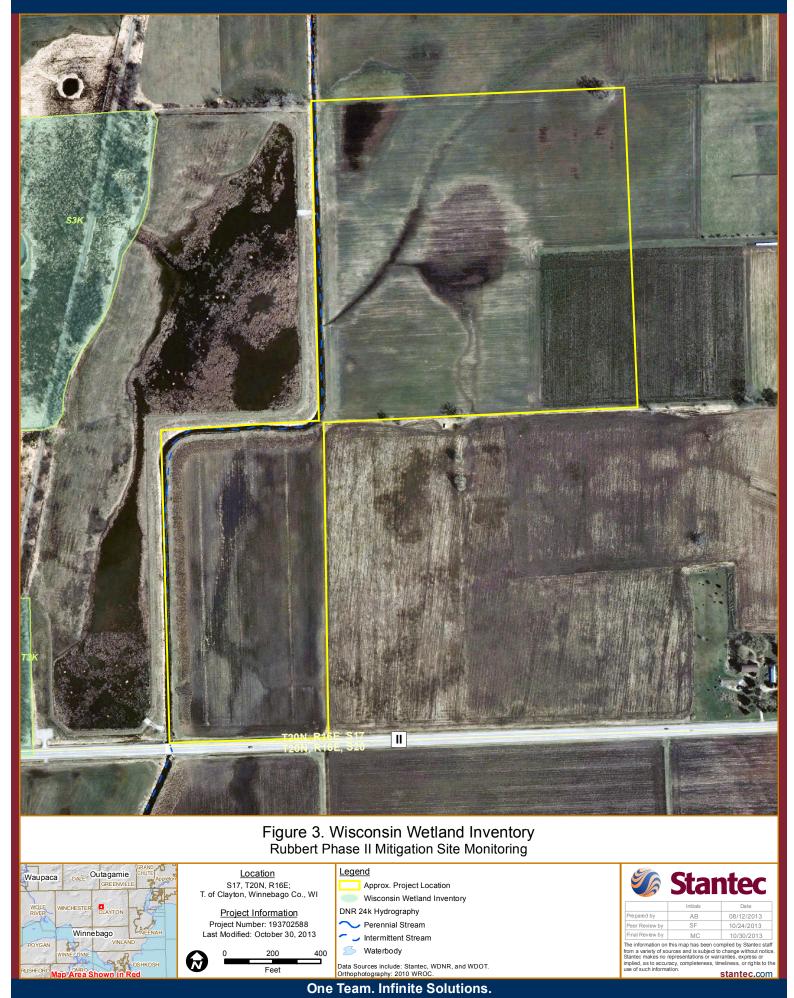
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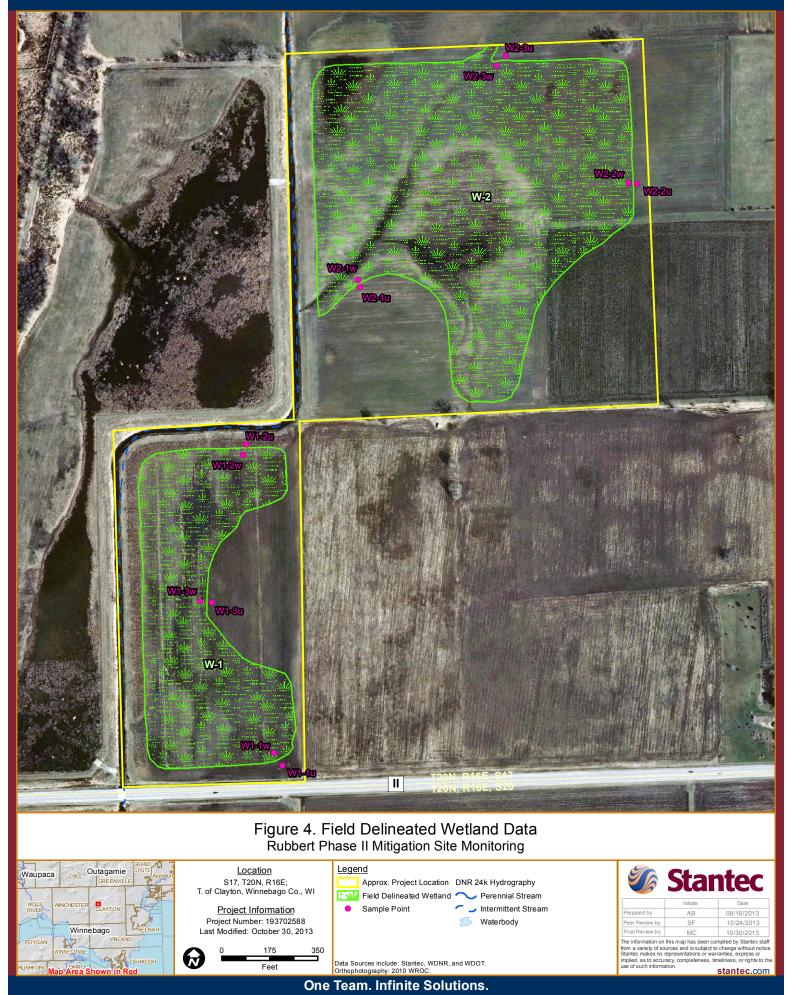
FIGURES

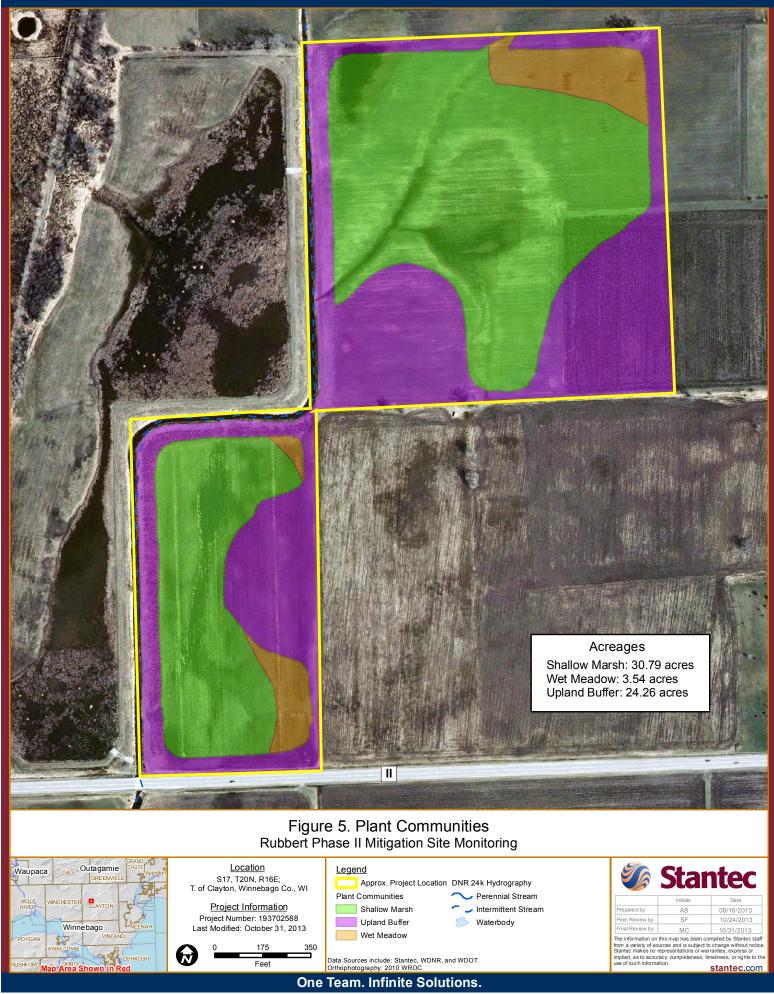












APPENDIX A US ARMY CORPS OF ENGINEERS PERMIT DOCUMENT





DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT, CORPS OF ENGINEERS 180 FIFTH STREET EAST, SUITE 700 ST. PAUL MINNESOTA 55101-1678

REPLY TO ATTENTION OF

February 10, 2012

Operations Regulatory (2010-02579-JRS)

Mr. William Bertrand Wisconsin Department of Transportation 944 Vanderperren Way Green Bay, Wisconsin 54303

Dear Mr. Bertrand:

This is in regard to the Rubbert Site Phase 2 Wetland Mitigation Plan you submitted in December 2011 concerning Department of the Army permit 2010-02579-JRS, which was issued on March 10, 2011. You asked that we consider the submitted information and determine if the permit could be modified to include the permittee responsible compensatory mitigation, as allowed in the special conditions of the issued permit.

As a matter of clarifying the record, the Corps decision to authorize the discharge of fill material into 13.26 acres of wetland was partially based on the withdrawal of 14.24 acres of wetland credit from the Hope Marsh mitigation bank site located in Marquette County, Wisconsin. This decision was made with the understanding that the credit withdrawal may be temporary as WisDOT was pursuing permittee responsible mitigation within the watershed.

In accordance with Special Condition #5 of the permit, you have requested approval to utilize permittee responsible compensatory wetland mitigation at the Rubbert Site Phase 2. We have reviewed our decision record and the wetland mitigation plan for the Rubbert Site Phase 2, dated December 2011. Based on that review and coordination with the Wisconsin Department of Natural Resources, we have determined that the requested permit modification is acceptable.

Therefore, I hereby modify permit 2010-02579-JRS by approving the compensatory migitaion plan for the Rubbert Site Phase 2, dated December 2011, prepared by WisDOT. This permit modification is subject to the attached Special Conditions for Permit Modification, hereby made part of this authorization.

Operations Regulatory (2010-02579-JRS)

Special Condition #5 of the permit required the withdrawal of 14.24 acres of wetland credit from the Hope Marsh Wetland Mitigation Bank site located in Marquette County, Wisconsin. Provided the standards at the Rubbert Phase 2 Site are being satisfactorily met after 3 full growing seasons, 14.24 acres of wetland credit may be returned to the Hope Marsh Wetland Mitigation Bank.

All other terms and conditions of the permit remain unchanged.

This document should be retained as part of your record.

If you have any questions, contact Joey Shoemaker in our Green Bay Field Office at (920) 448-2824. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,

For Tamara E. Cameron Chief, Regulatory Branch

To M Vesser

Attachments

Copy: Bobbi Jo Fischer, WDNR Mike Helmrick, WDOT Kathie Van Price, WDOT

Special Conditions for Permit Modification



Special Conditions for Permit Modification 2010-02579-JRS

- 1. To compensate for the unavoidable loss of 13.26 acres of wetland, WisDOT shall construct the Rubbert Site Phase 2 Wetland Mitigation Site. The site shall generate 29.82 acres of wetland including 22.55 acres of Wet Meadow and 6.9 acres of Shallow Marsh. A 20.24 acre upland buffer area would also be established that will account for 1.72 acres of credit. The site would also provide replacement of 1.37 acres due to the discharge of fill into .9 acres of wetlands for the construction of the site. WisDOT shall adhere to the respective success criteria listed below and to the Rubbert Phase 2 Wetland Mitigation site plans dated December 2011, prepared by the Wisconsin Department of Transportation, NE Region Green Bay.
- 2. The following success criteria shall apply to the Rubbert Phase 2 Wetland Mitigation site:

a. **VEGETATION**:

- i. At least 75 % of vegetative areal cover within the wetland communities of the mitigation site shall be composed of FAC, FACW or OBL species.
- ii. Herbaceous communities (including upland buffers) shall be dominated by 10 or more species of native grasses, sedges, rushes, forbs and/or ferns and shall achieve approximately 80% areal coverage by year 5.
- iii. Control of invasive and/or non-native plant species shall be carried out for 5 full growing seasons. Control shall consist of mowing, burning, disking, mulching, biocontrol and/or herbicide treatments. By the third growing season, any areas one-quarter acre in size or larger that have greater than 50 percent areal cover of invasive and/or non-native species shall be treated (e.g., herbicide) and/or cleared (e.g., disked) and then reseeded. Follow-up control of invasive and/or non-native species shall be implemented as stated above. At the end of the fifth growing season, the vegetative community shall not contain greater than 5 percent vegetative areal cover of invasive and/or non-native species including but not limited to: reed canary grass (Phalaris arundinacea), Canada thistle (Cirsium arvense), bull thistle (Cirsium vulgare), smooth brome grass (Bromus inermis), giant ragweed (Ambrosia trifida), common ragweed (Ambrosia artemisiifolia), quack grass (Elytrigia repens), black locust (Robinia pseudoacacia), sweet clovers (Melilotus alba and M. officinalis), non-native honeysuckles (e.g., Lonicera x bella), and non-native buckthorns (Rhamnus cathartica and R. frangula). The mitigation site shall have no purple loosestrife (Lythrum salicaria) present at the end of the monitoring period. Failure to meet any of the above criteria shall extend the permittee's responsibility for monitoring and control of invasive/non-native species within the compensation site.

- b. **HYDROLOGY** (apply the standard below which corresponds to the proposed cover type as described in the Rubbert Phase 2 Wetland Mitigation site plans, dated December 2011):
 - i. Fresh (Wet) Meadows, Sedge Meadows and Wet Prairies (Mineral Soils). Hydrology shall consist of saturation at or within 12 inches of the surface for a minimum of 28 consecutive days, or two periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). Inundation during the growing season shall not occur except following the 10-year frequency or greater storm/flood event. The depth of inundation shall be 6 inches or less and the duration of any inundation event shall be less than 14 days. An exception can be made for sites with hummocky microtopography -- hollows between hummocks can have standing water depths of up to 6 inches for extended duration.
 - ii. **Shallow Marshes.** Hydrology shall consist of saturation to the surface, to inundation by up to 6 inches of water, for a minimum of 56 consecutive days or two periods of 28 consecutive days or four periods of 14 consecutive days, during the growing season under normal to wetter than normal conditions (70 percent of years based on most recent 30-year record of precipitation). During the growing season, inundation by up to 18 inches of water following the 2-year or greater storm/flood event is permissible provided that the duration does not exceed 30 days (e.g., water depth drops from 18 inches to 6 inches within the 30 days).
- 3. Monitoring reports are required for the Rubbert Phase 2 Wetland Mitigation site. The reports shall be submitted by December 31 following the 1st, 3rd and 5th growing seasons. A final wetland delineation must be submitted at the end of the monitoring period. Two reports shall be forwarded to the Corps, one to the District Office at 180 Fifth Street E, Suite 700, St. Paul, Minnesota 55101; the other to the Green Bay Field Office, Army Corps of Engineers, at 211 N Broadway, Suite 221 Green Bay, WI 54303. The reports shall, at a minimum, include the following information:
 - a. All plant species along with their percent cover, identified using standard plots and/or transects, with at least one representative plot/transect in each plant community within the mitigation site including upland buffers. In addition, the presence, location and percent cover of invasive and/or non-native species, such as purple loosestrife and common buckthorn, in any of plant communities shall be noted.
 - b. Vegetation cover maps at an appropriate scale shall be submitted for each reported growing season.
 - c. Photographs showing all representative areas of the mitigation site taken at least once each reported growing season during the period of July 1 to September 30. Photographs shall be taken from a height of approximately five to six feet from at least one location per acre. Photos shall be taken from the same reference point and direction of view each reporting year.

- d. Surface water and groundwater elevations in representative areas (e.g., at least one sample point in each plant community) recorded at least once each week for the first 10 weeks of each growing season, thereafter taken monthly for the remainder of each growing season. The location of each monitoring site shall be shown on a plan view of the site.
- 4. The Rubbert Phase 2 Wetland Mitigation site shall be protected in perpetuity by covenants or conservation easement or other land use restrictions acceptable to the District Engineer that prohibit incompatible uses. The covenants shall be reviewed and approved by the District Engineer, the approved covenants shall be recorded within 90 days of the completion of the mitigation site construction (prior to monitoring completion), and a certified copy of the recorded covenant shall be returned to this office.
- 5. An as-built survey shall be submitted within one month of the completion of the Rubbert Phase 2 Wetland Mitigation site construction. This report will summarize the construction activities, describe any changes to the original plan, describe any corrective actions needed, and provide an as-built survey showing 6" (or 1 foot) elevation contours or spot elevations. This survey shall be prepared by a licensed surveyor and certified by the licensed surveyor or by a registered professional engineer to conform to the design plans and specifications. (Completion of construction will likely be identified as completion of the whole line certainly these submissions may be piecemealed to our office as well if desired by the permittee)
- 6. If the performance criteria outlined above for the Rubbert Phase 2 Wetland Mitigation site are not met at any time during the monitoring period, the permittee shall provide the Corps with a proposal detailing corrective actions and/or maintenance actions proposed (if any) and an implementation schedule for those actions. The permittee shall implement the necessary corrective measures following review and approval/modification of those measures by the Corps. Upon completion of corrective measures, the permittee shall provide a written summary of the work to the Corps. Additional remedial actions may be required if the corrective measures do not result in satisfaction of the performance criteria during the next growing season.
- 7. The Corps may, at any time during the five year monitoring period for the Rubbert Phase 2 Wetland Mitigation site, require removal, treatment or management of undesirable animal species, including physical removal, live trapping, confining wires or nets, etc.
- 8. The permittee shall assume all liability for accomplishing corrective work should the District Engineer determine that the compensatory mitigation proposed Rubbert Phase 2 Wetland Mitigation site has not been completed satisfactorily. Remedial work may include regrading and/or replanting the mitigation site. This responsibility shall extend for a period of 5 years beginning upon completion of mitigation site construction.
- 9. Your responsibility to complete the required compensatory mitigation as set forth in these Special Conditions will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the U.S. Army Corps of Engineers for the Rubbert Phase 2 Wetland Mitigation site.

APPENDIX B US ARMY CORPS OF ENGINEERS DATA SHEETS





WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Northeast and Northcentral Region

Project/Site: Applicant:	WisDOT	nase II Mitigation Sit	e Monito				Stantec Project #:	193702588		Date: County:	08/15/13 Winnebago
Investigator #1:				Investi	gator #2:			N1/A		State:	Wisconsin
Soil Unit:		ty clay loam		١٠٠	al Daliati		/I/WWI Classification:	N/A		Wetland ID:	w1
Landform:	Side slope	Latitudas	NI/A		al Relief:			Dotum	NI/A	Sample Point:	w1-1u
Slope (%):	2-6	Latitude:			ongitude:		alia lia mana adia)	Datum: ☐ Yes ☑		Community ID:	mesic prairie 17
·		ditions on the site ty	•			(if no, expir	Are normal circumsta			Section:	
•		or Hydrology □ sig	•				✓ Yes	ances presen □No	l :	Township:	20N 16 Dir: E
		or Hydrology	lurally pr	obiemati	iC?		₫ 163			Range:	16 Dir: E
SUMMARY OF		10		— V	— N.			Lhadria Oaila	D		□ Vaa □ Na
Hydrophytic Ve				☐ Yes				Hydric Soils		\\/:thip \ \\/.otlor	☐ Yes ☑ No
Wetland Hydrol	<u> </u>		olo proiri	☐ Yes		dotormi	nod that the antocodo			Within A Wetlar	
Remarks:	Sample plo	ot is located in a me	sic prairi	e. WEIS	s analysis	s determi	ned that the antecede	nt precipitatio	n condition	is were arier tha	an normai.
HYDROLOGY Wetland Hydro	ology Indica	ators (Check here i	f indicato	ors are n	ot preser	nt 🕡):					
<u>Primary:</u>				_			_		Secondary:		
	A1 - Surface				B9 - Wate					B6 - Surface Soil	
	A2 - High Wa A3 - Saturation			님	B13 - Aqu B15 - Mar					B10 - Drainage P	
	B1 - Water M			H	C1 - Hydro	•			_	C2 - Dry-Season	
	B2 - Sedimer						spheres on Living Roots			C8 - Crayfish Bur	
	B3 - Drift Dep				C4 - Prese	ence of Re	educed Iron			-	isible on Aerial Imagery
	B4 - Algal Ma						duction in Tilled Soils			D1 - Stunted or S	
	B5 - Iron Dep		20001		C7 - Thin		ace			D2 - Geomorphic	
		on Visible on Aerial Ima / Vegetated Concave S	0 ,		Other (Ex	piain)				D3 - Shallow Aqu D4 - Microtopogra	
	Do - Oparsery	vegetated concave c	dirace							D5 - FAC-Neutral	
Field Observat	ions:										
Surface Water		□ Vaa □ Na	Donth		(in)						
Water Table Pr		☐ Yes ☑ No	Depth:		(in.)			Wetland Hyd	drology Pr	resent?	Yes ☑ No
Saturation Pres		☐ Yes ☑ No	Depth:		(in.)						
Saturation Fies	ent?	☐ Yes ☑ No	Depth:		(in.)						
Describe Record	ed Data (str	eam gauge, monitori	ng well, a	erial pho	tos, previ	ous inspe	ctions), if available:		N/A		
D											
Remarks:	The sample	e plot is located on a	a gentle:	slope, a	oproximat	ely 2 fee	t higher in elevation th	nan the adjace	ent wetland	l plot. No evide	nce of wetland
Remarks:		e plot is located on a vas observed at the	_		oproximat	tely 2 fee	t higher in elevation th	nan the adjace	ent wetland	l plot. No evide	nce of wetland
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SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric	hydrology v group): otion (Describe to Bottom Depth 10 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy G	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	sample cam S dicator or confirm Color 7.5YR 5YR ere if indi	n the absence of Matrix (Moist) 2/1 4/4 icators a	% 100 90 re not pre S8 - Polyv (LRR R, M S9 - Thin (LRR R, M F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo	De: C=Concentra 5YR esent ☑ ralue Belov MLRA 149 Dark Surfa MLRA 149 ay Muck M -) ay Gleyed eted Matrix x Dark Surfa calcal descriptions y Concentra	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/1 N: w Surface B) acce B) ineral Matrix Curface	somewhat possible same Mottles Mottles % 10 Indicator	Type Type	Location Location M M matic Soils Muck (LRR K, L, Matrix) Prairie Redox (LRucky Peat of Peat aurface (LRR K, L) ue Below Surface ark Surface (LRR Matrix) Manganese Masses and Floodplain Soils Spodic (MLRA 14)	Texture (e.g. clay, sand, loan clay loam clay MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric	hydrology v group): ogroup): btion (Describe to Bottom Depth 10 20	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the int Horizon	sample cam S dicator or confirm Color 7.5YR 5YR ere if indi	n the absence of Matrix (Moist) 2/1 4/4 icators a	f indicators.) (Type % 100 90 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	se: C=Concentra 5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/1): w Surface B) ace B) ineral Matrix c arface Surface Surface	somewhat possible same Mottles Mottles % 10 Indicator	Type Type	Location Location M M matic Soils Muck (LRR K, L, Matrix) Prairie Redox (LR ucky Peat of Pea	Texture (e.g. clay, sand, loan clay loam clay MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) HAA, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric	hydrology v group): otion (Describe to Bottom Depth 10 20 Soil Field In A1- Histosol A2 - Histic En A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy M S5 - Sandy R S6 - Stripped	Neenah silty clay lo Aquollic Hapludalf the depth needed to document the ind Horizon	sample cam s cidicator or confirm Color 7.5YR 5YR ere if indi	n the absence of Matrix (Moist) 2/1 4/4 icators a	% 100 90 re not pre S8 - Polyv (LRR R, M S9 - Thin (LRR R, M F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo	se: C=Concentra 5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/1): w Surface B) ace B) ineral Matrix c arface Surface Surface	somewhat possible same state of the content of the	Type Type	Location Location M M matic Soils Muck (LRR K, L, Matrix) Prairie Redox (LRucky Peat of Peat ourface (LRR K, L) ue Below Surface (LRR K) ue Below Surface (LRR K) ark Surface (LRR K) flanganese Masses	Texture (e.g. clay, sand, loan clay loam clay MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) HAA, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric	hydrology v group): otion (Describe to Bottom Depth 10 20 Soil Field In A1- Histosol A2 - Histic En A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy M S5 - Sandy R S6 - Stripped	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the int Horizon	sample cam s cidicator or confirm Color 7.5YR 5YR ere if indi	n the absence of Matrix (Moist) 2/1 4/4 icators a	f indicators.) (Type % 100 90 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	se: C=Concentra 5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/1): w Surface B) ace B) ineral Matrix c arface Surface Surface	somewhat posts and Mottles Mottles % 10 Indicator	Type Type	Location Location M M matic Soils Muck (LRR K, L, Matrix) Prairie Redox (LR ucky Peat of Pea	Texture (e.g. clay, sand, loan clay loam clay MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) HAA, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric	hydrology v group): otion (Describe to Bottom Depth 10 20 Soil Field In A1- Histosol A2 - Histic En A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy M S5 - Sandy R S6 - Stripped	Neenah silty clay lo Aquollic Hapludalf the depth needed to document the ind Horizon	sample cam s cidicator or confirm Color 7.5YR 5YR ere if indi	n the absence of Matrix (Moist) 2/1 4/4 icators a	f indicators.) (Type % 100 90 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	se: C=Concentra 5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/1): w Surface B) ace B) ineral Matrix c arface Surface Surface	somewhat posts and Mottles % 10 Indicator	Type Type	Location Location M M matic Soils Muck (LRR K, L, Matrix) Prairie Redox (LR ucky Peat of Pea	Texture (e.g. clay, sand, loan clay loam clay MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) HAA, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric	hydrology v group): otion (Describe to Bottom Depth 10 20 Soil Field In A1- Histosol A2 - Histic En A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy M S5 - Sandy R S6 - Stripped	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the interpretation Horizon ndicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Oark Surface Muck Mineral Gleyed Matrix Redox Matrix rface (LRR R, MLRA 1	sample cam s cidicator or confirm Color 7.5YR 5YR ere if indi	n the absence of Matrix (Moist) 2/1 4/4 icators a	f indicators.) (Type % 100 90 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	se: C=Concentra 5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/1): w Surface B) ace B) ineral Matrix c arface Surface Surface	somewhat posts and Mottles Mottles % 10 Indicator	Type Type	Location Location M M matic Soils Muck (LRR K, L, Matrix) Prairie Redox (LR ucky Peat of Pea	Texture (e.g. clay, sand, loan clay loam clay MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) HAA, 145, 149B)



WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w1 Sample Point w1-1u

VEGETATION	(Species identified in all uppercase are non-na	ative spec	eies.)		
Tree Stratum (Plo	ot size: 10 meter radius)			1	
	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:1 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp
	Total Cover =	0			FACW spp. $\frac{5}{}$ $\times 2 = \frac{10}{}$
					FAC spp. ${}$ $}{}$ $$
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp. 90 x 4 = 360
1.					UPL spp. $5 x 5 = 25$
2.					··· ————
3.					Total 109 (A) 422 (B)
4.					(=,
5.					Prevalence Index = $B/A = 3.872$
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					
10.	 				☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.	Total Cover =	0			☐ Yes ☐ No Dominance Test is > 50%
	Total Cover =	U			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
_	t size: 2 meter radius)	75	Y	EACH	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Ambrosia artemisiifolia	75	· · ·	FACU	* Indicators of hydric soil and wetland hydrology must be
2.	Ambrosia trifida	2		FAC	present, unless disturbed or problematic.
3.	MELILOTUS OFFICINALIS	2		FACU	
4.	PENNISETUM GLAUCUM	5		FAC	Definitions of Vegetation Strata:
5.	TRIFOLIUM HYBRIDUM	2		FACU	_
6	Polygonum pensylvanicum	5		FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Rudbeckia hirta	2		FACU	height (DBH), regardless of height.
8.	RUMEX CRISPUS	2		FAC	
9.	SETARIA VIRIDIS	5		UPL	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.	TARAXACUM OFFICINALE	2		FACU	Can.
11.	PLANTAGO MAJOR	2		FACU	
12.	Elymus canadensis	5		FACU	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.					พบบนุ คลาเธายรร แลก 3.20 น. เสแ.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	109			
Moody Vina Strati	um (Plot size: 10 meter radius)				
1	um (Plot size: 10 meter radius)				
2.					
	_ 				Hydronbytic Vocatotion Procent - TVcc - T No
3.					Hydrophytic Vegetation Present ☐ Yes ☑ No
5.					
4.	Total Cayor				
Domorto	Total Cover =	0	100 of th -	E0/20 ***	la. Vagatation at the cample plot is not budranhytic
Remarks:	Dominant vegetation was determined the	irough t	ise of the	: OU/ZU ru	le. Vegetation at the sample plot is not hydrophytic.
Additional Rer	marks:				

Additional Remarks:

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

	WisDOT Melissa Cu Menasha c Depression 0-2 drologic cond	lay n Latitude: ditions on the site ty	N/A pical for	Investi Loc Lo this time		NW Concave N/A	I/WWI Classification:	N/A No	Date: County: State: Wetland ID: Sample Point: Community ID: Section:	08/15/13 Winnebago Wisconsin w1 w1-1w wet meadow 17			
•		or Hydrology ☐ sig	-				Are normal circumsta	•	t?	Township:	20N		
		or Hydrology	turally pr	oblemati	ic?			□No		Range:	16 Dir: E		
SUMMARY OF Hydrophytic Ve		cont?		□ Voc	□ No			Hydric Soils	Procent?				
Wetland Hydrol	•			✓ Yes✓ Yes						Within A Wetlar			
Remarks:	<u> </u>		t meadov				ned that the antecede						
					•								
Primary:	A1 - Surface A2 - High Wa A3 - Saturation B1 - Water M B2 - Sedimen B3 - Drift Dep B4 - Algal Ma B5 - Iron Dep	ater Table on Iarks nt Deposits posits at or Crust			B9 - Wate B13 - Aqu B15 - Mar C1 - Hydr C3 - Oxid C4 - Pres	er-Stained latic Fauna I Deposits ogen Sulfici ized Rhizo ence of Re ent Iron Re Muck Surf	de Odor spheres on Living Roots educed Iron duction in Tilled Soils			condary: ☐ B6 - Surface Soil Cracks ☐ B10 - Drainage Patterns ☐ B16 - Moss Trim Lines ☐ C2 - Dry-Season Water Table ☐ C8 - Crayfish Burrows ☐ C9 - Saturation Visible on Aerial Imagery ☐ D1 - Stunted or Stressed Plants ☐ D2 - Geomorphic Position			
Field Observat Surface Water Water Table Pr Saturation Pres	tions: Present? esent? ent?	✓ Vegetated Concave S ☐ Yes ☑ No ☐ Yes ☑ No ☐ Yes ☑ No ☐ eam gauge, monitori	Depth: Depth: Depth:		(in.) (in.) (in.) otos, previo	ous inspe	ctions), if available:	Wetland Hy	_	D4 - Microtopogra D5 - FAC-Neutral resent?			
Remarks:	The preser	nce of 2 secondary i	indicator	s at the s	sample pl	ot provid	es evidence of wetlan	d hydrology.					
SOILS Map Unit Name	\.	Menasha clay				S	eries Drainage Class:	noorly					
Taxonomy (Sub		Typic Epiaquolls					enes Diamage Class.	роопу					
TUNCTION TO THE		I VDIC EDIAGUOTIS											
	U /		dicator or confir	m the absence o	of indicators.) (Ty	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand	d Grains; Location: F	L=Pore Lining, M=Matrix)			
	U /		dicator or confin	m the absence o		pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand	d Grains; Location: F	L=Pore Lining, M=Matrix)	Texture		
Profile Descrip	otion (Describe to				%	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, C		d Grains; Location: F	Location	Texture (e.g. clay, sand, loam)		
Profile Descrip Top Depth 0	Bottom Depth	the depth needed to document the in	Color 10YR	Matrix (Moist) 2/1	% 100		Color (Moist)	Mottles %	Type 	Location 	(e.g. clay, sand, loam)		
Top Depth 0	Bottom Depth 6 20	the depth needed to document the in	Color 10YR 7.5YR	Matrix (Moist)	%	 7.5YR		Mottles	Type C	Location M	(e.g. clay, sand, loam)		
Top Depth 0 6	Bottom Depth 6 20	the depth needed to document the in-	Color 10YR 7.5YR	Matrix (Moist) 2/1	% 100 85	 7.5YR 	Color (Moist)	Mottles %	Type C 	Location M 	(e.g. clay, sand, loam) clay loam clay loam		
Profile Descrip Top Depth 0 6	Bottom Depth 6 20	the depth needed to document the in-	Color 10YR 7.5YR 	Matrix (Moist) 2/1	% 100	7.5YR 	Color (Moist)	Mottles %	Type C 	Location M	(e.g. clay, sand, loam) clay loam clay loam		
Top Depth 0 6	Bottom Depth 6 20	the depth needed to document the in-	Color 10YR 7.5YR	Matrix (Moist) 2/1	% 100 85	 7.5YR 	Color (Moist)	Mottles %	Type C 	Location M 	(e.g. clay, sand, loam) clay loam clay loam		
Profile Descrip Top Depth 0 6	Bottom Depth 6 20	the depth needed to document the in	Color 10YR 7.5YR 	Matrix (Moist) 2/1 4/4	% 100 85 	7.5YR 	Color (Moist) 5/6	Mottles %	Type C	Location M	(e.g. clay, sand, loam) clay loam clay loam		
Profile Descrip Top Depth 0 6	Bottom Depth 6 20	the depth needed to document the in	Color 10YR 7.5YR 	Matrix (Moist) 2/1 4/4	% 100 85 	 7.5YR 	Color (Moist) 5/6	Mottles % 15	Type C	Location M	(e.g. clay, sand, loam) clay loam clay loam		
Profile Descrip Top Depth 0 6 NRCS Hydric	Bottom Depth 6 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick Ep S1 - Sandy Ep S4 - Sandy Ep S5 - Sandy Ep S6 - Stripped	Horizon	Color 10YR 7.5YR ere if ind	Matrix (Moist) 2/1 4/4 icators a	% 100 85 re not pre S8 - Polyx (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple	7.5YR	Color (Moist) 5/6): w Surface B) ace B) ineral Matrix frace Surface Surface	Mottles % 15 Indicator	Type C s for Proble A10 - 2 cm A16 - Coast S3 - 5cm Mi S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red F TF12 - Very Other (Expla	Location M	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) H4A, 145, 149B)		
Profile Descrip Top Depth 0 6 NRCS Hydric	Bottom Depth 6 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick Ep S1 - Sandy Ep S4 - Sandy Ep S5 - Sandy Ep S6 - Stripped	Horizon	Color 10YR 7.5YR ere if ind	Matrix (Moist) 2/1 4/4 icators a	% 100 85 re not pre S8 - Polyo (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	7.5YR	Color (Moist) 5/6): w Surface B) ace B) ineral Matrix frace Surface Surface	Mottles % 15 Indicator	Type C s for Proble A10 - 2 cm A16 - Coast S3 - 5cm Mi S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red F TF12 - Very Other (Expla of hydrophytic veget or problematic.	Location M matic Soils Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat ourface (LRR K, L) ue Below Surface ark Surface (LRR I) langanese Masses ont Floodplain Soil Spodic (MLRA 14 Parent Material Shallow Dark Surfain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) H4A, 145, 149B)		



WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w1 Sample Point w1-1w

VEGETATION Troo Stratum (Plo	(Species identified in all uppercase are non-national structures (Species identified in all uppercase are non-national structures)	ative spec	cies.)		
Tiee Stratum (Fic	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.		<u> 78 COVEI</u>		<u></u>	Dominarios rest Worksheet
2.					Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 1 (B)
5.					``
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
	Total Cover =	0			FACW spp. 0 x 2 = 0
					FAC spp. $_{97}$ $_{X}$ 3 = $_{291}$
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp 2
1.					UPL spp. $\underline{\qquad \qquad \qquad }$ $X = \underline{\qquad \qquad }$ 10
2.					
3.					Total 101 (A) 309 (B)
4.					
5.					Prevalence Index = B/A = 3.059
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					
	Total Cover =	0			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
,	t size: 2 meter radius)	05	V	EAC.	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	ECHINOCHLOA CRUSGALLI	95	Υ	FAC	* Indicators of hydric soil and wetland hydrology must be
2. 3.	RUMEX CRISPUS Ambrosia artemisiifolia	2		FACU	present, unless disturbed or problematic.
3. 4.	SETARIA VIRIDIS	2		UPL	Definitions of Vegetation Strata:
4. 5.					Definitions of Vegetation Strata.
6	_ 				Tree - was to do so (7.0 a)
7.					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	101			
		101			
Woody Vine Strati	um (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
5.					
4.					
	Total Cover =	0			
Remarks:	Dominant vegetation was determined to	hrough เ	use of the	50/20 ru	ile. Vegetation at the sample plot is hydrophytic.
Additional Rer	narks:				



WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Are Vegetation	WisDOT Melissa Cu Neenah silt Side slope 2-6 drologic cond □, Soil □,	Latitude: ditions on the site ty or Hydrology	: N/A /pical for gnificantly	Invest Loc L this time	ed?	NW Convex N/A	Al/WWI Classification: ain in remarks) Are normal circumsta	Datum: □ Yes ☑ ances presen	County: State: Wetland I Sample Po Datum: N/A Community Yes No Section: Township:		08/15/13 Winnebago Wisconsin w1 w1-2u mesic prairie 17 20N
		or Hydrology □ na	turally pr	oblemat	tic?		☑ Yes	□No		Range:	16 Dir: E
SUMMARY OF											
Hydrophytic Ve	•			☐ Yes	_			Hydric Soils			☐ Yes ☑ No
Wetland Hydrol			<u> </u>	☐ Yes						Within A Wetlar	
Remarks:			sic prairi	e on the	upslope	of a berr	n. WETS analysis dete	ermined that	the anteced	lent precipitation	n conditions were drier
	than norma	d.									
Wetland Hydr	•	ators (Check here	if indicate		not preser	_ ,	Loavos		Secondary:	B6 - Surface Soil	Cracks
l H	A2 - High Wa				B3 - Wate B13 - Aqu				H	B10 - Drainage P	
	A3 - Saturation				B15 - Mar					B16 - Moss Trim	
	B1 - Water M	larks			C1 - Hydr	ogen Sulfi	ide Odor			C2 - Dry-Season	
	B2 - Sedimer	•					ospheres on Living Roots			C8 - Crayfish Bur	
l H	B3 - Drift Dep B4 - Algal Ma			_	•		educed Iron eduction in Tilled Soils		님	D1 - Saturation V	isible on Aerial Imagery
lä	B5 - Iron Dep				C7 - Thin				-	D2 - Geomorphic	
		on Visible on Aerial Im	agery		Other (Ex					D3 - Shallow Aqu	
	B8 - Sparsely	Vegetated Concave S	Surface							D4 - Microtopogra	
										D5 - FAC-Neutral	l est
Field Observat					<i>,</i> , ,						
Surface Water		☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pr	esent?	Yes ☑ No
Water Table Pr		☐ Yes ☑ No	Depth:		(in.)			_			
Saturation Pres	ent?	☐ Yes ☑ No	Depth:		(in.)						
Describe Record	led Data (str	eam gauge, monitori	ing well, a	aerial pho	otos, previ	ous inspe	ections), if available:		N/A		
Remarks:	•	•	•		pproxima	tely 2-3 f	eet higher in elevation	than the adj	acent wetla	nd plot. No evid	dence of wetland
	hydrology v	vas observed at the	e sample	plot.							
SOILS											
Map Unit Name		Neenah silty clay k				S	Series Drainage Class:	somewhat p	oorly		
Taxonomy (Sub	<u> </u>	Aquollic Hapludalf									
Top	Bottom	the depth needed to document the in	ndicator or confir	m the absence Matrix		pe: C=Concentr	ation, D=Depletion, RM=Reduced Matrix, C	Mottles	id Grains; Location: F	L=Pore Lining, M=Matrix)	Texture
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam)
0	8		10YR	4/2	100						clay
8	20		10YR	4/4	55	10YR	4/6	10	С	М	clay
			10YR	4/2	35						
		-									
NRCS Hydric	Soil Field Ir	ndicators (check h	ere if ind	icators a	are not pre	esent 🗹):	<u>Indicato</u>	rs for Proble	matic Soils ¹	
	A1- Histosol				S8 - Poly			_		Muck (LRR K, L, M	,
	A2 - Histic Ep A3 - Black Hi	•			(LRR R, N S9 - Thin		•			Prairie Redox (LR	•
	A3 - Black Fli A4 - Hydroge				(LRR R, I					ucky Peat of Peat of urface (LRR K, L)	(LKK K, L, K)
	A5 - Stratified			П	F1 - Loam		,			ue Below Surface	(LRR K. L)
		ed Below Dark Surface	e	_	(LRR K, L	•			•	ark Surface (LRR I	•
	A12 - Thick D	Dark Surface			F2 - Loam	ny Gleyed	Matrix			langanese Masses	,
	S1 - Sandy M				F3 - Deple					ont Floodplain Soi	·
	04 0 1 7	Jeved Matrix			F6 - Redo		ırrace			Spodic (MLRA 14	14A, 145, 149B)
1 1	S4 - Sandy C	•			F7 - Doole	Stad Dark	Surface		TEO - Dod c	Parent Material	
	S5 - Sandy R	Redox			F7 - Deple F8 - Redo					arent Material Shallow Dark Suri	face
	S5 - Sandy R S6 - Stripped	Redox	149B)		F7 - Deple F8 - Redo				TF12 - Very	'arent Material Shallow Dark Sur ain in Remarks)	face
	S5 - Sandy R S6 - Stripped	tedox I Matrix	149B)		•				TF12 - Very Other (Expla	Shallow Dark Sur	
Restrictive Layer	S5 - Sandy R S6 - Stripped	Redox I Matrix rface (LRR R, MLRA	149B)	Depth:	•				TF12 - Very Other (Explator of hydrophytic vegetor problematic.	Shallow Dark Sur ain in Remarks)	
	S5 - Sandy R S6 - Stripped S7 - Dark Su Type:	Redox I Matrix rface (LRR R, MLRA N/A	,		F8 - Redo	ox Depress		Hydric Soil	TF12 - Very Other (Expla of hydrophytic veget or problematic. Present?	Shallow Dark Surfain in Remarks) ation and wetland hydrology	must be present, unless Yes ☑ No



WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w1 Sample Point w1-2u

	(Species identified in all uppercase are non-na	tive spec	cies.)		
Tree Stratum (Pic	ot size: 10 meter radius)				
4	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp 0
	Total Cover =	0			FACW spp. $\underline{\qquad}$ $\mathbf{x} \ 2 = \underline{\qquad}$ $\underline{\qquad}$
					FAC spp 10
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp. 35 $x 4 = 140$
1.					UPL spp. $X 5 = 335$
2.					
3.					Total 112 (A) 505 (B)
4.					
5.					Prevalence Index = B/A = 4.509
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☐ No Dominance Test is > 50%
	Total Cover =	0			☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t size: 2 meter radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	SETARIA VIRIDIS	60	Υ	UPL	* In dispetance of levelving and constant by along any answer to
2.	Ambrosia artemisiifolia	30	Υ	FACU	 * Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3.	Ambrosia trifida	5		FAC	present, unless distarbed of problematic.
4.	TRIFOLIUM HYBRIDUM	5		FACU	Definitions of Vegetation Strata:
5.	PENNISETUM GLAUCUM	5		FAC	
6	Dalea purpurea	2		UPL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	TRIFOLIUM AUREUM	5		UPL	height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	112			
Woody Vine Stratu	um (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☐ Yes ☑ No
5.					
4.					
	Total Cover =	0			
Remarks:	Dominant vegetation was determined the	າrough ເ	use of the	50/20 ru	le. Vegetation at the sample plot is not hydrophytic.
Additional Ren	narks:				



WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Project/Site:		hase II Mitigation Sit	e ivionito	oring			Stantec Project #:	193702588		Date:	08/15/13
Applicant:	WisDOT									County:	Winnebago
Investigator #1:				Investi	igator #2:		•			State:	Wisconsin
Soil Unit:	Menasha c	lay					I/WWI Classification:	N/A		Wetland ID:	w1
Landform:	Depression	1		Loc	al Relief:	Concav	Э			Sample Point:	w1-2w
Slope (%):	0-2	Latitude:			ongitude:			Datum:		Community ID:	shallow marsh
Are climatic/hyd	Irologic cond	ditions on the site ty	pical for	this time	e of year?	(If no, expla	ain in remarks)	☐ Yes ☑	No	Section:	17
Are Vegetation	□, Soil □,	or Hydrology □ sig	nificantly	y disturb	ed?		Are normal circumsta	ances present	t?	Township:	20N
Are Vegetation	☐, Soil ☐,	or Hydrology	urally pr	oblemat	ic?		Yes	□No		Range:	16 Dir: E
SUMMARY OF	FINDINGS										
Hydrophytic Veg	getation Pre	sent?		✓ Yes	. □ No			Hydric Soils	Present?		
Wetland Hydrol				✓ Yes						Within A Wetlar	
Remarks:			llow ma				nd). WETS analysis				
. tomanto	drier than n				or o	tou mona					
HYDROLOGY	difor than i	iorrian									
-	ology Indica	ators (Check here i	f indicat	ors are r	not preser	nt □):					
<u>Primary:</u>				_		.			Secondary:		
	A1 - Surface			_	B9 - Wate					B6 - Surface Soil	
	A2 - High Wa A3 - Saturation				B13 - Aqu B15 - Mar					B10 - Drainage P B16 - Moss Trim	
	B1 - Water M				C1 - Hydr	•			_	C2 - Dry-Season	
	B2 - Sedimer				•	•	spheres on Living Roots			C8 - Crayfish Bur	
	B3 - Drift Dep	•					educed Iron			•	isible on Aerial Imagery
	B4 - Algal Ma						duction in Tilled Soils			D1 - Stunted or S	. .
	B5 - Iron Dep	oosits			C7 - Thin	Muck Surf	ace		V	D2 - Geomorphic	Position
		on Visible on Aerial Ima	-		Other (Ex	plain)				D3 - Shallow Aqu	itard
	B8 - Sparsely	Vegetated Concave S	Surface							D4 - Microtopogra	•
									<u> </u>	D5 - FAC-Neutral	lest
Field Observat	ions:										
Surface Water I	Present?	☐ Yes ☑ No	Depth:		(in.)			VA/ - 41 1 1 1	1I D.		- N
Water Table Pro	esent?	☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	arology Pr	esent?	Yes □ No
Saturation Pres		☑ Yes ☐ No	Depth:		(in.)						
			<u> </u>						N1/A		
	•	eam gauge, monitorii			<u>-</u>		•		N/A		
Domorko	The proces		. ^								
Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology.											
Remarks:	The presen	nce of 1 primary and	12 secor	ndary inc	dicators a	t the sam	iple plot provides evid	lence of wetla	nd hydrolo(gy.	
SOILS	The presen	ice of 1 primary and	l 2 secor	ndary inc	dicators a	t the sam	iple plot provides evid	lence of wetla	nd hydrolog	gy.	
SOILS	•		l 2 secor	ndary inc	dicators a				nd hydrolog	gy.	
SOILS Map Unit Name	:	Menasha clay	12 secor	ndary inc	dicators a		iple plot provides evid		nd hydrolog	gy.	
SOILS Map Unit Name Taxonomy (Sub	: group):	Menasha clay Typic Epiaquolls				S	eries Drainage Class:	poorly			
SOILS Map Unit Name Taxonomy (Sub Profile Descrip	: group): tion (Describe to	Menasha clay Typic Epiaquolls		m the absence o	of indicators.) (Ty	S		CS=Covered/Coated Sand			Texture
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	group): tion (Describe to	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confire	m the absence o	of indicators.) (Ty	S	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix,	CS=Covered/Coated Sand	d Grains; Location: P	'L=Pore Lining, M=Matrix)	Texture (e.g. clay, sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	group): tion (Describe to Bottom Depth	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confin	m the absence of Matrix (Moist)	of indicators.) (Ty	pe: C=Concentra	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist)	CS=Covered/Coated Sand Mottles %	Grains; Location: P	PL=Pore Lining, M=Matrix) Location	(e.g. clay, sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 8	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color 10YR	m the absence of Matrix (Moist)	of indicators.) (Ty	S	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix,	CS=Covered/Coated Sand	Grains; Location: P	Location	-
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 8	Menasha clay Typic Epiaquolls the depth needed to document the inc	Color 10YR 10YR	Matrix (Moist) 3/1 5/3	of indicators.) (Ty	pe: C=Concentra 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6	cs=Covered/Coated Sand Mottles % 15	Type C	L=Pore Lining, M=Matrix) Location M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 8	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color 10YR	m the absence of Matrix (Moist)	of indicators.) (Ty	pe: C=Concentra	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist)	CS=Covered/Coated Sand Mottles %	Grains; Location: P	Location	(e.g. clay, sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 8	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR	Matrix (Moist) 3/1 5/3	of indicators.) (Ty	pe: C=Concentra 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6	cs=Covered/Coated Sand Mottles % 15	Type C	L=Pore Lining, M=Matrix) Location M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3	% 50 35 90	7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6	cs=Covered/Coated Sand Mottles % 15	Type C	L=Pore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3	% 50 35 90	7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6	cs=Covered/Coated Sand Mottles % 15	Type C C	L=Pore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3	% 50 35 90	7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6	CS=Covered/Coated Sand Mottles % 15	Type C C	LePore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3	% 50 35 90	7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6	CS=Covered/Coated Sand Mottles % 15	Type C C	LePore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3	% 50 35 90	7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6	CS=Covered/Coated Sand Mottles % 15 10	Type C C C	Location M M	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field In	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90	7.5YR 7.5YR esent S	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6):	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C s for Proble	LePore Lining, M=Matrix) Location M M matic Soils ¹	(e.g. clay, sand, loam) clay loam clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field In	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3	% 50 35 90 are not pre	7.5YR 7.5YR esent □ value Belov	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C C s for Proble A10 - 2 cm [Location M M matic Soils ¹ Vuck (LRR K, L, I	(e.g. clay, sand, loam) clay loam clay loam MLRA149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field In A1- Histosol A2 - Histic Ep	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check he	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Polyv (LRR R, I	7.5YR 7.5YR esent □ value Belov MLRA 149	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B)	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C s for Proble A10 - 2 cm I	Location M M matic Soils ¹ Muck (LRR K, L, I	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon ndicators (check head)	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Polyv (LRR R, I) S9 - Thin	7.5YR 7.5YR esent value Below MLRA 149 Dark Surfa	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) acce	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu	Location M M matic Soils ¹ Vuck (LRR K, L, I) Prairie Redox (LRucky Peat of Peat	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field In A1 - Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check here) cipedon estic en Sulfide	Color 10YR 10YR 5YR	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Polyv (LRR R, I) S9 - Thin (LRR R, I)	7.5YR 7.5YR esent □ value Belov MLRA 149 Dark Surfa	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B)	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C s for Proble A10 - 2 cm I A16 - Coast S3 - 5 cm Mu S7 - Dark Si	LePore Lining, M=Matrix) Location M M matic Soils Prairie Redox (LR K, L, I) Locky Peat of Peat curface (LRR K, L)	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check he objection stick on Sulfide dayers	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Polyx (LRR R, I) S9 - Thin (LRR R, I) F1 - Loam	7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B)	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval	Location M M matic Soils ¹ Vuck (LRR K, L, I) Prairie Redox (LRucky Peat of Peat ourface (LRR K, L) ue Below Surface	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field In A1 - Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A11 - Deplete	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check here) cipedon estic en Sulfide d Layers ed Below Dark Surface	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Polyo (LRR R, I) S9 - Thin (LRR R, I) F1 - Loam (LRR K, I)	7.5YR 7.5YR 7.5YR esent value Below MLRA 149 Dark Surfa MLRA 149 ny Muck M -)	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B) ineral	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da	Location M M matic Soils Vuck (LRR K, L, I) Prairie Redox (LRucky Peat of Pe	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick D	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Poly (LRR R, I) S9 - Thin (LRR R, I) F1 - Loam (LRR K, L) F2 - Loam	7.5YR 7.5YR 7.5YR esent value Below MLRA 149 Dark Surfa MLRA 149 ny Muck M -) ny Gleyed	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6 N: w Surface B) ace B) ineral Matrix	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M	Location M M matic Soils M Prairie Redox (LF ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I langanese Masses	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) s (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon ndicators (check here) cipedon estic en Sulfide d Layers ed Below Dark Surface Dark Surface Muck Mineral	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	of indicators.) (Type	7.5YR 7.5YR esent value Below MLRA 149 Dark Surfa MLRA 149 ny Muck M -) ny Gleyed eted Matrix	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, and the second state of	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C S for Proble A10 - 2 cm f A16 - Coast S3 - 5cm Mt S7 - Dark St S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm	Location M M Muck (LRR K, L, N Prairie Redox (LF ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I langanese Masses ont Floodplain Soi	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick D	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Polyx (LRR R, I) S9 - Thin (LRR R, I) F1 - Loam (LRR K, L) F2 - Loam F3 - Deple F6 - Redo	7.5YR 7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6 N: w Surface B) ace B) ineral Matrix curface	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C C S for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-Mu F19 - Piedm TA6 - Mesic	Location M M matic Soils M Prairie Redox (LF ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I langanese Masses	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	of indicators.) (Type	7.5YR 7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B) ineral Matrix c rface Surface Surface	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C S for Proble A10 - 2 cm M A16 - Coast S3 - 5 cm M S7 - Dark S0 S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P	Location M M matic Soils M Prairie Redox (LF ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I langanese Masses ont Floodplain Soi Spodic (MLRA 14	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) dls (MLRA 149B) 44A, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 S8 - Polyx (LRR R, I) S9 - Thin (LRR R, I) F1 - Loam (LRR K, I) F2 - Loam F3 - Deple F6 - Redo	7.5YR 7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B) ineral Matrix c rface Surface Surface	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type C C C S for Proble A10 - 2 cm I A16 - Coast S3 - 5 cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very	Location M M Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I langanese Masses ont Floodplain Soi Spodic (MLRA 14	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) dls (MLRA 149B) 44A, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 S8 - Polyx (LRR R, I) S9 - Thin (LRR R, I) F1 - Loam (LRR K, I) F2 - Loam F3 - Deple F6 - Redo	7.5YR 7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B) ineral Matrix c rface Surface Surface	CS=Covered/Coated Sance Mottles % 15 10 Indicator □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Type C C C C S for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla of hydrophytic veget	Location M M matic Soils Muck (LRR K, L, I) Prairie Redox (LR urface (LRR K, L) ue Below Surface ark Surface (LRR I) langanese Masses ont Floodplain Soil Spodic (MLRA 14 Parent Material Shallow Dark Sur	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Ils (MLRA 149B) 44A, 145, 149B) face
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 are not pre S8 - Poly (LRR R, I) S9 - Thin (LRR K, I) F1 - Loam (LRR K, I) F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	7.5YR 7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B) ineral Matrix c rface Surface Surface	CS=Covered/Coated Sance Mottles % 15 10 Indicator Indicator	Type C C C C S for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	Location M M Muck (LRR K, L, I) Prairie Redox (LR ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I) langanese Masses ont Floodplain Soil Parent Material Shallow Dark Surfain in Remarks) ation and wetland hydrology	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) s (LRR K, L, R) lls (MLRA 149B) 14A, 145, 149B) face must be present, unless
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	group): tion (Describe to Bottom Depth 8 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR 10YR 5YR ere if ind	m the absence of Matrix (Moist) 3/1 5/3 4/3 icators a	% 50 35 90 S8 - Polyx (LRR R, I) S9 - Thin (LRR R, I) F1 - Loam (LRR K, I) F2 - Loam F3 - Deple F6 - Redo	7.5YR 7.5YR 7.5YR	eries Drainage Class: ation, D=Depletion, RM=Reduced Matrix, Color (Moist) 4/6 4/6): w Surface B) ace B) ineral Matrix c rface Surface Surface	CS=Covered/Coated Sance Mottles % 15 10 Indicator □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Type C C C C S for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	Location M M Muck (LRR K, L, I) Prairie Redox (LR ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I) langanese Masses ont Floodplain Soi Parent Material Shallow Dark Suriain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Ils (MLRA 149B) 44A, 145, 149B) face



WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w1 Sample Point w1-2w

VEGETATION	(Species identified in all uppercase are non-na	itive spec	cies.)		
Tree Stratum (Plo	ot size: 10 meter radius)				_
	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:1(A)
3.					
4.					Total Number of Dominant Species Across All Strata: 1 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.					(. 42)
8.					Prevalence Index Worksheet
9.					
					Total % Cover of: Multiply by:
10.					OBL spp. 110
	Total Cover =	0			FACW spp. 0
					FAC spp. $5 X 3 = 15$
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp. $0 x 4 = 0$
1.					UPL spp. $\underline{\qquad \qquad 0 \qquad \qquad } x 5 = \underline{\qquad \qquad 0 \qquad }$
2.					
3.					Total 115 (A) 125 (B)
4.					
5.					Prevalence Index = B/A = 1.087
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					
					✓ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					✓ Yes ☐ No Dominance Test is > 50%
	Total Cover =	0			
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t size: 2 meter radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	TYPHA ANGUSTIFOLIA	80	Υ	OBL	* Indicators of hydric soil and wetland hydrology must be
2.	Alisma triviale	20		OBL	present, unless disturbed or problematic.
3.	Schoenoplectus tabernaemontani	10		OBL	procerti, armose distarbed of problematic.
4.	ECHINOCHLOA CRUSGALLI	5		FAC	Definitions of Vegetation Strata:
5.					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					Herb - All herbaceous (non-woody) plants, regardless of size, and
12.					woody plants less than 3.28 ft. tall.
13.					
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	115			
Woody Vine Strate	um (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
5.					injurophytic regulation rescit. El 163 El 110
4.	Total Cover				
Damarila	Total Cover =	0	100 of 11	E0/00	ule. Monetation of the compile plat is business butin
Remarks:	Dominant vegetation was determined the	irough (use of the	9 50/20 ru	le. Vegetation at the sample plot is hydrophytic.
Additional Ren	narks:				

Additional Remarks:						



WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Stantec

Project/Site:	Rubbert Ph	ase II Mitigation Sit	e Monito	ring			Stantec Project #:	193702588		Date:	08/15/13	
Applicant: WisDOT County:							Winnebag	go				
Investigator #1: Melissa Curran Investigator #2: Nik Ber							agnoli			State:	Wisconsii	n
Soil Unit:	Menasha c	lay				NW	I/WWI Classification:	N/A		Wetland ID:	w1	
Landform:	Side slope			Loc	al Relief:	Convex				Sample Point:	w1-3u	
Slope (%):	•							N/A	Community ID:	mesic pra	airie	
Are climatic/hyd	Irologic cond	ditions on the site ty	pical for	this time	of year?	(If no, expla	ain in remarks)	☐ Yes ☑	No	Section:	17	
Are Vegetation	□, Soil □,	or Hydrology □ sig	nificantly	disturbe	ed?		Are normal circumsta	ances presen	t?	Township:	20N	
•		or Hydrology	-					□No		Range:	16 I	Dir: E
SUMMARY OF		, 0, 0	, ,							Ü		
Hydrophytic Veg		sent?		□ Yes	☑ No			Hydric Soils	Present?		[J]	Yes □ No
Wetland Hydrol				☐ Yes	_					Within A Wetlar		Yes ☑ No
Remarks:			ccording to t			eers NC/NE	Supplement, three parameters					
r comand.	•		ophytic vege	tation and v	wetland hydro	logy indicat	e the sample plot is located in a	an upland. WETS a	analysis determ	ined that the antecede	ent precipitation	conditions were
HYDROLOGY	drier than norma	al.										
_	ology Indica	ators (Check here i	f indicato	ors are n	ot presen	ıt ☑):						
Primary:						Otainad	l		Secondary:	DO 0 0 0 1	0	
님	A1 - Surface A2 - High Wa			님	B9 - Wate				_	B6 - Surface Soil		
	A3 - Saturation				B13 - Aqu B15 - Mar					B10 - Drainage P B16 - Moss Trim		
	B1 - Water M			H	C1 - Hydro	-			_	C2 - Dry-Season)
	B2 - Sedimer				•	•	spheres on Living Roots			C8 - Crayfish Bur		
	B3 - Drift Dep						educed Iron			C9 - Saturation V		ial Imagery
	B4 - Algal Ma	at or Crust			C6 - Rece	nt Iron Re	duction in Tilled Soils			D1 - Stunted or S	tressed Plan	nts
	B5 - Iron Dep				C7 - Thin	Muck Surf	ace			D2 - Geomorphic		
		on Visible on Aerial Ima	0 ,		Other (Exp	olain)				D3 - Shallow Aqu		
	B8 - Sparsely	Vegetated Concave S	Surface							D4 - Microtopogra		
										D5 - FAC-Neutral	rest	
Field Observat	ions:											
Surface Water I	Present?	☐ Yes ☑ No	Depth:		(in.)			Watland Hy	drology Dr	rocont?	V00 🗔 I	No
Water Table Pro	esent?	☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	arology Pi	esent?	Yes ☑ I	INO
Saturation Pres	ent?	☐ Yes ☑ No	Depth:		(in.)							
			•	مادراداد		!	ations) if available.		N/A			
	· · · · · · · · · · · · · · · · · · ·	eam gauge, monitorii	ng weii, a	enai pho	itos, previd	ous inspe	ctions), if available:		IN/A			
			4.1			1 0 1		41		L I A NI LI		
Remarks:		•	•		oproximat	ely 2 fee	t higher in elevation th	nan the adjac	ent wetland	l plot. No evide	nce of wetl	land
		e plot is located on a vas observed at the	•		oproximat	ely 2 fee	t higher in elevation th	nan the adjac	ent wetland	l plot. No evide	nce of wetl	land
SOILS	hydrology v	vas observed at the	•		oproximat	ely 2 fee	t higher in elevation th	nan the adjac	ent wetland	l plot. No evide	nce of wetl	land
	hydrology v	•	•		oproximat		t higher in elevation the ries Drainage Class:		ent wetland	l plot. No evide	nce of wetl	land
SOILS	hydrology v	vas observed at the	•		oproximat				ent wetland	l plot. No evide	nce of wetl	land
SOILS Map Unit Name Taxonomy (Sub	hydrology v : group):	vas observed at the Menasha clay Typic Epiaquolls	sample	plot.		S		poorly			nce of wetl	land
SOILS Map Unit Name Taxonomy (Sub	hydrology v : group):	vas observed at the Menasha clay Typic Epiaquolls	sample	plot.	f indicators.) (Typ	S	eries Drainage Class:	poorly				exture
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	hydrology v : group): tion (Describe to Bottom	vas observed at the Menasha clay Typic Epiaquolls	sample	plot. the absence of Matrix	f indicators.) (Typ	S	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C	poorly CS=Covered/Coated Sand	d Grains; Location: F		Te	
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	hydrology v : group): tion (Describe to Bottom Depth	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confirm	plot. the absence of Matrix (Moist)	f indicators.) (Typ	S pe: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist)	poorly CS=Covered/Coated Sand Mottles %	d Grains; Location: F	PL=Pore Lining, M=Matrix) Location	Te (e.g. clay	exture , sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	hydrology v : group): tion (Describe to Bottom Depth 8	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	dicator or confirmation Color 10YR	plot. the absence of Matrix (Moist) 3/1	f indicators.) (Typ	Se: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C	poorly CS=Covered/Coated Sand Mottles	d Grains; Location: F	² L=Pore Lining, M=Matrix)	Te (e.g. clay	exture
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	hydrology v group): tion (Describe to Bottom Depth 8	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	clicator or confirmation Color 10YR 7.5YR	m the absence of Matrix (Moist) 3/1 4/3	f indicators.) (Type % 40 40	See: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1	poorly CS=Covered/Coated Sand Mottles % 20	Type D	L=Pore Lining, M=Matrix) Location M	Te (e.g. clay	exture , sand, loam) ly loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	hydrology v group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	clicator or confirmation Color 10YR 7.5YR 5YR	m the absence of Matrix (Moist) 3/1 4/3 4/4	% 40 40 90	See: C=Concentrate 10YR 5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist)	poorly CS=Covered/Coated Sand Mottles %	Type D	LePore Lining, M=Matrix) Location M M	Te (e.g. clay	exture , sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	hydrology v group): tion (Describe to Bottom Depth 8	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	clicator or confirmation Color 10YR 7.5YR	m the absence of Matrix (Moist) 3/1 4/3	f indicators.) (Type % 40 40	See: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1	poorly CS=Covered/Coated Sand Mottles % 20	Type D	L=Pore Lining, M=Matrix) Location M	Te (e.g. clay	exture , sand, loam) ly loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	hydrology v group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	clicator or confirmation Color 10YR 7.5YR 5YR	m the absence of Matrix (Moist) 3/1 4/3 4/4	% 40 40 90	See: C=Concentrate 10YR 5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1	poorly CS=Covered/Coated Sand Mottles % 20	Type D	LePore Lining, M=Matrix) Location M M	Te (e.g. clay	exture , sand, loam) ly loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	hydrology v : group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	clicator or confirmation of the color of the	matrix (Moist) 3/1 4/3 4/4	f indicators.) (Typ. % 40 40 90	Se: C=Concentra 10YR 5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1 4/1	poorly CS=Covered/Coated Sand Mottles % 20 10	Type D D	LePore Lining, M=Matrix) Location M M	Te (e.g. clay	exture , sand, loam) by loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	hydrology v group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color Color TolyR 7.5YR 5YR	matrix (Moist) 3/1 4/3 4/4	% 40 40 90	Se: C=Concentra 10YR 5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1 4/1	poorly CS=Covered/Coated Sand Mottles % 20 10	Type D D	LePore Lining, M=Matrix) Location M M	Te (e.g. clay	exture , sand, loam) ny loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	hydrology v group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	clicator or confirmation of the confirmation o	matrix (Moist) 3/1 4/3 4/4	% 40 40 90	Se: C=Concentra 10YR 5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1 4/1	poorly CS=Covered/Coated Sand Mottles % 20 10	Type D D	LePore Lining, M=Matrix) Location M M	Te (e.g. clay	exture , sand, loam) ly loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8	hydrology v group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color	matrix (Moist) 3/1 4/3 4/4	% 40 40 90	10YR 5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1 4/1	poorly CS=Covered/Coated Sand Mottles % 20 10	Type D D	LePore Lining, M=Matrix) Location M M	Te (e.g. clay	exture , sand, loam) ny loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color	matrix (Moist) 3/1 4/3 4/4 cators a	% 40 40 90	See: C=Concentrate 10YR 5YR esent See: C=Concentrate 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1):	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D s for Proble	L=Pore Lining, M=Matrix) Location M M	Te (e.g. clay	exture , sand, loam) ny loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field In	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check he	color	matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pre	Se: C=Concentra 10YR 5YR esent ☑ ralue Belov	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1 4/1): w Surface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D s for Proble	LePore Lining, M=Matrix) Location M M matic Soils ¹	Te (e.g. clay)	exture , sand, loam) ny loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field In A1- Histosol	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check he	color	matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not presses \$8 - Polyv	10YR 5YR esent ralue Belo	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1): w Surface B)	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D s for Proble A10 - 2 cm	Location M M matic Soils ¹ Muck (LRR K, L, I	Te (e.g. clay) cla MLRA149B) RR K, L, R)	exture , sand, loam) ny loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 Soil Field In A1- Histosol A2 - Histic Ep	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check here)	color	m the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not presse se Polyv (LRR R, N	10YR 5YR esent ralue Belov MLRA 149 Dark Surfa	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 4/1 4/1): w Surface B) ace	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D s for Proble A10 - 2 cm A16 - Coast S3 - 5cm Mi	Location M M matic Soils ¹ Vuck (LRR K, L, I	Te (e.g. clay) cla MLRA149B) RR K, L, R)	exture , sand, loam) ny loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon ndicators (check here) pipedon stic en Sulfide	color	n the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pressed - Polyv (LRR R, N S9 - Thin I	10YR 5YR esent ralue Belo fulka 149 Dark Surfa	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1): w Surface B) ace B)	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D s for Proble A10 - 2 cm A16 - Coast S3 - 5cm Me S7 - Dark S	Location M M matic Soils ¹ Vuck (LRR K, L, I Prairie Redox (LF ucky Peat of Peat	MLRA149B) RR K, L, R) (LRR K, L, F	exture , sand, loam) ny loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Histosol A4 - Hydroge A5 - Stratified A11 - Deplete A11 - Deplete	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface	color	n the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not presse - Polyv (LRR R, N S9 - Thin I (LRR R, N K)	10YR 5YR esent alue Belov flara 149 Dark Surfa flara 149 by Muck M	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1): w Surface B) ace B)	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D	LePore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, I) Prairie Redox (LRucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR	MLRA149B) RR K, L, R) (LRR K, L, F	exture y, sand, loam) y loam clay
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick D	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface	color	m the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pressa - Polyv (LRR R, N S9 - Thin I (LRR R, N F1 - Loam (LRR K, L	10YR 5YR esent alue Belor flara 149 Dark Surfa flara 149 by Muck M b) by Gleyed	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1): w Surface B) ace B) ineral Matrix	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D	Location M M matic Soils M Prairie Redox (LR ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR langanese Masses	MLRA149B) RR K, L, R) (LRR K, L, F) K, L) S (LRR K, L,	exture , sand, loam) y loam clay R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Histosol A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color	m the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pres S8 - Polyv (LRR R, N S9 - Thin I (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple	Se: C=Concentra 10YR 5YR esent ☑ ralue Belor MLRA 149 Dark Surfa MLRA 149 Dy Muck M L) by Gleyed eted Matrix	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D	Location M M Muck (LRR K, L, I) Prairie Redox (LF ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I langanese Masses ont Floodplain Soi	MLRA149B) RR K, L, R) (LRR K, L, F (LRR K, L) K, L) S (LRR K, L,	exture y sand, loam) y loam clay R) R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy G	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface Juck Mineral Gleyed Matrix	color	matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90	10YR 5YR esent eslue Belov MLRA 149 Dark Surfa MLRA 149 by Muck M by Gleyed eted Matrix x Dark Su	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1): w Surface B) ace B) ineral Matrix crface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D	Location M M matic Soils Muck (LRR K, L, I) Prairie Redox (LRucky Peat of Peat ourface (LRR K, L) ue Below Surface ourface (LRR I) ue Below Surface ourface (LRR I) langanese Masses ont Floodplain Soil Spodic (MLRA 14)	MLRA149B) RR K, L, R) (LRR K, L, F (LRR K, L) K, L) S (LRR K, L,	exture y sand, loam) y loam clay R) R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy R S5 - Sandy R	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color	m the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pres S8 - Polyv (LRR R, N S9 - Thin I (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	See: C=Concentra 10YR 5YR esent ☑ ralue Below ralu	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1 N Surface B) ace B) ineral Matrix crface Surface Surface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D	Location M M Muck (LRR K, L, I) Prairie Redox (LR ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR langanese Masses ont Floodplain Soi Spodic (MLRA 14)	MLRA149B) RR K, L, R) (LRR K, L, F) K, L) S (LRR K, L, I)	exture y sand, loam) y loam clay R) R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color	matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90	See: C=Concentra 10YR 5YR esent ☑ ralue Below ralu	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1 N Surface B) ace B) ineral Matrix crface Surface Surface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D	Location M M matic Soils Muck (LRR K, L, I) Prairie Redox (LRucky Peat of Peat o	MLRA149B) RR K, L, R) (LRR K, L, F) K, L) S (LRR K, L, I)	exture y sand, loam) y loam clay R) R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color	m the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pres S8 - Polyv (LRR R, N S9 - Thin I (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	See: C=Concentra 10YR 5YR esent ☑ ralue Below ralu	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1 N Surface B) ace B) ineral Matrix crface Surface Surface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator	Type D D S for Proble A10 - 2 cm M S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF12 - Very Other (Explain	Location M M Muck (LRR K, L, I) Prairie Redox (LR ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR langanese Masses ont Floodplain Soil Parent Material Shallow Dark Surfain in Remarks)	MLRA149B) RR K, L, R) (LRR K, L, F) (LRR K, L, E) S (LRR K, E)	exture y, sand, loam) y loam clay R) R) 49B) 9B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	color	m the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pres S8 - Polyv (LRR R, N S9 - Thin I (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	See: C=Concentra 10YR 5YR esent ☑ ralue Below ralu	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1 N Surface B) ace B) ineral Matrix crface Surface Surface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator Indicator Indicator	Type D D S for Proble A10 - 2 cm M S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF12 - Very Other (Explain	Location M M matic Soils Muck (LRR K, L, I) Prairie Redox (LRucky Peat of Peat o	MLRA149B) RR K, L, R) (LRR K, L, F) (LRR K, L, E) S (LRR K, E)	exture y, sand, loam) y loam clay R) R) 49B) 9B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon ndicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface Muck Mineral Bleyed Matrix Redox Matrix rface (LRR R, MLRA 1	color	m the absence of Matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90 re not pres S8 - Polyv (LRR R, N S9 - Thin I (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	See: C=Concentra 10YR 5YR esent ☑ ralue Below ralu	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1 N Surface B) ace B) ineral Matrix crface Surface Surface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator Indicator Indicator	Type D D S for Proble A10 - 2 cm M S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red F TF12 - Very Other (Expla of hydrophytic veget or problematic.	Location M M Muck (LRR K, L, I) Prairie Redox (LR ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR langanese Masses ont Floodplain Soil Parent Material Shallow Dark Surfain in Remarks)	MLRA149B) RR K, L, R) (LRR K, L, F) (LRR K, L, E) S (LRR K, E)	exture y, sand, loam) y loam clay R) R) R9B) 9B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 8 NRCS Hydric S	hydrology v group): tion (Describe to Bottom Depth 8 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A1 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy G S5 - Sandy R S6 - Stripped S7 - Dark Su Type:	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color	matrix (Moist) 3/1 4/3 4/4 cators a	f indicators.) (Type % 40 40 90	Se: C=Concentra 10YR 5YR esent ☑ ralue Below ralue	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Class Color (Moist) 4/1 4/1 N Surface B) ace B) ineral Matrix crface Surface Surface	poorly CS=Covered/Coated Sand Mottles % 20 10 Indicator Indicator disturbed of	Type D D S for Proble A10 - 2 cm A16 - Coast S3 - 5cm Mt S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red F TF12 - Very Other (Expla of hydrophytic veget or problematic. Present?	Location M M Muck (LRR K, L, I) Prairie Redox (LF ucky Peat of Peat urface (LRR K, L) ue Below Surface ark Surface (LRR I) langanese Masses ont Floodplain Soi Spodic (MLRA 14 Parent Material Shallow Dark Sur ain in Remarks) ation and wetland hydrology	MLRA149B) RR K, L, R) (LRR K, L, F) (LRR K, L, F) (LRR K, L) S (LRR K, L, F) S (LRR K, L, F) Face The must be present, the result of the present of the p	exture y, sand, loam) y loam clay R) R) 19B) 19B) 9B)



WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w1 Sample Point w1-3u

VEGETATION		ative spec	cies.)		
Tree Stratum (Pi	ot size: 10 meter radius)				- ·
4	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:0.0%_ (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
- -	Total Cover =	0			FACW spp. $\frac{5}{}$ \times
		Ū			FAC spp. $\frac{0}{0}$ $\times 3 = \frac{0}{0}$
Sanling/Shruh Str	atum (Plot size: 5 meter radius)				FACU spp. $\frac{15}{15}$ $\times 4 = \frac{60}{15}$
1	atum (Flot Size. 5 meter radius)				UPL spp. $\frac{15}{85}$ $\frac{15}{x}$ $\frac{15}{5}$ $\frac{15}{x}$ $\frac{15}{5}$ $\frac{15}{425}$
2.					O1 L 3ρρ
3.					Total 105 (A) 495 (B)
					Total 105 (A) 495 (B)
4.					Providence leden D/A
5.					Prevalence Index = B/A = 4.714
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.	<u></u>				☐ Yes ☑ No Dominance Test is > 50%
I	Total Cover =	0			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 2 meter radius)	_			☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	SETARIA VIRIDIS	80	Υ	UPL	* Indicators of budric soil and watland hydrology must be
2.	Ambrosia artemisiifolia	15		FACU	 * Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3.	TRIFOLIUM AUREUM	5		UPL	present, unless distarbed of problematic.
4.	Polygonum lapathifolium	5		FACW	Definitions of Vegetation Strata:
5.					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.28 ft. tall.
14.					
15.	_ 				Woody Vines - All woody vines greater than 3.28 ft. in height.
10.					vvoody villes - / iii woody villoo groater than oleo iii iii lloigiiti
	Total Cover =	105			
	(T)				
Woody Vine Strat	um (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☐ Yes ☑ No
5.					
4.					
	Total Cover =	0			
Remarks:	Dominant vegetation was determined the	าrough เ	use of the	50/20 ru	le. Vegetation at the sample plot is not hydrophytic.
Additional Rei	marks:				



Stantec Northeast and Northcentral Reg

Project/Site: Applicant:	Rubbert Ph WisDOT	nase II Mitigation Sit	e Monito	oring			Stantec Project #:	193702588		Date: County:	08/15/13 Winnebago	
Investigator #1:	Melissa Cu	ırran		Investi	gator #2:	Nik Bert	agnoli			State:	Wisconsin	
Soil Unit:	Menasha c	lay				NW	/I/WWI Classification:	N/A		Wetland ID:	w1	
Landform:	Depression	ı		Loc	al Relief:	Concav	е			Sample Point:	w1-3w	
Slope (%):	0-2	Latitude:			ongitude:			Datum:		Community ID:	shallow marsh	
Are climatic/hyd	drologic cond	ditions on the site ty	pical for	this time	of year?	(If no, expla		☐ Yes ☑		Section:	17	
•		or Hydrology □ sig	-				Are normal circumsta	•	t?	Township:	20N	
		or Hydrology □ nat	turally pr	oblemati	ic?			□No		Range:	16 Dir:	Е
SUMMARY OF	FINDINGS											
Hydrophytic Veg	getation Pre	sent?		Yes	□ No			Hydric Soils				□ No
Wetland Hydrol										Within A Wetlar		■ No
Remarks:			illow mai	sh (rece	ently creat	ted wetla	nd). WETS analysis	determined th	at the ante	cedent precipita	tion conditions v	vere
	drier than r	normal.										
HYDROLOGY												
Wetland Hydro	ology Indic	ators (Check here i	f indicate	ors are n	ot preser	nt □):						
Primary:	• •	(_ ,			Secondary:			
	A1 - Surface				B9 - Wate					B6 - Surface Soil		
	A2 - High Wa				B13 - Aqu					B10 - Drainage Pa		
	A3 - Saturation B1 - Water M			님	B15 - Mar C1 - Hydr	•			_	B16 - Moss Trim C2 - Dry-Season		
	B2 - Sedimer						spheres on Living Roots			C8 - Crayfish Burn		
	B3 - Drift Dep	•					educed Iron			-	isible on Aerial Ima	igery
	B4 - Algal Ma				C6 - Rece	ent Iron Re	eduction in Tilled Soils			D1 - Stunted or S		0 ,
	B5 - Iron Dep				C7 - Thin		face			D2 - Geomorphic		
		on Visible on Aerial Ima	0 ,		Other (Ex	plain)				D3 - Shallow Aqui		
	B8 - Sparsely	y Vegetated Concave S	Surface							D4 - Microtopogra D5 - FAC-Neutral	•	
										D5 - FAC-Neutral		
Field Observat												
Surface Water I		☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pi	resent?	Yes □ No	
Water Table Pro		☐ Yes ☑ No	Depth:		(in.)				c.egy			
Saturation Pres	ent?	☑ Yes ☐ No	Depth:	3	(in.)							
Describe Record	ed Data (str	eam gauge, monitori	ng well, a	erial pho	tos, previ	ous inspe	ctions), if available:		N/A			
Remarks:	The preser	nce of 1 primary and	2 secor	ndary inc	licators a	t the sam	ple plot provides evid	lence of wetla	nd hydrolo	av.		
	•	, ,		,						3 7		
SOILS												
Map Unit Name	Y.	Menasha clay				S	eries Drainage Class:	poorly				
Taxonomy (Sub		Typic Epiaquolls					one Bramage Class.	роспу				
	<u> </u>		dicator or confire	n the absence o	of indicators.) (Tv	rpe: C=Concentra	ation, D=Depletion, RM=Reduced Matrix,	CS=Covered/Coated Sand	d Grains: Location: F	PL=Pore Lining, M=Matrix)		
Тор	Bottom			Matrix			, 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Mottles			Texture	e
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, san	
0	8		10YR	2/1	85	10YR	4/1	15	D	M	clay loa	
8	18		7.5YR	5/3	90	7.5YR	5/8	10	С	M	clay	111
				5/3	90		3/6	10	_		Clay	
NRCS Hydric	Soil Field Ir	ndicators (check he	ere if ind	icators a	re not pre	esent 🗆):	<u>Indicator</u>	s for Proble	matic Soils 1		
	A1- Histosol				S8 - Poly	value Belo	w Surface		A10 - 2 cm	Muck (LRR K, L, N	/ILRA149B)	
	A2 - Histic Ep	pipedon			(LRR R, I	MLRA 149	B)		A16 - Coast	Prairie Redox (LR	RR K, L, R)	
	A3 - Black Hi				S9 - Thin					ucky Peat of Peat	(LRR K, L, R)	
	A4 - Hydroge			_	•	MLRA 149	•			urface (LRR K, L)	(I == I = I)	
	A5 - Stratified	•		Ш	F1 - Loam	-	ineral		•	ue Below Surface	•	
	•	ed Below Dark Surface	!		(LRR K, L	,	Motriy	님		ark Surface (LRR I Janganese Masses	• ,	
	A12 - Thick I	Jark Surface Nuck Mineral			F2 - Loan	ny Gieyed eted Matrix				langanese Masses nont Floodplain Soi		
	S4 - Sandy N				•	eted Matri ox Dark Su				: Spodic (MLRA 1 4	,	
	S5 - Sandy R	•				eted Dark				Parent Material	, 173, 173D)	
	S6 - Stripped				•	ox Depress				Shallow Dark Surf	face	
	• • •	rface (LRR R, MLRA 1	149B)		- 3 - 3 - 3	- 12.200			-	ain in Remarks)		
									of hydrophytic vegetor problematic.	tation and wetland hydrology	must be present, unless	
Restrictive Layer (If Observed)	Туре:	N/A		Depth:	N/A			Hydric Soil	•	V	Yes □ No	
Remarks:	The soil at	the sample plot me	ets the F	7 Indica	tor descri	ibed in th	e NRCS publication F	ield Indicator	s of Hydric	Soil in the Unite	ed States - versi	on 7.0.

Stantec

WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w1 Sample Point w1-3w

Tree States (Products of Demonstration and Demonstration (Post States) (Products) (Pro	VEGETATION	(Species identified in all uppercase are non-na	ative spec	cies.)		
1.	Tree Stratum (Plo	ot size: 10 meter radius)				
A		<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
Total Number of Dominant Species Across All Strains	1.					
Total Number of Dominent Species Across Al Strate: 2 (B) Percent of Dominent Species Across Al Strate: 2 (B) Percent of Dominent Species Track Are OBL FACW, or FAC: 100.0% (A/B) Prevalence Index Worksheet Fractil Cover = 0 Fractil Species Strate (Boll Species Speci	2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
Percent of Dominant Species That are CSL. FACW, or FAC. 100.0% [A/E]	3.					
Percent of Dominant Species That are CSL. FACW, or FAC. 100.0% [A/E]	4.					Total Number of Dominant Species Across All Strata: 2 (B)
Providence Index Workshoot	5.					
Providence Index Workshoot	6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
Section Prevalence Index Worksheet Total Cover						
9						Prevalence Index Worksheet
10.						
Total Cover O SaplingShub Stratum (Plot size: 8 meter radius)						
FAC spp.	10.					
Sapingshub Stratum (Plot size: 5 meter radius)		Total Cover =	U			FACTOR SPP. $\frac{0}{\sqrt{2}}$ \times $2 = \frac{0}{\sqrt{2}}$
1.	0 1: /0! 1 0:	(5)				FAC spp. $\frac{0}{\sqrt{3}} \times 3 = \frac{0}{\sqrt{3}}$
2.	Sapling/Shrub Stra					
3	1.					UPL spp0
A						
S						Total 100 (A) 100 (B)
6.						
7.	5.					Prevalence Index = B/A = 1.000
B	6.					
9	7.					
Total Cover	8.					Hydrophytic Vegetation Indicators:
Total Cover 10	9.					☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 2 meter radius)	10.					
Perb Stratum (Plot size: 2 meter radius)		Total Cover =	0			
Herb Stratum (Plot size: 2 meter radius)						
1.	Herh Stratum (Plo	nt size: 2 meter radius)				
2.		, ,	80	Υ	OBI	Tes 140 Problem Hydrophytic Vegetation (Explain)
Sapling/Shrub - Woody plants as than 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in. (DBH and greater than 3.28 ft. tail.						
A.						present, unless disturbed or problematic.
Tree - Woody plants 3 in, (7.6cm) or more in diameter at breast height (DBH), regardless of height. Tree - Woody plants 3 in, (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in, DBH and greater than 3.28 ft. tall.						Definitions of Vagatation Strata:
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall. Herb - All woody vines greater than 3.28 ft. tall. Woody Vine Stratum (Plot size: 10 meter radius) 1.						Definitions of Vegetation Strata.
7						Tree
8						Woody plants 3 in. (7.6cm) or more in diameter at breast
9						Height (DBH), regardless of height.
10						O II (OI I Weath plants less than 2 in DDII and procton than 2 20 ft
10						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 π. tall.
12						
13						
13						
Total Cover = 100 Woody Vines - All woody vines greater than 3.28 ft. in height.	13.					woody plants less than 3.20 ft. tall.
Total Cover = 100 Woody Vine Stratum (Plot size: 10 meter radius)	14.					
Woody Vine Stratum (Plot size: 10 meter radius)	15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
Woody Vine Stratum (Plot size: 10 meter radius)		Total Cover =	100			
1						
1	Woody Vine Strate	um (Plot size: 10 meter radius)				
3	1.	· · · · · · · · · · · · · · · · · · ·				
3	2.					
5						Hydrophytic Vegetation Present Ves No
4						, a. ep, a.e regetation 1 7000 in 100 in 100
Total Cover = 0 Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.						
Remarks: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.	4.		0	_ 		
	Remarks			ice of the	50/20 r	le Vegetation at the sample plot is hydrophytic
Additional Remarks:	nemarks.	Dominant vegetation was determined the	nough t	use of the	5 JU/ZU IL	ne. vegetation at the sample plot is hydrophytic.
Additional Remarks:						
Additional Remarks:						
	Additional Ren	marks:				
·						

additional Remarks:



Project/Site:		ase II Mitigation Sit	e Monito	ring			Stantec Project #:	193702588		Date:	08/15/13
Applicant:	WisDOT				· · - #0.	NUL Daw				County:	Winnebago
Investigator #1: Soil Unit:				Investi	gator #2:		agnoli I/WWI Classification:	NI/A		State: Wetland ID:	Wisconsin w2
Landform:	Side slope	y clay loam		Loc	al Relief:		I/VV VVI Classification.	IN/A		Sample Point:	w2-1u
Slope (%):	2-6	Latitude:	N/A		ongitude:			Datum:	N/A	Community ID:	mesic prairie
. ,		ditions on the site ty					ain in remarks)	☐ Yes ☑	No	Section:	17
		or Hydrology □ sig	•			(,,	Are normal circumsta			Township:	20N
•		or Hydrology □ nat	-					□No ^¹		Range:	16 Dir: E
SUMMARY OF		у 3, Ц								3	
Hydrophytic Veg		sent?		□ Yes	☑ No			Hydric Soils	Present?		☐ Yes ☑ No
Wetland Hydrol				☐ Yes						Within A Wetlan	
Remarks:	Sample plo	t is located in a mes	sic prairi	e. WETS			ned that the antecede	nt precipitatio	n condition	s were drier tha	n normal.
HYDROLOGY											
	ology Indica	ators (Check here i	f indicate	ors are n	ot preser	ıt □					
Primary:	• •	CHECK HEIE I	illulcate	ns ale II	ot preser	ıı			Secondary:		
<u> </u>	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface Soil	Cracks
	A2 - High Wa	iter Table			B13 - Aqu	atic Fauna	l			B10 - Drainage Pa	atterns
	A3 - Saturation				B15 - Mar	•			_	B16 - Moss Trim I	
	B1 - Water M				C1 - Hydro	•				C2 - Dry-Season \	
	B2 - Sedimer	•					spheres on Living Roots educed Iron			C8 - Crayfish Burr	
	B3 - Drift Dep B4 - Algal Ma			_			duction in Tilled Soils			D1 - Stunted or St	sible on Aerial Imagery
	B5 - Iron Dep			_	C7 - Thin					D2 - Geomorphic	
	•	on Visible on Aerial Ima	agery		Other (Ex		400			D3 - Shallow Aqui	
		Vegetated Concave S	•		, ,	,				D4 - Microtopogra	
										D5 - FAC-Neutral	Test
Field Observat	ions:										
Surface Water F	Present?	☐ Yes ☑ No	Depth:		(in.)			187 (1 111			\(- \)
Water Table Pre	esent?	☐ Yes ☑ No	Depth:		(in.)			Wetland Hyd	drology Pr	esent?	Yes ☑ No
Saturation Pres		☐ Yes ☑ No	Depth:		(in.)						
			•								
Describe Record	<u> </u>	eam gauge, monitorir					<u> </u>		N/A		
Remarks:		•	•	slope, ar	oproximat	ely 2 fee	t higher in elevation th	nan the adjace	ent wetland	l plot. No evider	nce of wetland
	hydrology										
	riyarology v	vas observed at the	sample	plot.							
SOILS	, 0,			plot.							
Map Unit Name	:	Neenah silty clay lo	am	plot.		S	eries Drainage Class:	somewhat po	oorly		
Map Unit Name Taxonomy (Sub	: group):	Neenah silty clay lo Aquollic Hapludalfs	eam S					•	·		
Map Unit Name Taxonomy (Sub Profile Descrip	: group): tion (Describe to	Neenah silty clay lo Aquollic Hapludalfs	eam S	m the absence of	f indicators.) (Тур		eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand	·	L=Pore Lining, M=Matrix)	
Map Unit Name Taxonomy (Sub Profile Descrip Top	group): tion (Describe to	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc	oam S dicator or confirm	n the absence of	_		tion, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand	Grains; Location: P		Texture
Map Unit Name Taxonomy (Sub Profile Descrip	group): tion (Describe to Bottom Depth	Neenah silty clay lo Aquollic Hapludalfs	dicator or confirm	m the absence of Matrix (Moist)	%	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand Mottles	Grains; Location: P	Location	(e.g. clay, sand, loam)
Map Unit Name Taxonomy (Sub Profile Descrip Top	group): tion (Describe to	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc	dicator or confirm	m the absence of Matrix (Moist)	% 50		tion, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand	Grains; Location: P		
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 10	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc	cam dicator or confirm Color (10YR 7.5YR	m the absence of Matrix (Moist) 2/1 4/4	% 50 45	ne: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8	CS=Covered/Coated Sand Mottles % 5	Grains; Location: P	Location	(e.g. clay, sand, loam) clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	group): tion (Describe to Bottom Depth 10	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	dicator or confirm	m the absence of Matrix (Moist)	% 50	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand Mottles	Type	Location M	(e.g. clay, sand, loam)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 10	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	cam dicator or confirm Color (10YR 7.5YR	m the absence of Matrix (Moist) 2/1 4/4	% 50 45	ne: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8	CS=Covered/Coated Sand Mottles % 5	Type C	Location M 	(e.g. clay, sand, loam) clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	cam dicator or confirm Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3	% 50 45 85	10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1	CS=Covered/Coated Sand Mottles % 5	Type C	Location M M	(e.g. clay, sand, loam) clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3	% 50 45 85	10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8	Mottles % 5	Type C D C	Location M M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3	% 50 45 85 	10YR 10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8	Mottles % 5 10 5	Type C D C	Location M M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3	% 50 45 85 	10YR 10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8	Mottles % 5 10 5	Type C D C	Location M M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3	% 50 45 85 	10YR 10YR 10YR 	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8	Mottles % 5 10 5	Type C D C	Location M M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 Soil Field In	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre	10YR 10YR 10YR esent	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8):	Mottles % 5 10 5 Indicators	Type C D C s for Proble	Location M M M matic Soils 1	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 Soil Field In A1- Histosol	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre	10YR 10YR 10YR esent ralue Below	Color (Moist) 5/8 5/1 5/8): w Surface	Mottles % 5 10 5 Indicators	Type C D C s for Proble	Location M M M matic Soils Muck (LRR K, L, N	(e.g. clay, sand, loam) clay loam clay loam ILRA149B)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 Soil Field In	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the ince Horizon adicators (check he	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre	10YR 10YR 10YR esent ralue Belov	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B)	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm N	Location M M M matic Soils 1	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 Soil Field In A1- Histosol A2 - Histic Ep	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, M	10YR 10YR 10YR 10YR esent are	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8 : W Surface B) ace	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu	Location M M M matic Soils Muck (LRR K, L, N Prairie Redox (LR	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Histosol	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the ince Horizon adicators (check here) bipedon stic n Sulfide	Color (10YR 7.5YR 5YR	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin	10YR 10YR 10YR 10YR esent ☑ ralue Belov MLRA 149 Dark Surfa	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B)	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su	Location M M M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat ((e.g. clay, sand, loam) clay loam clay loam (ILRA149B) R K, L, R) (LRR K, L, R)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 5oil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the ince Horizon adicators (check here) bipedon stic n Sulfide	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N	10YR 10YR 10YR 10YR esent alue Belov ILRA 149 Dark Surfa ILRA 149 by Muck M	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B)	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu	Location M M M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L)	(e.g. clay, sand, loam) clay loam clay loam ILRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 5oil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the ince Horizon adicators (check here) bipedon stic n Sulfide d Layers ed Below Dark Surface	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam	10YR 10YR 10YR esent ralue Belov filara 149 Dark Surfa filara 149 by Muck M b)	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da	Location M M M matic Soils M Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface ((e.g. clay, sand, loam) clay loam clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 5oil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he bipedon stic n Sulfide d Layers ed Below Dark Surface Dark Surface luck Mineral	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple	10YR 10YR 10YR 10YR esent alue Below ILRA 149 Dark Surfa ILRA 149 by Muck M by Gleyed eted Matrix	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm	Location M M M Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K) langanese Masses ont Floodplain Soil	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he bipedon stic n Sulfide d Layers ed Below Dark Surface Dark Surface luck Mineral eleyed Matrix	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, M S9 - Thin (LRR R, M F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo	10YR 10YR 10YR 10YR esent ralue Belov //LRA 149 Dark Surfa //LRA 149 by Muck M -) by Gleyed eted Matrix x Dark Su	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix crface	Mottles % 5 10 5 Indicators	Type C D C S for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic	Location M M M matic Soils M Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K) ark Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the ince Horizon adicators (check here) bipedon stic n Sulfide d Layers ed Below Dark Surface luck Mineral eleyed Matrix edox	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	10YR 10YR 10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix crface Surface Surface	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P	Location M M M M matic Soils Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (ark Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14) Parent Material	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) (K, L) (LRR K, L) (K,
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 19 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he bipedon stic n Sulfide d Layers ed Below Dark Surface bark Surface luck Mineral eleyed Matrix edox Matrix	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, M S9 - Thin (LRR R, M F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo	10YR 10YR 10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix crface Surface Surface	CS=Covered/Coated Sand Mottles	Type C D C S for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very	Location M M M matic Soils M Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K) ark Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14) arent Material Shallow Dark Surf	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) (K, L) (LRR K, L) (K,
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 19 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the ince Horizon adicators (check here) bipedon stic n Sulfide d Layers ed Below Dark Surface luck Mineral eleyed Matrix edox	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	10YR 10YR 10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix crface Surface Surface	Mottles % 5 10 5 Indicators	Type C D C s for Proble A10 - 2 cm M A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	Location M M M M matic Soils Muck (LRR K, L, N) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ark Surface (LRR K, L) arent Material Shallow Dark Surfain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (LRR K, L, R) s (MLRA 149B) 4A, 145, 149B) face
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 19 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he bipedon stic n Sulfide d Layers ed Below Dark Surface bark Surface luck Mineral eleyed Matrix edox Matrix	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	10YR 10YR 10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix crface Surface Surface	Mottles % 5 10 5 Indicators Indicators Indicators	Type C D C s for Proble A10 - 2 cm M A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	Location M M M matic Soils M Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K) ark Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14) arent Material Shallow Dark Surf	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (LRR K, L, R) s (MLRA 149B) 4A, 145, 149B) face
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18 19 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he bipedon stic n Sulfide d Layers ed Below Dark Surface luck Mineral sleyed Matrix edox Matrix rface (LRR R, MLRA 1	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR R, N F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	10YR 10YR 10YR 10YR	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix crface Surface Surface	Mottles % 5 10 5 Indicators Indicators Indicators	Type C D C s for Problem A10 - 2 cm M A16 - Coast S3 - 5cm M S7 - Dark S0 S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Explain of hydrophytic vegetic r problematic.	Location M M M M matic Soils Muck (LRR K, L, N) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ark Surface (LRR K, L) arent Material Shallow Dark Surfain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (LRR K, L, R) s (MLRA 149B) 4A, 145, 149B) face
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	group): tion (Describe to Bottom Depth 10 18	Neenah silty clay lo Aquollic Hapludalfs the depth needed to document the inc Horizon adicators (check he bipedon stic n Sulfide d Layers ed Below Dark Surface Park Surface luck Mineral sleyed Matrix edox Matrix face (LRR R, MLRA 1	Color (10YR 7.5YR 5YR ere if indi	m the absence of Matrix (Moist) 2/1 4/4 5/3 icators a	% 50 45 85 re not pre S8 - Polyv (LRR R, N S9 - Thin (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	10YR 10YR 10YR 10YR esent ralue Below MLRA 149 Dark Surfa MLRA 149 Dy Muck M L) by Gleyed eted Matrix x Dark Su eted Dark x Depress	tion, D=Depletion, RM=Reduced Matrix, C Color (Moist) 5/8 5/1 5/8): w Surface B) ace B) ineral Matrix crface Surface Surface	Mottles % 5 10 5 Indicators Indicators disturbed of	Type C D C s for Proble A10 - 2 cm N A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyvalu S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Explain of hydrophytic veget of problematic.	Location M M M M matic Soils 1 Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ue Below Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14 Parent Material Shallow Dark Surfain in Remarks) ation and wetland hydrology	(e.g. clay, sand, loam) clay loam clay loam



Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w2 Sample Point w2-1u

VEGETATION	(Species identified in all uppercase are non-na	tive spec	ies.)		
Tree Stratum (Plo	t size: 10 meter radius)				
	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata: 6 (B)
5.					·, , ,
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
7.					(74B)
8.					Drovolongo Indox Workshoot
	_ - _				Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. $0 x 1 = 0$
	Total Cover =	0			FACW spp. $\underline{\hspace{1cm}}$ 15 $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ 2 $\underline{\hspace{1cm}}$ 30
					FAC spp. $\underline{\hspace{1cm}}$ 10 $\underline{\hspace{1cm}}$ X $3 = \underline{\hspace{1cm}}$ 30
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp 50
1.					UPL spp. $10 x 5 = 50$
2.					
3.					Total 85 (A) 310 (B)
4.					(-)
5.					Prevalence Index = $B/A = 3.647$
					Frevalence index = B/A = 3.047
6.	_ -				
7.	_ -				
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
	Total Cover =	0			☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t size: 2 meter radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	PLANTAGO MAJOR	15	Υ	FACU	_ · · · · · _ · · · · · · · · · · · · ·
2.	Ambrosia artemisiifolia	15	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Polygonum lapathifolium	10	Y	FACW	present, unless disturbed or problematic.
			<u>'</u>		Definitions of Vegetation Strate:
4.	SETARIA VIRIDIS	10		UPL	Definitions of Vegetation Strata:
5.	TARAXACUM OFFICINALE	10	Y	FACU	_
6	RUMEX CRISPUS	10	Y	FAC	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Polygonum pensylvanicum	5		FACW	height (DBH), regardless of height.
8.	TRIFOLIUM HYBRIDUM	5		FACU	
9.	CHENOPODIUM ALBUM	5		FACU	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.28 ft. tall.
14.					Woody Vines - All woody vines greater than 3.28 ft. in height.
15.					Woody Vines - All woody Vines greater than 3.28 ft. in fleight.
	Total Cover =	85			
Woody Vine Stratu	ım (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☐ Yes ☑ No
5.					, ,
4.					
7.	Total Cover =	0	<u></u>	_ 	
Domorko			oo of the	50/20 ru	la Vagatation at the comple plat is not hydrophytic
Remarks:	Dominant vegetation was determined th	nough t	ise oi liie	5 50/20 TU	le. Vegetation at the sample plot is not hydrophytic.
Additional Ren	narks:				



Project/Site:		ase II Mitigation Sit	e Monito	oring			Stantec Project #:	193702588		Date:	08/15/13
Applicant:	WisDOT			l.aa.ati		Nile David	a ana a li			County:	Winnebago
Investigator #1: Soil Unit:	Menasha c			Investi	igator #2:		agnoll /I/WWI Classification:	NI/A		State: Wetland ID:	Wisconsin w2
Landform:	Depression	•		Loc	al Relief:			. IN/A		Sample Point:	w2 w2-1w
Slope (%):	0-2	Latitude:	N/A		ongitude:		5	Datum:	N/A	Community ID:	shallow marsh
· ` ` '		ditions on the site ty					ain in remarks)	☐ Yes ☑		Section:	17
		or Hydrology □ sig	•				Are normal circumsta			Township:	20N
•		or Hydrology □ nat	-				Yes	_No .		Range:	16 Dir: E
SUMMARY OF		,									
Hydrophytic Veg	getation Pre	sent?		Yes	□ No			Hydric Soils	Present?		
Wetland Hydrol	ogy Present	?		Yes	□ No			Is This Samp	oling Point \	Within A Wetlar	nd? ☑ Yes ■ No
Remarks:			llow mai	rsh (rece	ently creat	ted wetla	nd). WETS analysis (determined th	at the ante	cedent precipita	tion conditions were
	drier than n	ormal.									
HYDROLOGY											
Wetland Hydro	ology Indica	ators (Check here i	f indicate	ors are n	not preser	nt □):					
<u>Primary:</u>				_	5.5.11	.			Secondary:		
	A1 - Surface A2 - High Wa			_	B9 - Wate B13 - Aqu					B6 - Surface Soil B10 - Drainage Pa	
	A2 - Figri Wa				B15 - Aqu					B16 - Moss Trim I	
	B1 - Water M				C1 - Hydr	•			_	C2 - Dry-Season	
	B2 - Sedimer	•					spheres on Living Roots			C8 - Crayfish Burn	
	B3 - Drift Dep B4 - Algal Ma			_			educed Iron duction in Tilled Soils			C9 - Saturation Vi D1 - Stunted or St	sible on Aerial Imagery
	B5 - Iron Dep			_	C7 - Thin					D2 - Geomorphic	
	B7 - Inundation	on Visible on Aerial Ima	0 ,		Other (Ex	plain)				D3 - Shallow Aqui	tard
	B8 - Sparsely	Vegetated Concave S	Surface							D4 - Microtopogra D5 - FAC-Neutral	
Fig. 1. Oleans at	•									D5 - FAC-Neutral	
Field Observat					(1)						
Surface Water		☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pr	esent?	Yes □ No
Water Table Pro		☐ Yes ☑ No	Depth:	_	(in.)						
		☑ Yes □ No	Depth:		(in.)						
	<u> </u>	eam gauge, monitori			otos, previ	ous inspe	ctions), if available:		N/A		
I Domorko:	The proces										
Remarks:	The presen	ice of 1 primary and	l 2 secor	ndary ind	dicators at	t the sam	ple plot provides evid	lence of wetla	nd hydrolog	gy.	
	The presen	ce of 1 primary and	l 2 secor	ndary ind	dicators at	t the sam	ple plot provides evid	lence of wetla	nd hydrolog	Jy.	
SOILS	·		l 2 secor	ndary ind	dicators at				nd hydrolog	Jy.	
SOILS Map Unit Name	:	Menasha clay	2 secor	ndary inc	dicators at		ple plot provides evid eries Drainage Class:		nd hydrolog	gy.	
SOILS Map Unit Name Taxonomy (Sub	: ogroup):	Menasha clay Typic Epiaquolls				S	eries Drainage Class:	poorly			
SOILS Map Unit Name Taxonomy (Sub	group):	Menasha clay Typic Epiaquolls		m the absence c	of indicators.) (Typ	S		CS=Covered/Coated Sand			Texture
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	: ogroup): otion (Describe to Bottom	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confirm	m the absence o	of indicators.) (Typ	S	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix,	CS=Covered/Coated Sand	d Grains; Location: P	L=Pore Lining, M=Matrix)	Texture (e.g. clay, sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	group): otion (Describe to Bottom Depth	Menasha clay Typic Epiaquolls	dicator or confirm	m the absence of Matrix (Moist)	of indicators.) (Type	S pe: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist)	CS=Covered/Coated Sand Mottles %	Grains; Location: P	LePore Lining, M=Matrix)	(e.g. clay, sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	: ogroup): otion (Describe to Bottom	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confirm	m the absence o	of indicators.) (Typ	S pe: C=Concentra 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1	CS=Covered/Coated Sand Mottles % 15	Grains; Location: P	LePore Lining, M=Matrix) Location M	-
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: egroup): etion (Describe to Bottom Depth 16	Menasha clay Typic Epiaquolls the depth needed to document the ind Horizon	Color 10YR	m the absence of Matrix (Moist)	of indicators.) (Type	S pe: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist)	CS=Covered/Coated Sand Mottles %	Grains; Location: P	LePore Lining, M=Matrix)	(e.g. clay, sand, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): otion (Describe to Bottom Depth 16	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist)	of indicators.) (Type	S De: C=Concentra 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1	CS=Covered/Coated Sand Mottles % 15	Type D C	L=Pore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 16	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist)	of indicators.) (Type	S De: C=Concentra 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1	CS=Covered/Coated Sand Mottles % 15	Type D C	LePore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: ogroup): otion (Describe to Bottom Depth 16	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist)	of indicators.) (Type	Spe: C=Concentra 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1	CS=Covered/Coated Sand Mottles % 15	Type D C	L=Pore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: egroup): tion (Describe to Bottom Depth 16	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist)	of indicators.) (Type	Sepe: C=Concentra 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6	CS=Covered/Coated Sand Mottles % 15 10	Type D C	L=Pore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: ogroup): otion (Describe to Bottom Depth 16	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist)	of indicators.) (Type	See: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6	CS=Covered/Coated Sand Mottles % 15 10	Type D C	L=Pore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: ogroup): otion (Describe to Bottom Depth 16	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1	% 75	10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6	CS=Covered/Coated Sand Mottles % 15 10	Type D C	LePore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	: ogroup): otion (Describe to Bottom Depth 16 Soil Field In A1- Histosol	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check he	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	% 75	See C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6):	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble	L=Pore Lining, M=Matrix) Location M M	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): stion (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep	Menasha clay Typic Epiaquolls the depth needed to document the incent to the depth needed to the depth	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	% 75 are not pre S8 - Polyv (LRR R, M	See: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6 Surface B)	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I	LePore Lining, M=Matrix) Location M M matic Soils ¹ Muck (LRR K, L, N Prairie Redox (LR	(e.g. clay, sand, loam) clay loam MLRA149B) R K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	: group): stion (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here)	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	% 75 are not pre S8 - Polyv (LRR R, N S9 - Thin	10YR 10YR 10YR esent value Below MLRA 149 Dark Surfa	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6): w Surface B) ace	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu	LePore Lining, M=Matrix) Location M M matic Soils ¹ Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat ((e.g. clay, sand, loam) clay loam MLRA149B) R K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): stion (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge	Menasha clay Typic Epiaquolls the depth needed to document the incent to the incent to the depth needed to document the incent to the incent to the depth needed to document the incent to the incent to the depth needed to document the incent to the incent	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	% 75	10YR 10YR 10YR esent □ value Belov MLRA 149 Dark Surfa	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6): w Surface B) ace B)	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5 cm Mu S7 - Dark Si	LePore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L)	(e.g. clay, sand, loam) clay loam (ILRA149B) R K, L, R) (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified	Menasha clay Typic Epiaquolls the depth needed to document the incent to the incent to the depth needed to document the incent to the incent to the depth needed to document the incent to the incent to the depth needed to document the incent to the incent	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	% 75 are not pre S8 - Polyv (LRR R, N S9 - Thin	10YR 10YR 10YR esent value Below MLRA 149 Dark Surfa MLRA 149 ny Muck M	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6): w Surface B) ace B)	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval	LePore Lining, M=Matrix) Location M M matic Soils ¹ Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat ((e.g. clay, sand, loam) clay loam (LRA149B) (R K, L, R) (LRR K, L, R) (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	% 75	10YR 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6): w Surface B) ace B) ineral Matrix	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M	Location M M matic Soils M Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K langanese Masses	(e.g. clay, sand, loam) clay loam (LRA149B) (R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here) Dipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface Dark Surface Juck Mineral	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	of indicators.) (Type	10YR 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, december 1. The series of	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm f A16 - Coast S3 - 5cm Mt S7 - Dark St S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm	L=Pore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K langanese Masses ont Floodplain Soil	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy G	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface Juck Mineral Gleyed Matrix	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	% 75	10YR 10YR 10YR esent value Below MLRA 149 Dark Surfa MLRA 149 ny Muck M -) ny Gleyed eted Matrix ox Dark Su	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 4/6 N Surface B) ace B) ineral Matrix crface	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5 cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic	LePore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K langanese Masses ont Floodplain Soil Spodic (MLRA 14	(e.g. clay, sand, loam) clay loam
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface luck Mineral sleyed Matrix ledox	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	of indicators.) (Type	Spe: C=Concentra 10YR 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Grace Binarce Matrix Grace Surface Surface Surface Surface	CS=Covered/Coated Sand Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm f A16 - Coast S3 - 5cm Mc S7 - Dark Sc S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P	L=Pore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K langanese Masses ont Floodplain Soil	(e.g. clay, sand, loam) clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) K, L) S (LRR K, L, R) Is (MLRA 149B) J4A, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface luck Mineral sleyed Matrix ledox	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	% 75	Spe: C=Concentra 10YR 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Grace Binarce Matrix Grace Surface Surface Surface Surface	CS=Covered/Coated Sance Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	LePore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, N) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L)) ue Below Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14 arent Material Shallow Dark Surfain in Remarks)	(e.g. clay, sand, loam) clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) S (LRR K, L, R) Is (MLRA 149B) HAA, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 16 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here) Dipedon stic In Sulfide I Layers I Layers I Below Dark Surface Dark Surface Dark Surface Duck Mineral Bleyed Matrix Ledox Matrix	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	% 75	Spe: C=Concentra 10YR 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Grace Binarce Matrix Grace Surface Surface Surface Surface	CS=Covered/Coated Sance Mottles % 15 10 Indicator Indicators of	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	Location M M matic Soils M Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface ark Surface (LRR K langanese Masses ont Floodplain Soil Spodic (MLRA 14 arent Material Shallow Dark Surf	(e.g. clay, sand, loam) clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) S (LRR K, L, R) Is (MLRA 149B) HAA, 145, 149B)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy M S4 - Sandy M S5 - Sandy R S6 - Stripped S7 - Dark Su	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon adicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface luck Mineral sleyed Matrix edox Matrix rface (LRR R, MLRA 1	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	of indicators.) (Type	Spe: C=Concentra 10YR 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Grace Binarce Matrix Grace Surface Surface Surface Surface	CS=Covered/Coated Sance Mottles % 15 10 Indicator	Type D C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	LePore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, N) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14 arent Material Shallow Dark Surfain in Remarks) ation and wetland hydrology	(e.g. clay, sand, loam) clay loam MLRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L) S (LRR K, L, R) Is (MLRA 149B) AA, 145, 149B) Face must be present, unless
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 16 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy M S4 - Sandy M S5 - Sandy R S6 - Stripped S7 - Dark Su	Menasha clay Typic Epiaquolls the depth needed to document the interpretation Horizon adicators (check here) bipedon stic en Sulfide d Layers ed Below Dark Surface Dark Surface Juck Mineral Bleyed Matrix Ledox Matrix rface (LRR R, MLRA 1	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	of indicators.) (Type	Spe: C=Concentra 10YR 10YR 10YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, Grace Binarce Matrix Grace Surface Surface Surface Surface	CS=Covered/Coated Sand Mottles % 15 10 Indicator Indic	Type D C s for Proble A10 - 2 cm f A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla of hydrophytic veget or problematic.	LePore Lining, M=Matrix) Location M M matic Soils Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14 larent Material Shallow Dark Surfain in Remarks) ation and wetland hydrology	(e.g. clay, sand, loam) clay loam



Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w2 Sample Point w2-1w

VEGETATION Troe Stratum (Ple	(Species identified in all uppercase are non-national size: 10 meter radius)	ative spec	ies.)		
Tree Stratum (Pi	Species Name	% Cover	Dominant	Ind Status	Dominance Test Worksheet
1.	Species Name	<u> </u>	Dominant 	Ind.Status	Dominance rest worksneet
2.					Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)
3.					(A)
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					Total Number of Dominant Species Across All Strata(D)
	_ 				Derecant of Deminant Species That Are OBL EACIM or EAC: 100.09/ (A/B)
6.	_ 				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.					Dravalance Index Montrakest
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 100 x 1 = 100
	Total Cover =	0			FACW spp. 0
					FAC spp.
	atum (Plot size: 5 meter radius)				FACU spp. $0 x 4 = 0$
1.					UPL spp. $0 x 5 = 0$
2.					
3.					Total 100 (A) 100 (B)
4.					
5.					Prevalence Index = B/A = 1.000
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes ☐ No Dominance Test is > 50%
	Total Cover =	0			☑ Yes ☐ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 2 meter radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	TYPHA ANGUSTIFOLIA	80	Υ	OBL	
2.	Alisma triviale	20	Υ	OBL	* Indicators of hydric soil and wetland hydrology must be
3.					present, unless disturbed or problematic.
4.					Definitions of Vegetation Strata:
5.					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
15.	Total Caver	400			vvoody vines - / in troody vines greater than ones it in moregita
	Total Cover =	100			
10/22 1 12 22 22	(District 12 and 13 and 14 and 15 and				
vvoody vine Strat	um (Plot size: 10 meter radius)				
1.	_ 				
2.					Uhadha ahadia Wanatadia a Bararata (200 (200)
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
5.					
4.					
	Total Cover =		* **	F0/05	
Remarks:	Dominant vegetation was determined t	hrough u	ise of the	: 50/20 ru	lle. Vegetation at the sample plot is hydrophytic.
Additional Re	marks:				

additional Remarks:



Applicant: WisDOT Investigator #12: Nik Bertagnoli State: Wisconsin Welfand ID: Wasconsin Welf
Soil Unit: Menasha clay
Landfrorm: Side slope Local Relief: Convex Slope (%): 2-6 Latitude: N/A Longitude: N/A Datum: N/A Community ID: mesic prairie Are climatic/hydrologic conditions on the site typical for this time of year? (##nc. explainin remarks) Yes No No Socion: 17 Are Vegetation Soil or Hydrology significantly disturbed? Are normal circumstances present? Township: 20N Are Vegetation Soil or Hydrology naturally problematic? Yes No No Range: 16 Dir: SUMMARY OF FINDINGS
Slope (%):
Are climatic/hydrologic conditions on the site typical for this time of year? Iff no., explain in remarks)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are normal circumstances present? Township: 20N
Are Vegetation Soil or Hydrology naturally problematic? SUMMARY OF FINDINGS Wetland Hydrology Present? Yes No Hydric Soils Present? Yes Ye
Are Vegetation Soil or Hydrology naturally problematic? SUMMARY OF FINDINGS Wetland Hydrology Present? Yes No Hydric Soils Present? Yes Ye
SUMMARY OF FINDINGS Hydrophytic Vegetation Present?
Hydric Soils Present?
Vest Vest Vest Vest No Stampling Point Within A Wetland? Vest
Remarks: Sample plot is located in a mesic prairie. WETS analysis determined that the antecedent precipitation conditions were drier than normal. HYDROLOGY Wetland Hydrology Indicators (Check here if indicators are not present :): Primary.
HYDROLOGY Wetland Hydrology Indicators (Check here if indicators are not present ☑): Primary:
Wetland Hydrology Indicators (Check here if indicators are not present ☑): Primary:
Wetland Hydrology Indicators (Check here if indicators are not present ☑): Primary:
Primary: A1 - Surface Water B9 - Water-Stained Leaves B10 - Drainage Patterns B10 - Drainage Patterns B15 - Marl Deposits B16 - Moss Trim Lines B16 - Moss Trim Lines B15 - Marl Deposits B16 - Moss Trim Lines B16 - Moss Trim Lin
A1 - Surface Water B9 - Water-Stained Leaves B6 - Surface Soil Cracks B10 - Drainage Patterns A2 - High Water Table B15 - Mart Deposits B16 - Moss Trim Lines
A2 - High Water Table
A3 - Saturation
B1 - Water Marks
B2 - Sediment Deposits
B3 - Drift Deposits
B4 - Algal Mat or Crust
B5 - Iron Deposits
B7 - Inundation Visible on Aerial Imagery B8 - Sparsely Vegetated Concave Surface D3 - Shallow Aquitard D4 - Microtopographic Relief D5 - FAC-Neutral Test
B8 - Sparsely Vegetated Concave Surface D4 - Microtopographic Relief D5 - FAC-Neutral Test
Field Observations: Surface Water Present?
Field Observations: Surface Water Present?
Surface Water Present? Yes No Depth: (in.) Water Table Present? Yes No Depth: (in.) Saturation Present? Yes No Depth: (in.) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: The sample plot is located on a gentle slope, approximately 2 feet higher in elevation than the adjacent wetland plot. No evidence of wetland hydrology was observed at the sample plot. SOILS
Water Table Present?
Water Table Present? ☐ Yes ☑ No Depth: (in.) Saturation Present? ☐ Yes ☑ No Depth: (in.) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks: The sample plot is located on a gentle slope, approximately 2 feet higher in elevation than the adjacent wetland plot. No evidence of wetland hydrology was observed at the sample plot. SOILS
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A Remarks: The sample plot is located on a gentle slope, approximately 2 feet higher in elevation than the adjacent wetland plot. No evidence of wetland hydrology was observed at the sample plot. SOILS
Remarks: The sample plot is located on a gentle slope, approximately 2 feet higher in elevation than the adjacent wetland plot. No evidence of wetland hydrology was observed at the sample plot. SOILS
Remarks: The sample plot is located on a gentle slope, approximately 2 feet higher in elevation than the adjacent wetland plot. No evidence of wetland hydrology was observed at the sample plot. SOILS
hydrology was observed at the sample plot. SOILS
SOILS
Map Unit Name: Menasha clay Series Drainage Class: poorly
Taxonomy (Subgroup): Typic Epiaquolls
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)
Top Bottom Matrix Mottles Textur
Depth Depth Horizon Color (Moist) % Color (Moist) % Type Location (e.g. clay, sar
0 6 10YR 2/1 55 10YR 5/2 5 C M clay loa
7.5YR 4/3 40
6 16 7.5YR 4/3 90 7.5YR 4/6 5 C M clay
7.5YR 5/2 5 C M
The control of the c



Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w2 Sample Point w2-2u

VEGETATION	` '	ative spec	cies.)		
Tree Stratum (Pl	ot size: 10 meter radius)				
	Species Name	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:4(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp 0
	Total Cover =	0			FACW spp. $\frac{0}{0}$ $\times 2 = \frac{0}{0}$
					FAC spp. $\frac{0}{0}$ $\times 3 = \frac{0}{0}$
Sapling/Shrub Str	ratum (Plot size: 5 meter radius)				FACU spp. $\frac{80}{}$ $x = \frac{320}{}$
1.					UPL spp. 30 $x = 5$ 5
2.					···
3.					Total 110 (A) 470 (B)
4.					(-)
5.					Prevalence Index = $B/A = 4.273$
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
10.	Total Cover =	0			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
	Total Cover =	U			
Llamb Ctuatura (Di	-t -i 0tdi\				☐ Yes ☐ No Morphological Adaptations (Explain) *
1.	ot size: 2 meter radius) TRIFOLIUM PRATENSE	30	Υ	FACU	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
2.	Ambrosia artemisiifolia	20	<u>Т</u> Ү	FACU	* Indicators of hydric soil and wetland hydrology must be
	SETARIA VIRIDIS	15	Y	UPL	present, unless disturbed or problematic.
3.			Y		Definitions of Vegetation Strate:
4.	ELYTRIGIA REPENS	15		FACU	Definitions of Vegetation Strata:
5.	TARAXACUM OFFICINALE	10		FACU	Troo
6	BROMUS INERMIS	10		UPL	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
7.	MEDICAGO SATIVA	5		UPL	rieight (DBH), regardless of height.
8.	ARCTIUM MINUS	5		FACU	One II and or other than 2 in DDI and greater than 2 20 ft
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.					
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.					
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	110			
Woody Vine Strat	um (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☐ Yes ☑ No
5.					
4.					
	Total Cover =	0			
Remarks:	Dominant vegetation was determined the	nrough u	use of the	50/20 ru	le. Vegetation at the sample plot is not hydrophytic.
		_			
Additional Re	marks:				
7 Garrieria IV					

Project/Site:	Rubbert Ph	nase II Mitigation Sit	e Monito	oring			Stantec Project #:	193702588		Date:	08/15/13	
Applicant:	WisDOT									County:	Winnebago	
Investigator #1:				Investi	gator #2:					State:	Wisconsin	
Soil Unit:	Menasha c	•					I/WWI Classification:	N/A		Wetland ID:	w2	
Landform:	Depression				al Relief:		9	_		Sample Point:	w2-2w	
Slope (%):	0-2	Latitude:			ongitude:			Datum:		Community ID:	shallow marsh	
		ditions on the site ty				(If no, expl		☐ Yes ☑		Section:	17	
•		or Hydrology ☐ sig	-				Are normal circumsta	•	t?	Township:	20N	_
		or Hydrology	urally pr	oblemati	c?		☑ Yes	□No		Range:	16 Dir:	Е
SUMMARY OF												
Hydrophytic Ve								Hydric Soils				
Wetland Hydrol										Within A Wetlar		
Remarks:			llow mai	rsh (rece	ntly creat	ed wetla	nd). WETS analysis o	determined th	at the ante	cedent precipita	tion conditions w	vere
	drier than r	normal.										
HYDROLOGY												
Wetland Hydro	ology Indica	ators (Check here i	f indicate	ors are n	ot preser	nt □):						
<u>Primary:</u>	•	•			•	— ,			Secondary:			
	A1 - Surface			_	B9 - Wate				_	B6 - Surface Soil		
	A2 - High Wa				B13 - Aqu					B10 - Drainage Pa		
	A3 - Saturation B1 - Water M				B15 - Mar C1 - Hydro	•			_	B16 - Moss Trim I C2 - Dry-Season		
l H	B2 - Sedimer				•	•	spheres on Living Roots			C8 - Crayfish Burr		
l	B3 - Drift Dep	•					educed Iron				sible on Aerial Imaç	gery
	B4 - Algal Ma				C6 - Rece	ent Iron Re	duction in Tilled Soils			D1 - Stunted or St		
	B5 - Iron Dep				C7 - Thin		ace			D2 - Geomorphic		
		on Visible on Aerial Ima			Other (Exp	plain)				D3 - Shallow Aqui		
	B8 - Sparsely	y Vegetated Concave S	ourrace							D4 - Microtopogra D5 - FAC-Neutral		
Fig. 1.01	•									D3 - 1 AO-Neutral	1631	
Field Observat												
Surface Water		☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	droloav Pr	esent?	Yes □ No	
Water Table Pr		☐ Yes ☑ No	Depth:		(in.)				0.0 g,			
Saturation Pres	ent?	☐ Yes ☑ No	Depth:		(in.)							
Describe Record	ed Data (str	eam gauge, monitorii	ng well, a	erial pho	tos, previo	ous inspe	ctions), if available:		N/A			
	•		<u> </u>	•		•	, .					
Remarks:	The preser	nce of 2 secondary i	ndicator	s at the s	sample pl	ot provid	es evidence of wetlan	nd hydrology				
Remarks:	The preser	nce of 2 secondary i	ndicator	s at the s	sample pl	ot provid	es evidence of wetlan	nd hydrology.				
	The preser	nce of 2 secondary i	ndicator	s at the s	sample pl	ot provid	es evidence of wetlan	nd hydrology.				
SOILS	·	•	ndicator	s at the s	sample pl	•						
SOILS Map Unit Name	:	Menasha clay	ndicator	s at the s	sample pl	•	es evidence of wetlan eries Drainage Class:					
SOILS Map Unit Name Taxonomy (Sub	: group):	Menasha clay Typic Epiaquolls				S	eries Drainage Class:	poorly				
SOILS Map Unit Name Taxonomy (Sub	: group): tion (Describe to	Menasha clay Typic Epiaquolls		m the absence o		S		poorly CS=Covered/Coated Sand	d Grains; Location: P	L=Pore Lining, M=Matrix)	Teyture	
SOILS Map Unit Name Taxonomy (Sub Profile Descrip	: group): tion (Describe to Bottom	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confire	n the absence o	f indicators.) (Тур	S	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, (poorly CS=Covered/Coated Sand Mottles	Т		Texture	
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	group): otion (Describe to Bottom Depth	Menasha clay Typic Epiaquolls	dicator or confirm	m the absence o Matrix (Moist)	f indicators.) (Typ	Se: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist)	cs=Covered/Coated Sand Mottles %	Туре	Location	(e.g. clay, sand	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip	: group): tion (Describe to Bottom	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confire	n the absence o	f indicators.) (Тур	S	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, (poorly CS=Covered/Coated Sand Mottles	Т			d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	group): otion (Describe to Bottom Depth	Menasha clay Typic Epiaquolls the depth needed to document the inc	dicator or confirm	m the absence o Matrix (Moist)	f indicators.) (Typ	Se: C=Concentra	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist)	cs=Covered/Coated Sand Mottles %	Туре	Location	(e.g. clay, sand	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: egroup): etion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color	m the absence o Matrix (Moist)	f indicators.) (Typ	Se: C=Concentra 7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist)	cs=Covered/Coated Sand Mottles %	Type C	Location M	(e.g. clay, sand	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence o Matrix (Moist)	f indicators.) (Typ	Se: C=Concentra 7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist)	cs=Covered/Coated Sand Mottles %	Type C 	Location M 	(e.g. clay, sand clay loar 	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1	f indicators.) (Type of the first of the fir	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist)	cs=Covered/Coated Sand Mottles %	Type C 	Location M 	(e.g. clay, sand clay loar 	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	group): tion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1	f indicators.) (Type of the first of the fir	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist)	cs=Covered/Coated Sand Mottles %	Type C 	Location M	(e.g. clay, sand clay loar 	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: egroup): etion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1	f indicators.) (Typ	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, 0 Color (Moist) 4/6	poorly CS=Covered/Coated Sand Mottles % 5	Type C 	Location M	(e.g. clay, sand	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: ogroup): otion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1	f indicators.) (Typ	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, of Color (Moist) 4/6	CS=Covered/Coated Sand Mottles % 5	Type C	Location M	(e.g. clay, sand	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	: ogroup): otion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1	f indicators.) (Type % 95	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, 0 Color (Moist) 4/6	poorly CS=Covered/Coated Sand Mottles 5	Type	Location M	(e.g. clay, sand	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): group): Bottom Depth 18 Soil Field Ir	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	f indicators.) (Type % 95	7.5YR esent	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, of Color (Moist) 4/6):	CS=Covered/Coated Sand Mottles % 5 Indicator	Type	Location M matic Soils 1	(e.g. clay, sand	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	: ogroup): otion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	f indicators.) (Type % 95	7.5YR esent value Belo	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6 y: w Surface	poorly CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm	Location M	(e.g. clay, sand clay loar	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	: ogroup): otion (Describe to Bottom Depth 18 Soil Field In	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check he	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	% 95 re not pre	7.5YR esent value Belo	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, of Color (Moist) 4/6): w Surface B)	CS=Covered/Coated Sand Mottles % 5 Indicator	Type	Location M matic Soils ¹ Vluck (LRR K, L, N	(e.g. clay, sand clay loar	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): btion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon andicators (check here) cipedon istic en Sulfide	Color 10YR	m the absence of Matrix (Moist) 2/1 icators a	f indicators.) (Type % 95	7.5YR esent value Belo MLRA 149 Dark Surfa	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, of the color (Moist) 4/6): w Surface B) ace B)	poorly CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Si	Location M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L)	(e.g. clay, sand clay loar ILRA149B) R K, L, R)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): stion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon ndicators (check here) cipedon istic en Sulfide d Layers	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	f indicators.) (Type % 95 95 95 95 95 95 95 96 97 97 97 97 97 97 97 97 97 97 97 97 97	7.5YR esent value Belo MLRA 149 Dark Surfa MLRA 149 ny Muck M	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, of the color (Moist) 4/6): w Surface B) ace B)	poorly CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Si S8 - Polyval	Location M Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface	(e.g. clay, sand clay loar MLRA149B) R K, L, R) (LRR K, L, R)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon ndicators (check here) cipedon istic en Sulfide d Layers ed Below Dark Surface	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	f indicators.) (Type % 95	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, of Color (Moist) 4/6): w Surface B) ace B) ineral	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Si S8 - Polyval S9 - Thin Da	Location M matic Soils Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K) ark Surface (LRR K)	(e.g. clay, sand clay loar ILRA149B) R K, L, R) LRR K, L, R)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser Polyv (LRR R, M S9 - Thin (LRR R, M F1 - Loam (LRR K, L	7.5YR esent value Belo MLRA 149 Dark Surfa MLRA 149 ny Muck M -) ny Gleyed	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark So S8 - Polyval S9 - Thin Da F12 - Iron-M	Location M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (ark Surface (LRR K) langanese Masses	(e.g. clay, sand clay loar (LRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): stion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon ndicators (check here) cipedon distic en Sulfide d Layers ed Below Dark Surface Dark Surface Muck Mineral	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser comments of the	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix G	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mc S7 - Dark Sc S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm	Location M Muck (LRR K, L, Muck (LRR K, L, Muck (LRR K, L) Muck (LRR K, L) Prairie Redox (LR K, L) urface (LRR K, L) ue Below Surface (LRR K, L) ark Surface (LRR K, L) langanese Masses ont Floodplain Soil	(e.g. clay, sand clay loar (LRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (MLRA 149B)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A12 - Thick E S1 - Sandy M S4 - Sandy M	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser Polyvoor (LRR R, M) S9 - Thin (LRR R, M) F1 - Loam (LRR K, L) F2 - Loam F3 - Deplet F6 - Redo	7.5YR esent esent	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, 0 Color (Moist) 4/6 N Surface B) ace B) ineral Matrix crface	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark So S8 - Polyval S9 - Thin Da F12 - Iron-W F19 - Piedm TA6 - Mesic	Location M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ark Surface (LRR K langanese Masses ont Floodplain Soil Spodic (MLRA 14	(e.g. clay, sand clay loar (LRA149B) R K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (MLRA 149B)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Egroup): ogroup): otion (Describe to Bottom Depth 18	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser sa - Polyv (LRR R, N S9 - Thin (LRR K, L F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	7.5YR 7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix c rface Surface	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mt S7 - Dark St S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P	Location M Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14) Parent Material	(e.g. clay, sand clay loar 	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser Polyvoor (LRR R, M) S9 - Thin (LRR R, M) F1 - Loam (LRR K, L) F2 - Loam F3 - Deplet F6 - Redo	7.5YR 7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix c rface Surface	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark So S8 - Polyval S9 - Thin Da F12 - Iron-W F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very	Location M matic Soils Muck (LRR K, L, N Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ark Surface (LRR K langanese Masses ont Floodplain Soil Spodic (MLRA 14	(e.g. clay, sand clay loar 	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser sa - Polyv (LRR R, N S9 - Thin (LRR K, L F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	7.5YR 7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix c rface Surface	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark So S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla of hydrophytic veget	Location M matic Soils Muck (LRR K, L, N) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K) ark Surface (LRR K) langanese Masses ont Floodplain Soil Spodic (MLRA 14) Parent Material Shallow Dark Surf	(e.g. clay, sand clay loar MLRA149B) R K, L, R) LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (MLRA 149B) 4A, 145, 149B)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser Polyv (LRR R, N S9 - Thin (LRR K, L F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	7.5YR 7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix c rface Surface	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla of hydrophytic veget or problematic.	Location M matic Soils Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ark Surface (LRR K, L) varent Material Shallow Dark Surfain in Remarks)	(e.g. clay, sand clay loar MLRA149B) R K, L, R) LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (MLRA 149B) 4A, 145, 149B)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	group): otion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser sa - Polyv (LRR R, N S9 - Thin (LRR K, L F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple	7.5YR 7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix c rface Surface	CS=Covered/Coated Sand Mottles % 5 Indicator	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla of hydrophytic veget or problematic.	Location M matic Soils Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ue Below Surface (urface (LRR K, L) ark Surface (LRR K, L) varent Material Shallow Dark Surfain in Remarks)	(e.g. clay, sand clay loar MLRA149B) R K, L, R) LRR K, L, R) (LRR K, L, R) (LRR K, L, R) s (MLRA 149B) 4A, 145, 149B)	d, loam)
SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 NRCS Hydric	Egroup): stion (Describe to Bottom Depth 18 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy M S5 - Sandy R S6 - Stripped S7 - Dark Su Type:	Menasha clay Typic Epiaquolls the depth needed to document the inc Horizon	Color 10YR ere if ind	m the absence of Matrix (Moist) 2/1 icators a	re not presser Polyv (LRR R, N S9 - Thin (LRR K, L F1 - Loam (LRR K, L F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	7.5YR	eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix, G Color (Moist) 4/6): w Surface B) ace B) ineral Matrix c rface Surface	poorly CS=Covered/Coated Sance Mottles % 5 Indicator Indicat	Type C s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mt S7 - Dark St S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla of hydrophytic veget or problematic. Present?	Location M	(e.g. clay, sand clay loar	d, loam)

Stantec

WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w2 Sample Point w2-2w

VEGETATION	(Species identified in all uppercase are non-na	itive spec	cies.)		
Tree Stratum (Plo	ot size: 10 meter radius)				
	Species Name	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					
10.	Total Cover				OBL spp. $\frac{60}{100} \times 1 = \frac{60}{100}$
	Total Cover =	0			FACW spp. $5 X 2 = 10$
0 11 (0) 1 0:					FAC spp. $\frac{40}{100} \times 3 = \frac{120}{100}$
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp. $5 X 4 = $
1.					UPL spp. $0 x 5 = 0$
2.					
3.					Total 110 (A) 210 (B)
4.					
5.					Prevalence Index = B/A = 1.909
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes ☐ No Dominance Test is > 50%
101	Total Cover =	0			✓ Yes ☐ No Prevalence Index is ≤ 3.0 *
	Total Gover =	O			
Llank Ctratura (Dla	t sings O master realises)				
	t size: 2 meter radius)	40	Υ	OPI	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	TYPHA ANGUSTIFOLIA	40		OBL	* Indicators of hydric soil and wetland hydrology must be
2.	ECHINOCHLOA CRUSGALLI	40	Υ	FAC	present, unless disturbed or problematic.
3.	Alisma triviale	20		OBL	
4.	Polygonum lapathifolium	5		FACW	Definitions of Vegetation Strata:
5.	TRIFOLIUM HYBRIDUM	5		FACU	
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
10.					Treedy vines
	Total Cover =	110			
14/55 1 12 2	(Distriction 40 sectors ")				
vvoody Vine Strati	um (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
5.					
4.					
	Total Cover =	0			
Remarks:	Dominant vegetation was determined the	nrough (use of the	50/20 ru	ile. Vegetation at the sample plot is hydrophytic.
		-			
Additional Rer	marks:				
Additional Net	IIII NJ.				

Additional Remarks:	



Project/Site: Applicant:	Rubbert Ph WisDOT	nase II Mitigation Sit	e Monito	ring			Stantec Project #:	193702588		Date: County:	08/15/13 Winnebago	
• •	#1: Melissa Curran Investigator #2: Nik Bertagnoli									State:	Wisconsin	
Soil Unit:	Menasha d	•					/I/WWI Classification:	N/A		Wetland ID:	w2	
Landform:	Side slope		N1/A		cal Relief:			Datama	N1/A	Sample Point:	w2-3u	
Slope (%):	2-6	Latitude:			ongitude:			Datum:		Community ID:	mesic prairie	
		ditions on the site ty	•			(If no, explain	ain in remarks) Are normal circumsta	☐ Yes ☑	No 12	Section:	17 20N	
•		or Hydrology □ sig or Hydrology □ nat	-				✓ Yes	inces presen ⊟No	l :	Township: Range:	16 Dir: E	F
SUMMARY OF		or riyarology riat	draily pro	obiemat			□ 100	_, ,,,		rtange.	10 Dii. L	
Hydrophytic Ve		sent?		□ Yes	s ☑ No			Hydric Soils	Present?		□ Yes ☑	7 No
Wetland Hydrol	•			☐ Yes	_					Within A Wetla		
Remarks:			sic prairie				ned that the antecede					
HYDROLOGY												
		ators (Check here i	f indicato	ors are r	not preser	nt ☑):						
<u>Primary:</u> □	<u>:</u>	Water			B9 - Wate	ar-Stained	Leaves		Secondary:	B6 - Surface Soil	Cracks	
	A2 - High Wa				B3 - Wate					B10 - Drainage P		
	A3 - Saturati				B15 - Mar					B16 - Moss Trim		
	B1 - Water M				C1 - Hydr	•				C2 - Dry-Season		
	B2 - Sedime	•					spheres on Living Roots			C8 - Crayfish Bur		
	B3 - Drift De B4 - Algal Ma				•		educed Iron eduction in Tilled Soils			D1 - Saturation v	isible on Aerial Image	jery
	B5 - Iron Dep									D2 - Geomorphic		
		on Visible on Aerial Ima	agery	_	Other (Ex		doc			D3 - Shallow Aqu		
	B8 - Sparsel	y Vegetated Concave S	Surface		`	,				D4 - Microtopogr		
										D5 - FAC-Neutra	l Test	
Field Observat	ions:											
Surface Water	Present?	☐ Yes ☑ No	Depth:		(in.)			Watland Us	drology Di	rocent?	Voo □ No	
Water Table Pr	esent?	☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pi	resent?	Yes ☑ No	
Saturation Pres	ent?	☐ Yes ☑ No	Depth:		(in.)							
Describe Record	led Data (str	eam gauge, monitorii	ng well, a	erial pho	otos, previ	ous inspe	ctions), if available:		N/A			
Remarks:	· · ·						et higher in elevation th	an the adiac	ent wetland	d plot. No evide	ence of wetland	
rtorriamor		was observed at the	•		,pproxime	10.7 = 100	arngrier in Gieralien i	iair ii io aajao	one woulding	. proti i to otrao	arios or womania	
SOILS	, ,,			•								
Map Unit Name);	Menasha clay				S	eries Drainage Class:	poorly				
Taxonomy (Sub		Typic Epiaquolls						, <i>,</i>				
	<u> </u>	the depth needed to document the inc	dicator or confirm	n the absence	of indicators.) (Ty	pe: C=Concentra	ation, D=Depletion, RM=Reduced Matrix, C	CS=Covered/Coated Sand	d Grains; Location: F	PL=Pore Lining, M=Matrix)		
Тор	Bottom			Matrix	(Mottles			Texture	
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand,	loam)
0	4		10YR	2/1	60	7.5YR	5/2	2	D	M	clay loam	
-		-	7.5YR	4/4	38				-			
4	12	-	7.5YR	4/4	75	7.5YR	5/2	20	D	M	clay	
1		-				7.5YR	5/8	5	C	M		
12	18	-	5YR	4/4	95	5YR	5/8	5	C	M	silt loam	
NRCS Hydric		ndicators (check he	ere if indi	cators a	•		•			matic Soils 1		
	A1- Histosol				S8 - Poly					Muck (LRR K, L, I		
	A2 - Histic E			_	(LRR R, M					Prairie Redox (LF		
	A3 - Black H				S9 - Thin					ucky Peat of Peat	•	
	A4 - Hydroge A5 - Stratifie				(LRR R, N F1 - Loam		•			urface (LRR K, L) lue Below Surface		
		a Layers ed Below Dark Surface		Ц	(LRR K, L	•	morai		•	ark Surface (LRR	•	
	A12 - Thick [F2 - Loan	,	Matrix			langanese Masse	• •	
		Muck Mineral			F3 - Deple					nont Floodplain So	,	
	S4 - Sandy C				F6 - Redo					Spodic (MLRA 1	,	
	S5 - Sandy F				F7 - Deple					Parent Material		
	S6 - Stripped		140E)		F8 - Redo	x Depress	sions		•	Shallow Dark Sur	face	
	S7 - Dark Su	rface (LRR R, MLRA 1	(49B)					1 Indicators (` •	ain in Remarks) tation and wetland hydrology	v must be present unless	
									r problematic.		, we process, united	
Restrictive Layer (If Observed)	Type:	N/A		Depth:	N/A			Hydric Soil	Present?		Yes ☑ No	
Remarks:	The soil at	the sample plot doe	s not hav	ve any f	field indica	ators of h	ydric soil, nor does it a	appear to be i	nundated o	or saturated to t	he surface for lone	a
		time during the grow		•				1 1				9



Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w2 Sample Point w2-3u

VEGETATION	(Species identified in all uppercase are non-na	tive spec	ies.)		
Tree Stratum (Plo	t size: 10 meter radius)				
	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. $\begin{array}{cccccccccccccccccccccccccccccccccccc$
	Total Cover =	0			FACW spp. $\frac{10}{10}$ \times $2 = \frac{20}{10}$
	10tal 20001 =	Ü			FAC spp. $\frac{10}{10}$ $\times 3 = \frac{20}{30}$
Sanling/Shruh Stra	atum (Plot size: 5 meter radius)				FACU spp. 36
1					
2.					UPL spp. $X 5 = 200$
	_ -				T-1-1 00 (A)
3.	_ - _				Total <u>96</u> (A) <u>394</u> (B)
4.	_ 				
5.					Prevalence Index = B/A = 4.104
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
	Total Cover =	0			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t size: 2 meter radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	SETARIA VIRIDIS	40	Υ	UPL	
2.	Ambrosia artemisiifolia	15	Υ	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Polygonum lapathifolium	10		FACW	present, unless disturbed or problematic.
4.	TRIFOLIUM PRATENSE	10		FACU	Definitions of Vegetation Strata:
5.	RUMEX CRISPUS	10		FAC	
6	TRIFOLIUM HYBRIDUM	5		FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	CHENOPODIUM ALBUM	5		FACU	height (DBH), regardless of height.
8.	CIRSIUM ARVENSE	1		FACU	
9.		1			Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
	_ 				tall.
10.	_ 				
11.					Herb - All herbaceous (non-woody) plants, regardless of size, and
12.					woody plants less than 3.28 ft. tall.
13.					
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	96			
Woody Vine Stratu	ım (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☐ Yes ☑ No
5.					
4.					
	Total Cover =	0			
Remarks:		rough ι	use of the	50/20 ru	le. Vegetation at the sample plot is not hydrophytic.
	3	9			
Additional Ren	a a wika .				
Additional Ren	narks:				



Applicant: Investigator #1: Soil Unit:	Menasha c	rran lay		Investi	gator #2:	NW	I/WWI Classification:	193702588 : N/A		Date: County: State: Wetland ID:	Winnebago Wisconsin w2
Landform: Slope (%):	Depression 0-2	Latitude:	N/A		al Relief: ongitude:		9	Datum:	N/A	Sample Point: Community ID:	w2-3w wet meadow
• • •		ditions on the site ty					in in remarks)	☐ Yes ☑		Section:	17
-		or Hydrology □ sig			-		Are normal circumst		t?	Township:	20N
Are Vegetation	□, Soil □,	or Hydrology □ nat	urally pr	oblemati	ic?			□No		Range:	16 Dir: E
SUMMARY OF	FINDINGS										
Hydrophytic Veg	•			☑ Yes	_			Hydric Soils		\(\lambda\)	✓ Yes □ No
Wetland Hydrol Remarks:	<u> </u>		meado	✓ Yes			I) WFTS analysis de	•		Within A Wetlar	nd? ✓ Yes ■ No on conditions were drier
Remarks.	than norma		meado	v (recent	ily created	a wettand	ij. WETO analysis de		the antece	dent precipitation	on conditions were drief
HYDROLOGY											
Wetland Hydro Primary:	•	ators (Check here i	f indicate	ors are n	ot preser	nt□):			Secondary:		
	A1 - Surface A2 - High Wa A3 - Saturatio B1 - Water M B2 - Sedimer B3 - Drift Dep	iter Table on larks ot Deposits oosits			C4 - Pres	latic Fauna I Deposits ogen Sulfi ized Rhizo ence of Re	de Odor spheres on Living Roots educed Iron				atterns Lines Water Table rows isible on Aerial Imagery
	B8 - Sparsely		-		C6 - Rece C7 - Thin Other (Ex	Muck Surf	duction in Tilled Soils ace			D1 - Stunted or Since D2 - Geomorphic D3 - Shallow Aquid D4 - Microtopograd D5 - FAC-Neutral	Position itard aphic Relief
Field Observat Surface Water I Water Table Pro Saturation Pres	Present? esent? ent?	☐ Yes ☑ No ☐ Yes ☑ No ☐ Yes ☑ No	Depth: Depth:		(in.) (in.) (in.)			Wetland Hy		resent? ☑	Yes □ No
Describe Record	•	eam gauge, monitorii							N/A		
Remarks:	The presen	ce of 2 secondary i	ndicator	s at the s	sample pl	ot provid	es evidence of wetlar	nd hydrology.			
COLLC								, 0.			
SOILS		Managha alay					orios Droinago Class	noorly			
Map Unit Name		Menasha clay				S	eries Drainage Class:	: poorly			
Map Unit Name Taxonomy (Sub	group):	Typic Epiaquolls	dicator or confin	m the absence o	of indicators.) (Tvi				d Grains: Location: P	L=Pore Lining, M=Matrix)	
Map Unit Name Taxonomy (Sub Profile Descrip	group):	Typic Epiaquolls	dicator or confire	m the absence o			eries Drainage Class: tion, D=Depletion, RM=Reduced Matrix,		d Grains; Location: P	L=Pore Lining, M=Matrix)	Texture
Map Unit Name Taxonomy (Sub	group): otion (Describe to	Typic Epiaquolls						CS=Covered/Coated Sand	Grains; Location: P	PL=Pore Lining, M=Matrix) Location	Texture (e.g. clay, sand, loam)
Map Unit Name Taxonomy (Sub Profile Descrip Top	ogroup): otion (Describe to Bottom	Typic Epiaquolls the depth needed to document the inc		Matrix			tion, D=Depletion, RM=Reduced Matrix,	CS=Covered/Coated Sand	<u> </u>		- .
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	ogroup): otion (Describe to Bottom Depth	Typic Epiaquolls the depth needed to document the inc	Color	Matrix (Moist)	%	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, Color (Moist)	CS=Covered/Coated Sand Mottles %	Туре	Location	(e.g. clay, sand, loam)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup): otion (Describe to Bottom Depth 10	Typic Epiaquolls the depth needed to document the inc Horizon	Color 7.5YR	Matrix (Moist) 2.5/1	% 85	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, Color (Moist)	CS=Covered/Coated Sand Mottles %	Type D	Location M	(e.g. clay, sand, loam)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	egroup): otion (Describe to Bottom Depth 10	Typic Epiaquolls the depth needed to document the inc Horizon	Color 7.5YR 7.5YR	Matrix (Moist) 2.5/1 4/4	% 85 10	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1	CS=Covered/Coated Sand Mottles % 5	Type D 	Location M 	(e.g. clay, sand, loam) clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	Bottom Depth 10 18	Typic Epiaquolls the depth needed to document the inc Horizon	Color 7.5YR 7.5YR 7.5YR	Matrix (Moist) 2.5/1 4/4 4/4	% 85 10 90	5YR 7.5YR	tion, D=Depletion, RM=Reduced Matrix, Color (Moist) 5/1 5/6	CS=Covered/Coated Sand Mottles % 5	Type D C	Location M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	Bottom Depth 10 18	Typic Epiaquolls the depth needed to document the inc Horizon	Color 7.5YR 7.5YR 7.5YR 	Matrix (Moist) 2.5/1 4/4 4/4	% 85 10 90	5YR 7.5YR 7.5YR	Color (Moist) 5/1 5/6 5/2	CS=Covered/Coated Sand Mottles % 5 5	Type D C D	Location M M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	pgroup): ption (Describe to Bottom Depth 10 18	Typic Epiaquolls the depth needed to document the inc Horizon	Color 7.5YR 7.5YR 7.5YR 	Matrix (Moist) 2.5/1 4/4 4/4 	% 85 10 90 	5YR 7.5YR 7.5YR	Color (Moist) 5/1 5/6 5/2	CS=Covered/Coated Sand Mottles % 5 5	Type D C D	Location M M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10	egroup): Potion (Describe to Depth 10 18	Typic Epiaquolls the depth needed to document the ince Horizon	Color 7.5YR 7.5YR 7.5YR 	Matrix (Moist) 2.5/1 4/4 4/4	% 85 10 90 	5YR 7.5YR 7.5YR	Color (Moist) 5/1 5/6 5/2	CS=Covered/Coated Sand Mottles % 5 5	Type D C D	Location M M M	(e.g. clay, sand, loam) clay loam clay loam
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric	Bottom Depth 10 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Typic Epiaquolls the depth needed to document the inc Horizon	Color 7.5YR 7.5YR 7.5YR ere if ind	Matrix (Moist) 2.5/1 4/4 4/4 icators a	% 85 10 90 re not pre	5YR 7.5YR 7.5YR	Color (Moist) 5/1 5/6 5/2 N: Surface B) Ince B) Ineral Matrix Inface Surface Surface	CS=Covered/Coated Sand Mottles % 5 5 Indicator Indicator Indicator Indicator	Type D C D s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark So S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla	Location M M M	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) Is (LRR K, L, R) Is (MLRA 149B)
Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 10 NRCS Hydric S	Bottom Depth 10 18 Soil Field In A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick E S1 - Sandy M S4 - Sandy M S4 - Sandy R S6 - Stripped	Typic Epiaquolls the depth needed to document the inc Horizon adicators (check he bipedon stic n Sulfide d Layers ed Below Dark Surface Park Surface luck Mineral sleyed Matrix edox Matrix rface (LRR R, MLRA 1	Color 7.5YR 7.5YR 7.5YR ere if ind	Matrix (Moist) 2.5/1 4/4 4/4 icators a	% 85 10 90	5YR 7.5YR 7.5YR	Color (Moist) 5/1 5/6 5/2 N: Surface B) Ince B) Ineral Matrix Inface Surface Surface	CS=Covered/Coated Sand Mottles % 5 5 Indicator Indicator Indicator Indicator	Type D C D s for Proble A10 - 2 cm I A16 - Coast S3 - 5cm Mu S7 - Dark Su S8 - Polyval S9 - Thin Da F12 - Iron-M F19 - Piedm TA6 - Mesic TF2 - Red P TF12 - Very Other (Expla of hydrophytic veget or problematic.	Location M M M matic Soils Muck (LRR K, L, M) Prairie Redox (LR ucky Peat of Peat ourface (LRR K, L) ue Below Surface ark Surface (LRR K, L) ue Below Surface ark Surface (LRR I) langanese Masses ont Floodplain Soi Spodic (MLRA 14 Parent Material Shallow Dark Surfain in Remarks)	(e.g. clay, sand, loam) clay loam clay loam MLRA149B) RR K, L, R) (LRR K, L, R) (LRR K, L, R) (LRR K, L, R) Is (LRR K, L, R) Is (MLRA 149B)

Stantec

WETLAND DETERMINATION DATA FORM Northeast and Northcentral Region

Project/Site: Rubbert Phase II Mitigation Site Monitoring Wetland ID: w2 Sample Point w2-3w

VEGETATION	(Species identified in all uppercase are non-na	tive spec	ies.)		
Tree Stratum (Plo	ot size: 10 meter radius)				
	<u>Species Name</u>	% Cover	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC: (A)
3.					
4.					Total Number of Dominant Species Across All Strata: (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp
	Total Cover =	0			FACW spp. 25 $x 2 = 50$
					FAC spp. 35 $x 3 = 105$
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp. 21 $x 4 = 84$
1.					UPL spp. $x 5 = 75$
2.					
3.					Total 96 (A) 314 (B)
4.					<u> </u>
5.					Prevalence Index = B/A = 3.271
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes ☐ No Dominance Test is > 50%
	Total Cover =	0			☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
	rotal Gover	· ·			☐ Yes ☐ No Morphological Adaptations (Explain) *
Herh Stratum (Plo	t size: 2 meter radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	SETARIA VIRIDIS	15	Υ	UPL	E 163 E 140 1 Toblem Tryarophytic Vegetation (Explain)
2.	Polygonum lapathifolium	15	Y	FACW	* Indicators of hydric soil and wetland hydrology must be
3.	Panicum capillare	15	Y	FAC	present, unless disturbed or problematic.
4.	Elymus virginicus	10	Y	FACW	Definitions of Vegetation Strata:
5.	RUMEX CRISPUS	10	Y	FAC	Definitions of Vegetation offata.
6	POA PRATENSIS	10		FACU	Tree - war and a second a second and a second a second and a second a second and a second and a second and a
7.	ECHINOCHLOA CRUSGALLI	10		FAC	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.
					g (= =, ,
8.	TARAXACUM OFFICINALE	5		FACU	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
9.	Ambrosia artemisiifolia	5		FACU	tall.
10.	Amaranthus retroflexus	1		FACU	
11.					Herb - All herbaceous (non-woody) plants, regardless of size, and
12.					woody plants less than 3.28 ft. tall.
13.					
14.					NAVe a de Min e a All woody vinos greater than 2.29 ft. in height
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	96			
Woody Vine Stratu	um (Plot size: 10 meter radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
5.					
4.					
	Total Cover =	0			
Remarks:	Dominant vegetation was determined the	rough u	ise of the	50/20 ru	le. Vegetation at the sample plot is hydrophytic.
Additional Ren	marks:				

Additional Remarks:

APPENDIX C SPECIES LISTS



Rubbert Phase II 2013 Shallow Marsh Species List

Scientific Name*	Common Name	Coefficient of Conservatism	Native	Physiognomy	Region 3 Wetland Coefficient
Alisma triviale	northern water-plantain	4	Х	Aquatic	
Ambrosia artemisiifolia	common ragweed	0	Х	Forb	FACU
Aster puniceus	swamp aster	5	Х	Forb	OBL
Bidens cernuus	nodding beggar-ticks	4	Х	Forb	OBL
Bidens frondosus	common beggar-ticks	1	Х	Forb	FACW
Bolboschoenus fluviatilis	river bulrush	6	Х	Sedge	OBL
Cyperus esculentus	field nut sedge	0	Х	Sedge	FACW
ECHINOCHLOA CRUSGALLI	barnyard grass			Grass	FACW
Eleocharis obtusa	blunt spike-rush	3	Х	Sedge	OBL
Epilobium coloratum	cinnamon willow-herb	3	Х	Forb	OBL
Erigeron strigosus	daisy fleabane	2	Х	Forb	FAC-
Juncus canadensis	Canadian rush	7	Х	Rush	OBL
Juncus dudleyi	Dudley's rush	4	Х	Rush	
Leersia oryzoides	rice cut grass	3	Х	Grass	OBL
Lythrum alatum	winged loosestrife	6	Х	Forb	OBL
Mimulus ringens	monkey-flower	6	Х	Forb	OBL
Panicum capillare	witch grass	1	Х	Grass	FAC
PHALARIS ARUNDINACEA	reed canary grass			Grass	FACW+
Poa palustris	marsh bluegrass	5	Х	Grass	FACW+
Polygonum pensylvanicum	pinkweed	1	Х	Forb	FACW+
Potentilla norvegica	Norwegian cinquefoil	0	Х	Forb	FAC
RUMEX CRISPUS	curly dock			Forb	FAC+
Sagittaria latifolia var. latifolia	broad-leaved arrowhead	3	Х	Aquatic	OBL
Schoenoplectus tabernaemontani	soft-stem bulrush	4	Х	Sedge	OBL
TRIFOLIUM HYBRIDUM	alsike clover			Forb	FAC-
TYPHA ANGUSTIFOLIA	narrow-leaved cat-tail			Aquatic	OBL
Zizania aquatica	annual wild rice	8	Х	Grass	OBL

FQI Calculations	Species Richness	Mean C Value	FQI
Native	22	3.5	16.2
All Species	s 27	2.8	14.6

^{*}Bold denotes dominant species

Rubbert Phase II 2013 Wet Meadow Species List

Scientific Name*	Common Name	Coefficient of Conservatism	Native	Physiognomy	Region 3 Wetland Coefficient
ABUTILON THEOPHRASTI	Piemarker			Forb	FACU-
Alisma triviale	northern water-plantain	4	Х	Aquatic	
Amaranthus retroflexus	pigweed	0	Х	Forb	FACU+
Ambrosia artemisiifolia	common ragweed	0	Х	Forb	FACU
Ambrosia trifida	giant ragweed	0	Х	Forb	FAC+
Aster puniceus	swamp aster	5	Х	Forb	OBL
CIRSIUM ARVENSE	Canada thistle			Forb	FACU
Cyperus esculentus	field nut sedge	0	Х	Sedge	FACW
ECHINOCHLOA CRUSGALLI	barnyard grass			Grass	FACW
Elymus virginicus	Virginia wild-rye	6	Х	Grass	FACW-
ELYTRIGIA REPENS	quackgrass			Grass	FACU
Epilobium coloratum	cinnamon willow-herb	3	Х	Forb	OBL
HIBISCUS TRIONUM	flower-of-an-hour			Forb	
HORDEUM JUBATUM	squirrel-tail grass			Grass	FAC+
Lactuca canadensis	wild lettuce	2	Х	Forb	FACU+
Leersia oryzoides	rice cut grass	3	Χ	Grass	OBL
Lythrum alatum	winged loosestrife	6	Х	Forb	OBL
Mimulus ringens	monkey-flower	6	Х	Forb	OBL
Panicum capillare	witch grass	1	Х	Grass	FAC
PENNISETUM GLAUCUM	pearl millet			Grass	FAC
PHALARIS ARUNDINACEA	reed canary grass			Grass	FACW+
PLANTAGO MAJOR	plantain			Forb	FAC+
POA PRATENSIS	Kentucky bluegrass			Grass	FAC-
Polygonum lapathifolium	heart's-ease	2	Х	Forb	FACW+
Polygonum pensylvanicum	pinkweed	1	Х	Forb	FACW+
RUMEX CRISPUS	curly dock			Forb	FAC+
SETARIA VIRIDIS	green foxtail			Grass	
Solidago canadensis	common goldenrod	1	Х	Forb	FACU
TRIFOLIUM HYBRIDUM	alsike clover			Forb	FAC-
TRIFOLIUM PRATENSE	red clover			Forb	FACU+
Verbena hastata	blue vervain	3	Х	Forb	FACW+
Xanthium strumarium	common cocklebur	1	Х	Forb	FAC

FQI Calculations	Species Richness	Mean C Value	FQI
Native	18	2.4	10.4
All Species	32	1.4	7.8

^{*}Bold denotes dominant species

Rubbert Phase II 2013 Upland Buffer Species List

Scientific Name*	Common Name	Coefficient of Conservatism	Native	Physiognomy	Region 3 Wetland Coefficient
ABUTILON THEOPHRASTI	Piemarker			Forb	FACU-
Amaranthus retroflexus	pigweed	0	Х	Forb	FACU+
Ambrosia artemisiifolia	common ragweed	0	Х	Forb	FACU
Ambrosia trifida	giant ragweed	0	Х	Forb	FAC+
Andropogon gerardii	big blue-stem	4	Х	Grass	FAC-
ARCTIUM MINUS	common burdock			Forb	UPL
Asclepias incarnata	swamp milkweed	5	Х	Forb	OBL
Asclepias syriaca	common milkweed	1	Х	Forb	UPL
BROMUS INERMIS	smooth brome			Grass	UPL
CHENOPODIUM ALBUM	lamb's-quarters			Forb	FAC-
CICHORIUM INTYBUS	chicory			Forb	
CIRSIUM ARVENSE	Canada thistle			Forb	FACU
CIRSIUM VULGARE	bull thistle			Forb	FACU-
Conyza canadensis	fleabane	0	Х	Forb	FAC-
Cyperus esculentus	field nut sedge	0	Х	Sedge	FACW
DACTYLIS GLOMERATA	orchard grass			Grass	FACU
Dalea purpurea	violet prairie-clover	7	Х	Forb	
DAUCUS CAROTA	Queen Anne's-lace			Forb	
ECHINOCHLOA CRUSGALLI	barnyard grass			Grass	FACW
ELYTRIGIA REPENS	quackgrass			Grass	FACU
Epilobium coloratum	cinnamon willow-herb	3	Х	Forb	OBL
Erigeron strigosus	daisy fleabane	2	Х	Forb	FAC-
HORDEUM JUBATUM	squirrel-tail grass			Grass	FAC+
Juncus dudleyi	Dudley's rush	4	Х	Rush	
Lactuca canadensis	wild lettuce	2	Х	Forb	FACU+
MEDICAGO SATIVA	alfalfa			Forb	[UPL]
MELILOTUS ALBA	white sweet-clover			Forb	FACU
MELILOTUS OFFICINALIS	yellow sweet-clover			Forb	FACU
Panicum capillare	witch grass	1	Х	Grass	FAC
PENNISETUM GLAUCUM	pearl millet			Grass	FAC
PHALARIS ARUNDINACEA	reed canary grass			Grass	FACW+
PLANTAGO MAJOR	plantain			Forb	FAC+
POA PRATENSIS	Kentucky bluegrass			Grass	FAC-
Polygonum lapathifolium	heart's-ease	2	Х	Forb	FACW+
Polygonum pensylvanicum	pinkweed	1	Х	Forb	FACW+
Ratibida pinnata	globular coneflower	4	Х	Forb	
Rudbeckia hirta	black-eyed Susan	4	Х	Forb	FACU
RUMEX CRISPUS	curly dock			Forb	FAC+
SETARIA VIRIDIS	green foxtail			Grass	
SONCHUS ARVENSIS	field sow-thistle			Forb	FAC-
TARAXACUM OFFICINALE	common dandelion			Forb	FACU
TRIFOLIUM AUREUM	golden clover			Forb	
TRIFOLIUM HYBRIDUM	alsike clover			Forb	FAC-
TRIFOLIUM PRATENSE	red clover			Forb	FACU+
Verbena hastata	blue vervain	3	Х	Forb	FACW+

FQI Calculations	Species Richness	Mean C Value	FQI
Native	19	2.3	9.9
All Species	44	1.0	6.5

^{*}Bold denotes dominant species