



**Division of Transportation
System Development**
Northwest Region – Eau Claire Office
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Eau Claire, WI 54701

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E-mail: nw.dtsd@dot.wi.gov

May 19, 2015

ATTN: Dan Munson
U.S. Army Corps of Engineers
190 Fifth Street E
St Paul MN 55101

RE: Project Id: 1021-01-70
IH 94
STH 128 Bridge B-55-0266
St. Croix County

Dear Mr. Munson:

The Wisconsin Department of Transportation (WisDOT) is in the process of developing plans for a proposed bridge replacement/interchange improvement project located at the STH 128 interchange on IH 94 in St. Croix County

The above mentioned project is expected to have minor impacts to wetlands. Please review the enclosed application and send the applicable permits needed for construction.

For any questions related to the project, please contact me by mail at 718 W Clairemont Ave, Eau Claire, WI 54701, by phone at (715).836.3919, or by email at stacey.rusch@dot.wi.gov

Sincerely,

Stacey Rusch

Stacey Rusch
Project Design Leader

Enclosure: State/Federal Application for Water Regulator Permits and Approvals
 Project Location Map
 Project Preliminary Plans and Cross Sections and Wetland Impact Locations
 Wetland Impact Tracking Form
 Wetland Delineation Report

Cc: Chris Willger - Wisconsin DNR

Notice: Pursuant to chs. 30 and 31, Wis. Stats., ch. 281, Wis. Stats., and s. 283.33, Wis. Stats., this form is used to apply for coverage under the state construction site storm water runoff general permit, and to apply for a state or federal permit or certification for waterway and wetland projects or dam projects. This form and any required attachments constitute the permit application. Failure to complete and submit this application form may result in a fine and/or imprisonment or forfeiture under the provisions of applicable laws including s. 283.91, Wis. Stats. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records Laws (ss. 19.31-19.39, Wis. Stats.).

Use this form for (select all that apply):

- | | |
|--|---|
| ☐ Waterway General Permit | ☐ Storm water NOI - New land disturbing construction activity |
| ☐ Waterway Individual Permit | ☐ Storm water NOI - Renewal FIN # _____ |
| ☒ Wetland General Permit | ☐ Work in waters of the U.S. (Army Corps of Engineers) |
| ☐ Wetland Individual Permit | ☐ Dam projects (DNR-ch. 31, Wis. Stats., or Army Corps of Engineers) |

Read all instructions provided before completing. If additional space is needed, attach additional pages.

Section 1: Landowner Information

Landowner Name (first and last name, org. or entity)	Authorized Representative		
Wisconsin Department of Transportation	Stacey Rusch		
Mailing Address	City	State	ZIP Code
718 W Clairemont Ave	Eau Claire	WI	54701
Email Address	Phone Number (include area code)	Alternate Phone Number	
stacey.rusch@dot.wi.gov	(715) 836-3919	(715) 577-3855	

Section 2: Applicant Information ☒ Select if same as landowner

Applicant Name (first and last name, org. or entity)	Contact Person		
Mailing Address	City	State	ZIP Code
Email Address	Phone Number (include area code)	Alternate Phone Number	

Section 3: Primary Project Contact ☒ Select if same as landowner

☐ Consultant ☐ Contractor ☐ Other – Specify: _____

Name (Ind., Org. or Entity)	Contact Person (first and last name)		
Mailing Address	City	State	ZIP Code
Email Address	Phone Number (include area code)	Alternate Phone Number	

Section 4: Project or Site Location

Project Name	County	☐ City ☒ Town ☐ Village
STH 128 Bridge B-55-0266	St. Croix	of Cady

Location Address/Description

STH 128 and IH 94 Interchange - See Attachment 1 for Project Location Map

Public Land Survey System (PLSS) – Provide the section, range, township information and latitude and longitude in decimal degrees, if available.

NW ¼ of SW ¼ of Section 3, Township 28 N, Range 15 ^{○ E} _{● W} _____ Latitude _____ Longitude

If this site is not wholly contained in the quarter-quarter section, more description:

Project is also located in: SW 1/4 of NW 1/4 of Section 3, T28N, R15W
SW 1/4 of SW 1/4 of Section 3, T28N, R15W
SE 1/4 of NE 1/4 of Section 4, T28N, R15W
NE 1/4 of SE 1/4 of Section 4, T28N, R15W
SE 1/4 of SE 1/4 of Section 4, T28N, R15W

Section 5: Pre-Application Resource Screening

Screening your project site for the presence of sensitive natural or cultural resources before applying for a permit can assist you in planning and designing your project to avoid or minimize impacts to these resources. Please identify any screening you have already completed and attach any supporting documentation to your application. If sensitive resources are identified during the permit review, it may result in delays in processing your application and/or project re-design.

Waterways: Provide the name(s) of closest waterbodies:

Willow Creek

Wetlands: Has the project site been assessed for the presence of wetlands? ☒ Yes ☐ No

If yes, select all sources of information used and attach supporting report or documentation:

- ☒ Wisconsin Wetland Inventory
- ☒ Wetland Locator Tool - <http://dnr.wi.gov/topic/wetlands/locating.html>
- ☐ Wetland Delineation by consultant
- ☒ NRCS Soils Map
- ☐ DNR Wetland Identification letter - <http://dnr.wi.gov/topic/wetlands/identification.html>
- ☐ DNR Wetland Confirmation letter - <http://dnr.wi.gov/topic/wetlands/identification.html>
- ☐ Army Corps of Engineers Concurrence letter
- ☒ Other: Wetland Delineation by WisDOT See Attachment 2

Are wetlands proposed to be filled, excavated or disturbed during construction or as part of this project? ☒ Yes ☐ No

Endangered or Threatened Resources:

Has the presence of endangered or threatened resources been evaluated according to the protocols developed by the DNR Bureau of Natural Heritage Conservation (BNHC)? dnr.wi.gov/topic/ERReview/ ☒ Yes ☐ No

If yes, select how evaluation was completed and attach supporting report or documentation:

- ☐ DNR BNHC ER Review Letter
- ☐ Certified ER Review Letter
- ☐ Broad Incidental Take Permit/Authorization - specify (e.g. No/Low Impact Activities, Grassland and Savanna Management, etc.)

☒ Other: WDNR Initial Project Review (See Attachment 3 for Correspondence)

Section 6: Project Information (attach additional sheets as necessary)

Duration: 01/15/2017 11/15/2017
Anticipated Project Start Date (mm/dd/yyyy) Anticipated Project End Date (mm/dd/yyyy)

Photos: Provide photographs of the "before" condition. See Appendix C of Attachment 2
Date of Photographs

Project Purpose and Need: Provide a one to two paragraph description of the proposed project, including land and water alterations and intended use(s) of the project.

The intended use of the proposed project is for transportation highway purposes. The purpose of the proposed project is to increase the safety and efficiency of the IH 94 and STH 128 interchange to better serve the social and economic goals of west central Wisconsin and St. Croix County.

The needs for the proposed IH 94 and STH 128 interchange project include the physical improvement of an aging and deficient infrastructure, and the improvement of substandard geometry impacting the operation and safety of the interchange. Ramp traffic at the IH 94 and STH 128 interchange is projected to increase by 22 to 55-percent by the year 2036. Traffic on STH 128 between the interchange and the first access to the north, Kwik Trip, is projected to increase by 42-percent in the same timeframe. Increasing traffic volumes combined with a deteriorating, substandard bridge and substandard roadway features present immediate operational and safety concerns for this interchange.

The proposed project would involve replacement of the STH 128 structure over IH 94 slightly west of its current location, construction of single lane roundabouts at the ramp terminal intersections, and reconstruction of 0.54 miles of STH 128.

The proposed project would also include Kwik Trip access modifications, new access road construction, and park and ride lot facility construction.

A total of 6 acres of new right-of-way would need to be acquired for the proposed project. Of these 6 acres, a total of 0.319 acres of wetland would be filled and 3.210 acres of active farmland would be acquired.

Section 7: Certification and Permission

Certification: I hereby certify that I am the owner or authorized representative of the owner of the property which is the subject of this Permit Application. I certify that the information contained in this form and attachments is true and accurate. I certify that the project will be in compliance with all permit conditions. I understand that failure to comply with any or all of the provisions of the permit may result in permit revocation and a fine and/or imprisonment or forfeiture under the provisions of applicable laws.

Permission: I hereby give the Department permission to enter and inspect the property at reasonable times, to evaluate this notice and application, and to determine compliance with any resulting permit coverage.



Signature of Landowner / Authorized Representative – **For Stormwater applications, signature of landowner is required. Authorized representative is not sufficient.**

4/29/15

Date Signed

Stacey Rusch

Printed Name of Landowner / Authorized Representative

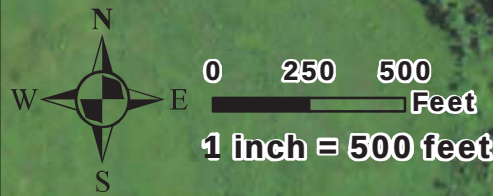
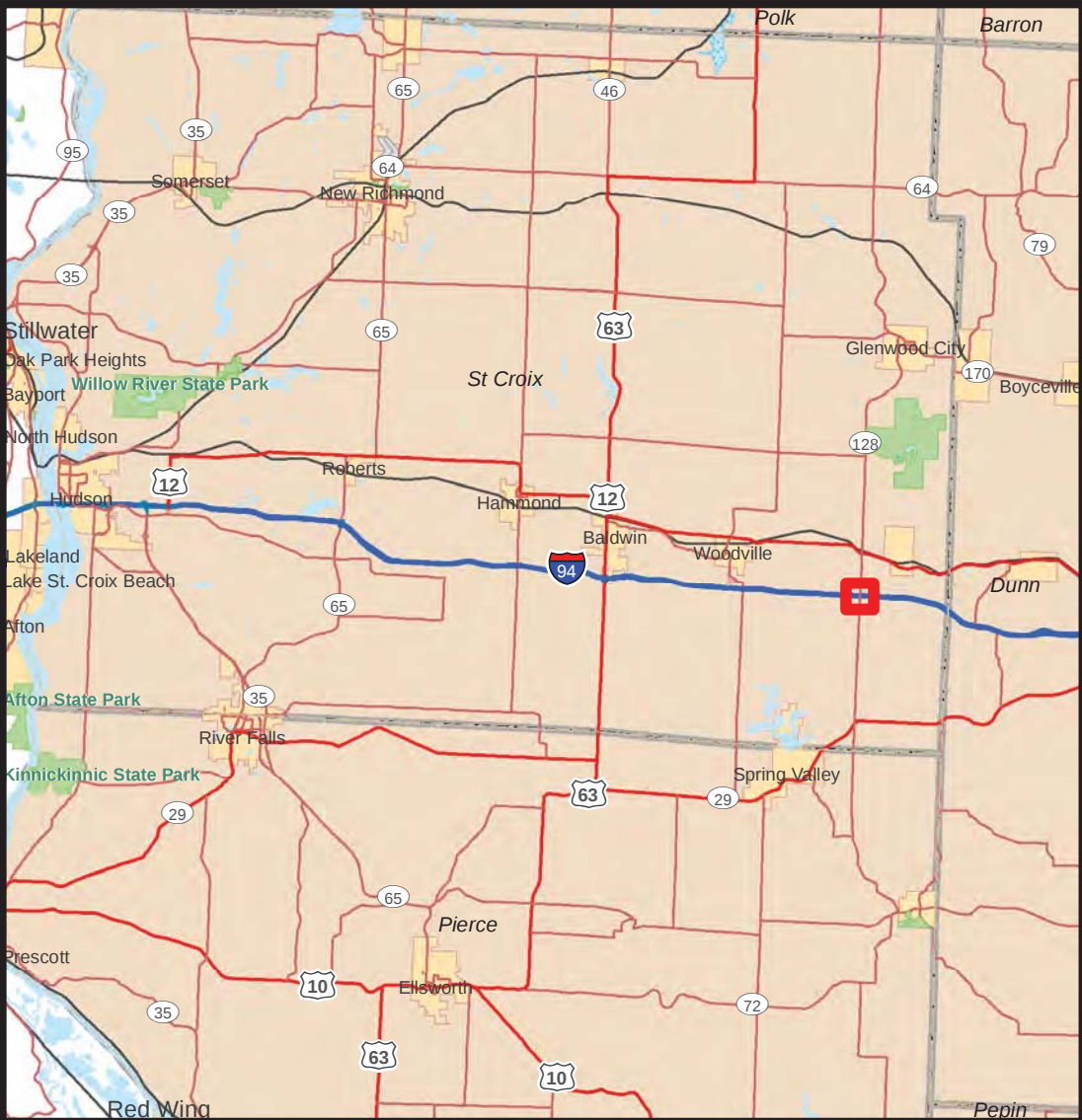
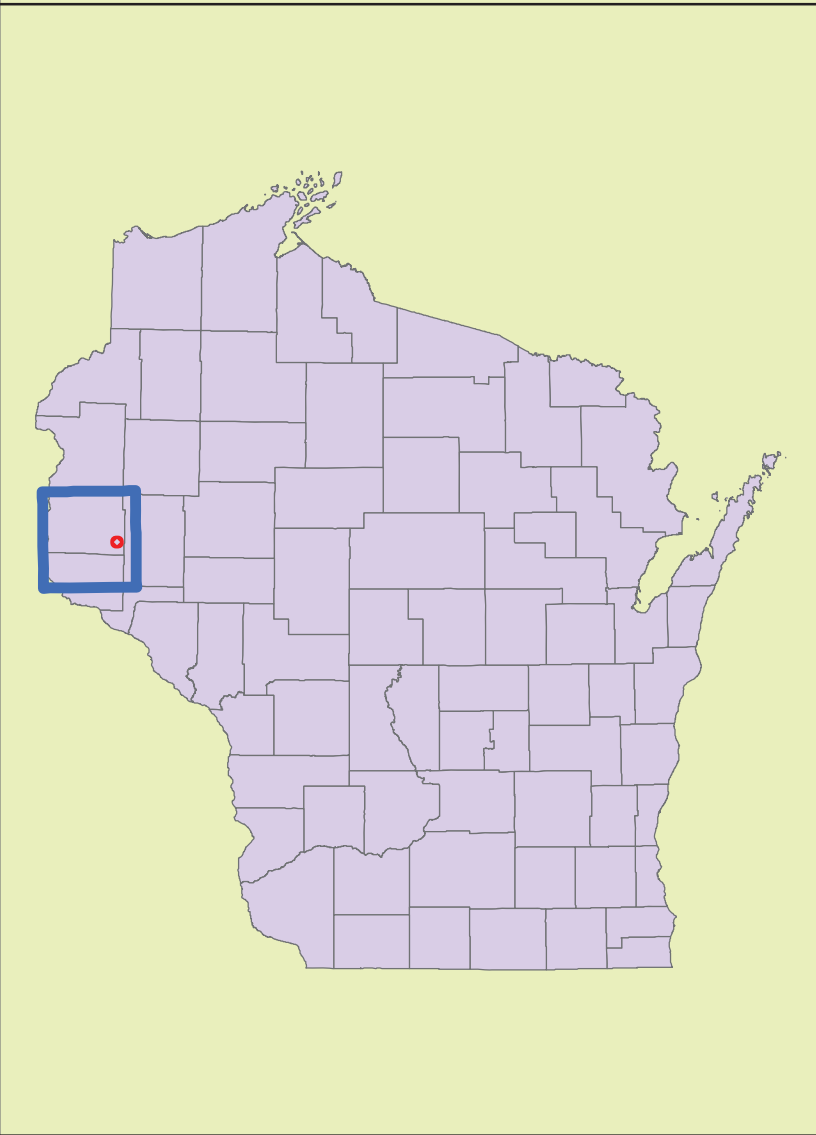
Project Manager

Title

Attachment 1
Project Location Map

IH 94 & STH 128 Interchange

Project I.D. 1021-01-00
IH 94 & STH 128 Interchange
Intersection Control Evaluation
St. Croix County



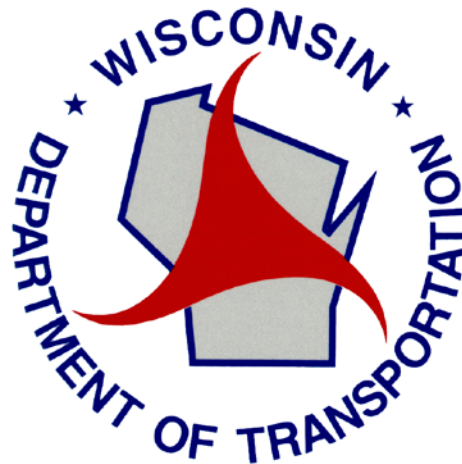
Attachment 2

Wetland Delineation Report

Wetland Delineation Report

Project ID# 1021-01-00/70

Baldwin-Menominee
STH 128 & IH 94 Interchange
STH 128 Bridge B-55-0266
IH 94
St. Croix County



Prepared by the Wisconsin Department of Transportation
Northwest Region
Katie Lueth
718 West Clairemont Ave
Eau Claire, WI 54701
February 2015

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Appendix A (Tables and Figures)

- o Project Location Map
- o Wisconsin Wetland Inventory Map
- o NRCS Hydric Soils Map
- o Project Impact Location Map
- o WMBAS form

Appendix B (Monitoring Forms)

- o Monitoring Forms 1-5
 - o Bridge Replacement and Interchange Improvement Wetlands
Wetland/Upland 1-Wetland/Upland 5

Appendix C (Photos)

- o Figure 1: Wetland Plot 1
- o Figure 2: Upland Plot 1
- o Figure 3: Wetland Plot 2
- o Figure 4: Upland Plot 2
- o Figure 5: Wetland Plot 3
- o Figure 6: Upland Plot 3
- o Figure 7: Wetland Plot 4
- o Figure 8: Upland Plot 4
- o Figure 9: Wetland Plot 5
- o Figure 10: Upland Plot 5

Project Summary

The Wisconsin Department of Transportation (WisDOT) has proposed a bridge replacement and improvement project on the IH 94 and STH 128 interchange between Baldwin and Menominee in St. Croix County. As part of the reconstruction, the STH 128 & IH 94 Interchange Bridge (B-55-0021) will be replaced with a new structure (B-55-0266) in the same location. The bridge structure will be widened and elongated to meet current standards and accommodate future expansion of IH 94 to a six lane facility with a 60-foot median and sidewalks to accommodate pedestrians.

There are unavoidable wetland impacts associated with this project. The area surrounding construction has been delineated according to the US Army Corps of Engineers 1987 Wetland Delineation Manual and the US Army Corps of Engineers 2012 Midwest Supplement and the impacted wetland type and acreage have been determined based on three criteria—vegetation, hydrology, and soils.

Wetland Delineators

The delineation for project 1021-01-00 was conducted on July 11th, 2012 by Lindsay Tekler and Derek Huebsch. Ms. Tekler was an intern with WisDOT and attended the University of Wisconsin-Superior, majoring in biology. She graduated with a BS in May 2013. She attended the basic and advanced wetland delineation training in July 2011 through the University of Wisconsin-La Crosse. Mr. Huebsch was an intern with WisDOT and attended the University of Wisconsin-Eau Claire, majoring in biology. He graduated with a BS in May 2014. He attended the basic and advanced wetland delineation training in July 2012. The site was visited again on August 7, 2012 by Derek Huebsch.

Equipment

In order to conduct the delineation, several pieces of field equipment were used, including:

- Trimble Geo XH Global Positioning System Unit 6000 Series
- Munsell® Soil Color Chart 2013 edition
- 20 inch WSA soil boring tool
- Field identification books:
 - “Wetland Plants and Plant Communities of Minnesota and Wisconsin” 2nd ed.
 - “Wildflowers of Wisconsin and the Great Lakes Region; A Comprehensive Field Guide” 2nd ed.
 - “A Great Lakes Wetland Flora” 3rd ed.

In the office, software programs were used, including:

- GPS Pathfinder Office Software version 4.10
- Microstation V8i 2010 Edition
- Microsoft Office Series 2007

Pre-Delineation Resources

- o *United States Agriculture Department- Natural Resource Conservation Service*
 - Web Soil Survey
 - Hydric soil map
- o *Department of Natural Resources*
 - Surface Water Data Finder
 - WI Wetland Inventory Map

Delineation Methods

Wetlands are delineated by examining an area for the presence of wetland indicators. There are three categories of indicators used to determine if an area is a wetland: vegetation, hydrology, and soils. Samples and observations of these wetland indicators are necessary for proper delineation. First, a site walk of the project area is completed in order to identify areas that may fit the wetland criteria. Second, transects are set up perpendicular to the proposed wetland boundary and data plots are taken. Data plots are usually taken in reference to obvious changes in topography and/or vegetation. At each of the data plots, criteria for hydrophytic vegetation, hydric soils, and hydrology is checked for.

A list of the most prevalent plant species is made and then compared to the *National List of Plant Species that Occur in Wetlands*, published by the U.S. Fish and Wildlife Service, in order to determine the likelihood of that species occurring in a wetland by defining their wetland indicator status.

Soil samples are collected using a soil probe or shovel to collect the first 20 inches of soil. Examination of the sample is then conducted for evidence of saturation, as well as other soil indicators listed in the US Army Corps of Engineers 1987 Wetland Delineation Manual. This manual is used as a reference guide to compare our methods, observations, and data with proper delineation techniques and information.

Field observation of the soils, vegetation, and the general area are used determine the presence of hydrology indicators.

After soil samples, lists of vegetation, and on-site hydrology observations are made and recorded, in conjunction with using reference materials and on site observations, wetland areas are confirmed. After verifying the wetland area, the wetland boundary is delineated between upland and wetland plots.

The bridge replacement, elongation and widening on the IH 94& STH 128 interchange will permanently impact five wetland areas. The area surrounding construction has been delineated and the impacted wetland type and acreage have been determined.

Vegetation:

- It is stated in the US Army Corps of Engineers 1987 Wetland Delineation Manual that “hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions”. These species are labeled FAC, FACW, and/or OBL. Accordingly, if an area is dominated by $\geq 50\%$ of these species, it meets the wetland vegetation requirement.
- Through species identification, the impacted wetlands were all determined to have hydrophytic dominance in proportions $\geq 50\%$. Dominant species include Yellow Lake Sedge (*Carex utriculata*), Kentucky Bluegrass (*Poa pratensis*), Sandbar Willow (*Salix interior*), Green Ash (*Fraxinus pennsylvanica*), Narrow Leafed Cattail (*Typha angustifolia*), Broad Leafed Cattail (*Typha latifolia*), Reed Canary Grass (*Phalaris arundinacea*), and Tussock Sedge (*Carex stricta*). The hydrophytic vegetation present at these plots is similar to common species found among wet meadow (M), shrub-scrub (SS), and wooded swamp (WS) wetland environments. The species found in these plots are listed in the vegetation section of the Routine Wetland Delineation Forms located in Appendix B.

Hydrology:

- Paragraph 55 of the US Army Corps of Engineers 1987 Wetland Delineation Manual states, “an area has wetland hydrology if it is inundated or saturated to the surface continuously for at least 5% of the growing season in most years (50% probability of recurrence).” The growing season for this definition is determined based on the number of frost-free days for a certain area.
- Hydrology of the impacted wetland areas was determined using several indicators. Primary indicators observed at the sites were saturation within 12 inches of the surface, the presence of a high water table within 12 inches of the surface, water marks, and sparsely vegetated concave surfaces. Secondary indicators observed at all sites were the FAC-Neutral test, dry season water table, and geomorphic position. At one site drainage patterns were also observed.

Soils:

- According to the U.S.D.A Natural Resources Conservation Service (NRCS) a hydric soil is, “A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.”
- The Soil Survey and the Hydric Soils List for Trempealeau County were obtained from the United States Department of Agriculture (USDA). The soil type listed for the areas impacted by this project is loam soils. This soil is listed on the USDA Hydric Soils List as soils that are poorly drained.

1. Wetlands 1-2

Santiago silt loam, 2 to 6 percent slopes- Soils are listed on the NRCS Web Soil Survey as having loam type soils, with a well drained drainage class. Depth to water table is more than 80 inches.

Map Unit symbol: SaB

Wetland Type: Meadow (M) and Shrub Scrub (SS)

2. Wetlands 3-5

Magnor silt loam, 1 to 6 percent slopes-Soils are listed on the NRCS Web Soil Survey as having loam type soils, with a somewhat poorly drained drainage class. Depth to water table is about 6 inches.

Map Unit Symbol: MaB

Wetland Type: Meadow (M), Wooded Swamp (WS)

- Soil samples were taken at all data plots to 20 inches or to an unavoidable resistance. Hydric soil indicators were present among all wetland sites for this project. Histosol, redox dark surface, loamy gleyed matrix and depleted matrix were the hydric soil indicators present. Full soil profiles are included in the Routine Wetland Delineation Forms in Appendix B.

Delineation

Six different wetlands have been determined to be within the limits of the projects, but only five will be impacted. The delineation of the wetlands included the establishment of six upland monitoring sites as well as six wetland sites, but only five wetland and upland sites will be impacted. Below is the summary for the wetlands that will be impacted.

- Wetland 1- Shrub Scrub (Monitoring Forms 1-2)
 - Monitoring form 1 (Wetland 1): This wetland lies on the northwest side of the interchange to the north of the Kwik Trip and is associated with a shrub scrub (SS) wetland type. Dominant hydrophytic species in this area were Yellow Lake Sedge, Kentucky Bluegrass, Sandbar Willow, and Green Ash; non-dominant species include Reed Canary Grass, Common Dandelion, Canada Goldenrod, Greater Burdock, Narrow Leaf Cattail, and American Elm. At this site, loam and silt loam soils were found. The soils were saturated 11 inches from the surface and the hydric soil indicator found was redox dark surface (F6).
 - Monitoring form 2 (Upland 1): The upland portion of this site was dominated by Kentucky Blue Grass. Soils were not obtained due to refusal at the surface.
- Wetland 2-Meadow (Monitoring Forms 3-4)
 - Monitoring form 3 (Wetland 2): This wetland lies north of the Kwik Trip on STH 128 and is associated with a wet meadow (M) wetland type. Dominant hydrophytic species in this area were Narrow Leaf Cattail, Broad Leaf Cattail, and Reed Canary Grass; the non-dominant species found was Fox Sedge. At this site, sandy loam and sand soils were found. The soils were completely saturated and the hydric soil indicator found was redox dark surface (F6).
 - Monitoring form 4 (Upland 2): The upland portion of this site was dominated by Kentucky Bluegrass. Soils were not obtained due to refusal at the surface.

- Wetland 3-Meadow (Monitoring Forms 5-6)
 - Monitoring form 5 (Wetland 3): This wetland lies on the northeast side of STH 128 and is associated with a wet meadow (M) wetland type. Dominant hydrophytic species in this area were Narrow Leaf Cattail and Common Lake Sedge; the non-dominant species found was Canada Goldenrod. At this site, silt loam soil was found. The soils were saturated 9 inches from the surface and the hydric soil indicator found was histosol (A1) No surface water was found at this site.
 - Monitoring form 6 (Upland 3): The upland portion of this site was dominated by Kentucky Bluegrass and Reed Canary Grass. Soils were not obtained due to refusal at the surface.
- Wetland 4-Wooded Swamp (Monitoring Forms 7-8)
 - Monitoring form 7 (Wetland 4): This wetland lies north of the interchange on the west side of STH 128 north of the Kwik Trip and is associated with a wooded swamp (WS) wetland type. Dominant hydrophytic species in this area were Green Ash and Tussock Sedge. At this site, loam and silt loam soils were found. The soils were saturated 14 inches from the surface and the hydric soil indicator found was depleted matrix (F3).
 - Monitoring form 8 (Upland 4): The upland portion of this site was dominated by Canada Goldenrod, Reed Canary Grass, and Green Ash. Soils were not obtained due to refusal at the surface.
- Wetland 5-Meadow (Monitoring Forms 9-10)
 - Monitoring form 9 (Wetland 5): This wetland lies southeast of the interchange and is associated with a wet meadow (M) wetland type. Dominant hydrophytic species in this area was Narrow Leaf Cattail; non-dominant species include Reed Canary Grass, Kentucky Bluegrass, Canada Goldenrod, and Soft Stem Club Rush. At this site, loam and clay loam soils were found. The soils were saturated 18 inches from the surface and the hydric soil indicator found was loamy gleyed matrix (F2).
 - Monitoring form 10 (Upland 5): The upland portion of this site was dominated by Kentucky Blue Grass. Soils were not obtained due to refusal at the surface.

Wetland Impacts

The proposed cumulative **permanent** wetland impacts for the IH 94 project in St. Croix County are 0.319 acres. The impacted acreage consists of:

- 0.125 acres of shrub scrub (SS) from the bridge replacement and improvement on IH 94.
- 0.044 acres of wet meadow (M) from the bridge replacement and improvement on IH 94.
- 0.150 acres of wooded swamp (WS) from the bridge replacement and improvement on IH 94.

The permanent losses will be mitigated according to and at a ratio consistent with the Wisconsin DOT Wetland Mitigation Banking Technical Guideline (2002 revision). Delineation monitoring forms demonstrating wetland criteria in each sampling area can be found in Appendix B of this report. Photos of the delineated areas for these projects are located in Appendix C (Fig.1-5).

Wetland Mitigation

According to the NRCS, “mitigation is compensation through wetland restoration, enhancement, or creation for functions and values that are lost on a converted wetland”. The total permanent wetland impact for the IH 94 project located in St. Croix County is 0.319 acres. The permanent losses will be mitigated by debiting them to the WisDOT Knights Creek Wetland Mitigation Bank Site in Dunn County at a ratio consistent with the Wisconsin DOT Wetland Mitigation Banking Technical Guideline (2002 revision). The 0.125 acres of shrub scrub (SS) wetland will be mitigated at a 1:1 compensation ratio to shrub scrub (SS) totaling 0.125 acres; the 0.044 acres of wet meadow (M) wetland will be mitigated at a 1:1 compensation ratio to wet meadow (M) totaling 0.044 acres; and the 0.150 acres of wooded swamp (WS) wetland will be mitigated at a 1:1 compensation ratio to shrub scrub (SS) totaling 0.150 acres. A Wetland Mitigation Bank Accounting Sheet (WMBAS) is included at the end of Appendix A, summarizing the wetland losses and mitigation plans.

Appendix A

Tables and Figures

Project Location Map





Surface Water Data Viewer Map



Legend

Wetland Class Points

- Dammed pond
- Excavated pond
- Filled excavated pond
- Filled/draind wetland
- Wetland too small to delineate

Filled Points

Wetland Class Areas

- Wetland
- Upland
- Filled Areas
- NRCS Wetspots
- Wetland Indicators
- Rivers and Streams
- Open Water
- 2010 Air Photos (WROC)

Notes

0.2 0 0.12 0.2 Miles

NAD_1983_HARN_Wisconsin_TM
© Latitude Geographics Group Ltd.

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

NRCS Hydric Soils Map

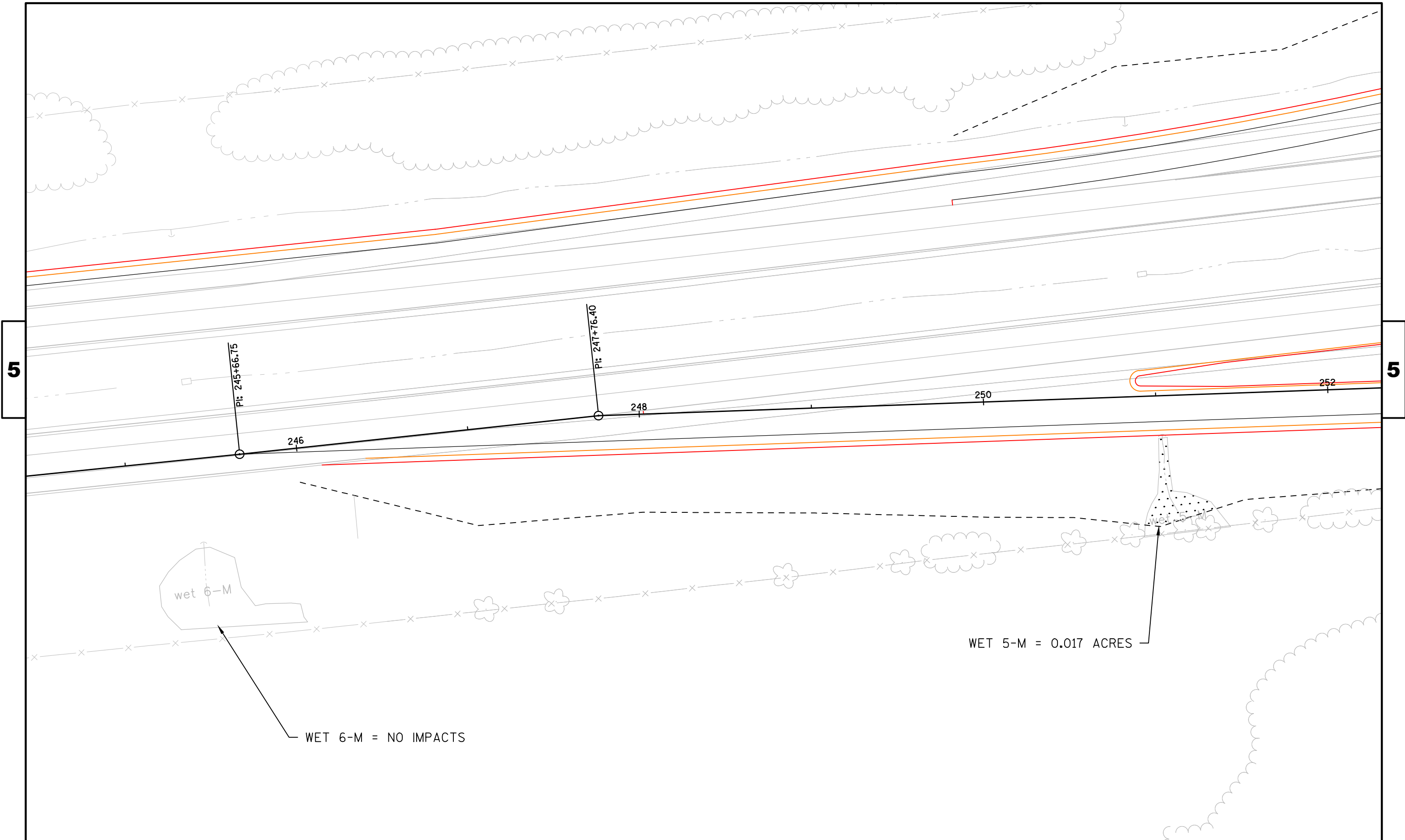
Custom Soil Resource Report Soil Map



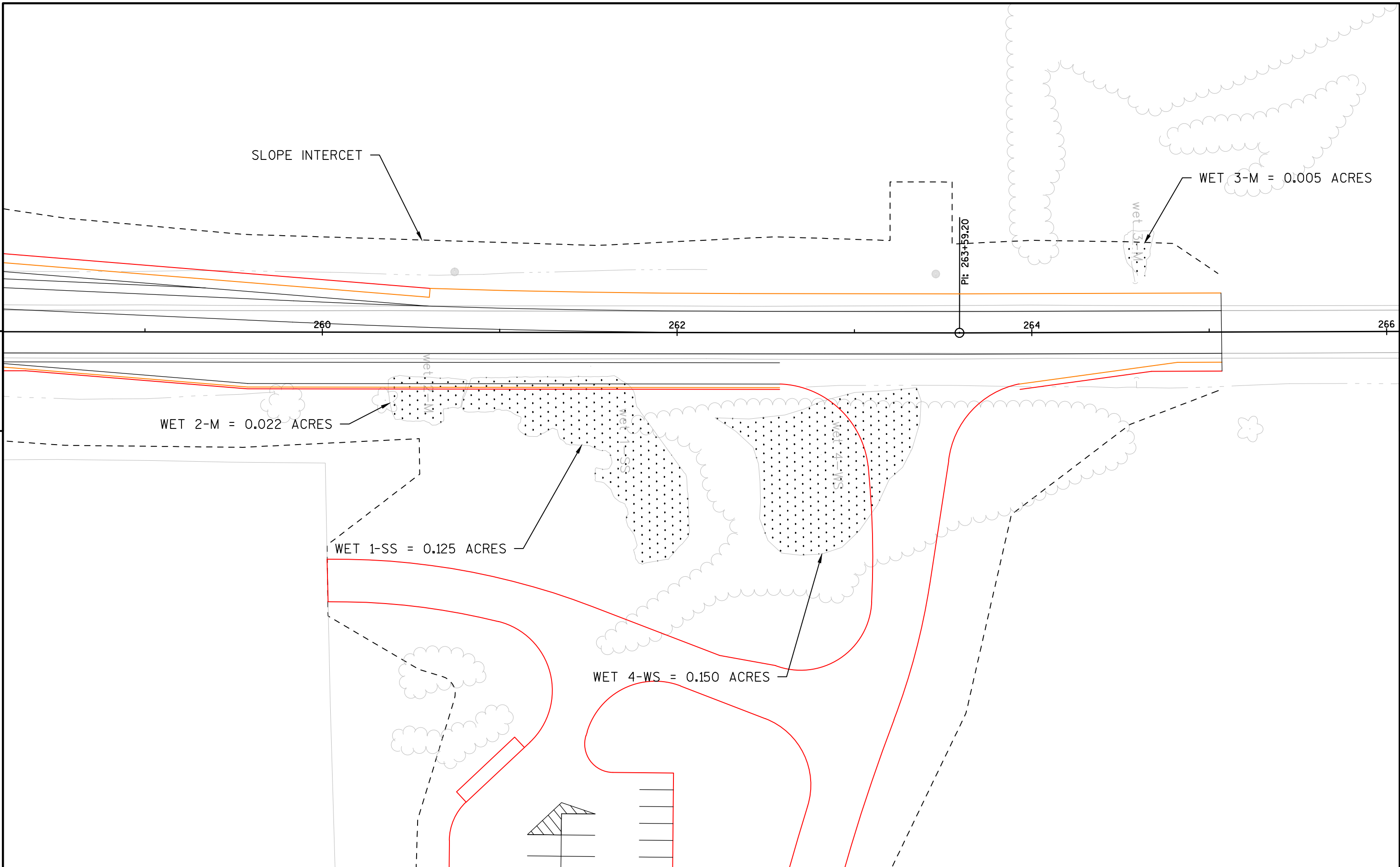
Map Unit Legend

St. Croix County, Wisconsin (WI109)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmB	Amery loam, 2 to 6 percent slopes	7.4	11.5%
AuA	Auburndale silt loam, 0 to 3 percent slopes	0.9	1.4%
FnB	Freeon silt loam, 2 to 6 percent slopes	24.3	38.0%
MaB	Magnor silt loam, 1 to 6 percent slopes	21.3	33.2%
SaB	Santiago silt loam, 2 to 6 percent slopes	9.6	15.0%
VaC2	Vlasaty silt loam, 6 to 12 percent slopes, eroded	0.6	0.9%
Totals for Area of Interest		64.1	100.0%

Wetland Impacts



PROJECT NO: 1021-01-70	HWY: STH 128	COUNTY: ST. CROIX	PLAN: WETLAND IMPACTS	SHEET	E
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Wisconsin Department of Transportation

Division of Transportation System Development
Northwest Region

WETLAND IMPACT TRACKING FORM

****This form must be filled out for all projects.****

For projects in:

Jackson, Trempealeau, Buffalo, Clark, Eau Claire, Pepin, Pierce, St. Croix, Dunn, and Chippewa Counties;

Return to:

Nick Schaff
Environmental Coordinator
WisDOT - Northwest Region
718 W. Clairemont Ave.
Eau Claire, WI 54701
Phone : (715) 836-2068
Facsimile (FAX):
NicholasA.Schaff@dot.wi.gov

For projects in:

Douglas, Bayfield, Ashland, Burnett, Washburn, Sawyer, Polk, Barron, Rusk and Taylor Counties;

Return to:

Amy Adrihan
Environmental Coordinator
WisDOT - Northwest Region
1701 N. 4th Street
Superior, WI 54880
Phone : (715) 392-7972
Facsimile (FAX):
Amy.Adrihan@dot.wi.gov

Project Design I.D. #: 1021-01-00
Project Construction I.D. #: 1021-01-70
Project Title : BALDWIN - MENOMONIE
STH 128 BRIDGE B-55-0266
County : ST. CROIX
Construction Year : 2016
Date this form is completed : 2/20/2015

Prepared by (name & phone #) :

Stacey Rusch, (715) 836-3919

Is a discharge of dredged or fill material into wetlands anticipated?

NO ☐ Form complete; no further information is required (RETURN FORM).

YES ☒ Complete remainder of form and:

1. Include this sheet with your DNR 401 and COE 404 permit applications.
2. When you receive DNR 401 final concurrence and COE 404 permit, return this form with:
 - a. D size copy of plan sheet showing impact areas.
 - b. A copy of the DNR 401 Water Quality Certification Letter.
 - c. A copy of the U.S. COE 404 permit (Cover letter only).

Wetland Delineation/Determination completed by (name & phone #, qualifications): DOT Environmental Analysis Interns

Derek Huebsch 715-836-2097; Wetland Delineation Basic and Advanced Training UW-La Crosse

Directions:

1. One location may be made up of several different wetland types. List each type of wetland impacted from each location on the project corridor separately in the table below.
2. Contact the Environmental Coordinator for appropriate ratio and bank information.
3. Use Department of Transportation Wetland Classification System.
4. Areas should be reported to the nearest 0.001-acre if possible.

The Environmental Coordinator (EC) will provide this information.

Site #	Impact Location (project station)	Type Impacted	Area Impacted	Debit Ratio	Type Mitigated	Area Mitigated
1	WET 5-M (STA 250+90 - STA 251+30 RT)	M	0.017	1.0	M	0.017
2	WET 2-M (STA 260+35 - STA 260+80 RT)	M	0.022	1.0	M	0.022
3	WET 1-SS (STA 260+80 - STA 262+00 RT)	SS	0.125	1.0	SS	0.125
4	WET 4-WS (STA 262+20 - STA 263+35 RT)	WS	0.150	1.0	SS	0.150
5	WET 3-M (STA 264+50 - STA 264+65 LT)	M	0.005	1.0	M	0.005
6						
7						
TOTAL			0.319			0.319

Is there potential for onsite mitigation? If unknown, check with the EC.

YES ☐ Where is it located? (T/R, station, map)

NO ☒ List bank site to be used. (Determined by EC)

Knight's Creek Wetland Mitigation Bank Site

Please attach another sheet if the space provided is not adequate for all impacts or to add any additional comments.

Appendix B

Monitoring Forms

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I-94 Interchange		Date: 7/1/12	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
			NO
Transect #:	Is the site significantly disturbed (Atypical Situation)?		YES
			NO
Plot #: Wet 1	Is the area potentially naturally problematic?		YES
			NO
Plot Description: STH 128 N of Kwik Trip	Type of atypical or problem area (soils, vegetation, hydrology)?		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.

Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Carex utriculata</i> Yellow Lake Sedge	30	OBL	H	1.	<i>Phalaris arundinacaeae</i> Reed Canary Grass	10	FACW	H
2.	<i>Poa pratensis</i> Kentucky Bluegrass	30	FAC	H	2.	<i>Taraxacum officinale</i> Common dandelion	2	FACU	H
3.	<i>Salix interior</i> Sandbar Willow	70	FACW	S	3.	<i>Solidago canadensis</i> Canada Goldenrod	5	FACU	H
4.	<i>Fraxinus pennsylvanica</i> Green Ash	5	FACW	T	4.	<i>Arctium lappa</i> Greater Burdock	3	UPL	H
5.					5.	<i>Typha angustifolia</i> Narrow-leaved Cattail	2	OBL	H
6.					6.	<i>Ulmus americana</i> American Elm	3	FACW	S
7.					7.				
8.					8.				
9.					9.				
10.					10.				

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

100%

Prevalence Index Worksheet:

Total % Cover of: _____ Multiply By: _____

OBL species: _____ 1 _____

FACW species: _____ 2 _____

FAC species: _____ 3 _____

FACU species: _____ 4 _____

UPL species: _____ 5 _____

TOTAL (A): _____ TOTAL (B): _____

Prevalence Index (B/A): _____

Hydrophytic Vegetation Indicators

Dominance Test is >50% ☒ YES ☐ NO

Prevalence Index is < or =3.01 ☐ YES ☐ NO

Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) ☐ YES ☐ NO

Problematic Hydrophytic Vegetation1 (Explain) ☐ YES ☐ NO

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

Hydrophytic Vegetation Present?

Yes/No

Hydrology

Recorded Data (describe in remarks): Stream, lake, or tide gauge _____ Aerial photographs _____ Monitoring well _____ Other: _____			
No Recorded Data Available Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)			
Field Observations:			
Surface water present?: ☐ Yes ☒ No	Depth (inches) _____	Water in well?: ☐ Yes ☐ No	Depth (inches) _____
Water table present?: ☐ X ☐ Yes ☐ No	16 _____ Depth (inches)	Saturation Present?: ☐ X ☐ Yes ☐ No	11 _____ Depth (inches)
Remarks:			

Wetland Hydrology Indicators:**Primary Indicators:** (1 or more required, check all that apply)

☐ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Water-Stained Leaves (B9)

☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators: (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

FAC-Neutral Test (3 : 0)
(OBL & FACW : FACU & UPL)**Remarks:****Soils** (Describe to depth needed to document the indicator, or confirm the absence of indicators)

Map Unit Name (Series & hase):				Drainage Class:				Permeability:			
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				☐ YES ☐ NO			
Matrix				Redox Features							
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks			
0-12	Loam	95	10YR 3/2	7.5 YR 5/8	5	PL	M				
12-20	Silt Loam	90	7.5YR 6/1	7.5YR 5/8	10	C	M				

Type¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location²: PL=Pore Lining M=Matrix**Hydric Soils Indicators:****Indicators for Problematic Hydric Soils***

☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☐ Loamy Gleyed Matrix (F2)	☐ Iron/Manganese Masses (F12)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☒ Redox Dark Surface (F6)	
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)	
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)	
☐ Depleted Below dark surface(A11)			

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

Remarks:**Wetland Determination****Wetland Vegetation Present?**☒ YES ☐ NO

Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.

Wetland Hydrology Present?☒ YES ☐ NO

Note: According to the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation. The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.

Soil Type _____ Drainage Class _____ Permeability _____ Capillary Fringe _____ +6"=W.T. Depth Criteria _____

The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type.
SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".**Wetland Soils Present?**☒ YES ☐ NO

Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.

Duration Met?☒ YES ☐ NO

If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?

Is This Plot a Wetland?☒ YES ☐ NO

Plot ID:

Wetland Type:

	M		RPE
X	SS		RPF
	WS		BOG
	SM		AB
	DM		

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I-94 Interchange		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
Transect #:	Is the site significantly disturbed (Atypical Situation)?	X	YES
Plot #: Up 1	Is the area potentially naturally problematic?		YES
Plot Description: STH 128 N of Kwik Trip	Type of atypical or problem area (soils, vegetation, hydrology)? Mowed Veg. & Soils		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.

Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species				%	Indicator	Stratum	Non-Dominant Species				%	Indicator	Stratum
1.	<i>Poa pratensis</i>			30	FAC	H	1.	<i>Carex pennsylvanica</i>			8	OBL	H
	Kentucky Bluegrass							Pennsylvania Sedge					
2.							2.	<i>Phalaris arundinaceae</i>			8	FACW	H
								Reed Canary Grass					
3.							3.	<i>Taraxacum officinale</i>			4	FACU	H
								Common Dandelion					
4.							4.	<i>Lotus Corniculatus</i>			5	FACU	H
								Birdsfoot Trefoil					
5.							5.	<i>Achillea Millefolium</i>			5	FACU	H
								Yarrow					
6.							6.						
7.							7.						
8.							8.						
9.							9.						
10.							10.						

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

100%

Prevalence Index Worksheet:

Total % Cover of: Multiply By:

OBL species: _____ 1 _____

FACW species: _____ 2 _____

FAC species: _____ 3 _____

FACU species: _____ 4 _____

UPL species: _____ 5 _____

TOTAL (A): _____ TOTAL (B): _____

Prevalence Index (B/A): _____

Hydrophytic Vegetation Indicators

Dominance Test is >50% ☒ YES _____ NO

Prevalence Index is < or =3.01 _____ YES _____ NO

Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) _____ YES _____ NO

Problematic Hydrophytic Vegetation1 (Explain) _____ YES _____ NO

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

Hydrophytic Vegetation Present?

Yes/No

Hydrology

Recorded Data (describe in remarks):	
Stream, lake, or tide gauge _____	Aerial photographs _____ Monitoring well _____ Other: _____
No Recorded Data Available	
Growing Season Dates/Days: _____	
(To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations:	
Surface water present?: _____ Yes _____ X _____ No _____	Depth (inches) _____ Water in well?: _____ Yes _____ No _____
Water table present?: _____ Yes _____ X _____ No _____	Depth (inches) _____ Saturation Present?: _____ Yes _____ X _____ No _____
Remarks:	

Wetland Hydrology Indicators:				Secondary Indicators: (2 or more required)			
Primary Indicators: (1 or more required, check all that apply)							
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)		☐ High Water Table (A2)	☐ True Aquatic Plants (B14)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)		☐ Water Marks (B1)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial (C9)		☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)		☐ Iron Deposits (B5)	☐ Gauge or Well Data (D9)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)			☐ Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (:)	
☐ Water-Stained Leaves (B9)						(OBL & FACW : FACU & UPL)	
Remarks: No wetland hydrology indicators.							

Soils (Describe to depth needed to document the indicator, or confirm the absence of indicators)									
Map Unit Name (Series & hase):				Drainage Class:				Permeability:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				YES	NO
Matrix				Redox Features					
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks	
Type ¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location ² : PL=Pore Lining M=Matrix									
Hydric Soils Indicators:					Indicators for Problematic Hydric Soils*				
☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)				☐ Coast Prairie Redox (A16)			
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☐ Loamy Gleyed Matrix (F2)				☐ Iron/Manganese Masses (F12)			
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)				☐ Other (Explain in Remarks)			
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☐ Redox Dark Surface (F6)							
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)							
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)							
☐ Depleted Below dark surface(A11)									
*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.									
Remarks:									
No soil sample obtained, refusal at surface; road fill.									

Wetland Determination																																	
Wetland Vegetation Present? ☒ YES ☐ NO																																	
Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.																																	
Wetland Hydrology Present? ☐ YES ☒ NO																																	
Note: According to the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation . The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.																																	
Soil Type	Drainage Class	Permeability	Capillary Fringe	+6"=W.T. Depth Criteria																													
The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type. SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".																																	
Wetland Soils Present? ☐ YES ☒ NO																																	
Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.																																	
Duration Met? ☐ YES ☐ NO																																	
If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?																																	
Is This Plot a Wetland? ☐ YES ☒ NO																																	
Plot ID:																																	
<table><thead><tr><th colspan="4">Wetland Type:</th></tr></thead><tbody><tr><td>M</td><td></td><td></td><td>RPE</td></tr><tr><td>SS</td><td></td><td></td><td>RPF</td></tr><tr><td>WS</td><td></td><td></td><td>BOG</td></tr><tr><td>SM</td><td></td><td></td><td>AB</td></tr><tr><td>DM</td><td></td><td></td><td></td></tr></tbody></table>										Wetland Type:				M			RPE	SS			RPF	WS			BOG	SM			AB	DM			
Wetland Type:																																	
M			RPE																														
SS			RPF																														
WS			BOG																														
SM			AB																														
DM																																	

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I-94 Interchange		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
Transect #:	Is the site significantly disturbed (Atypical Situation)?		YES
Plot #: Wet 2	Is the area potentially naturally problematic?		YES
Plot Description: North of Kwik Trip, STH 128	Type of atypical or problem area (soils, vegetation, hydrology)?		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.

Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Typha angustifolia</i> Narrow Leafed Cattail	40	OBL	H	1.	<i>Carex vulpinoidea</i> Fox Sedge	20	FACW	H
2.	<i>Typha latifolia</i> Broad leafed Cattail	30	OBL	H	2.				
3.	<i>Phalaris arundinaceae</i> Reed Canary Grass	30	FACW	H	3.				
4.					4.				
5.					5.				
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

100%

Prevalence Index Worksheet:

Total % Cover of:	Multiply By:
OBL species: _____	1 _____
FACW species: _____	2 _____
FAC species: _____	3 _____
FACU species: _____	4 _____
UPL species: _____	5 _____
TOTAL (A): _____	TOTAL (B): _____
Prevalence Index (B/A):	

Hydrophytic Vegetation Indicators

Dominance Test is >50%	☒ YES	☐ NO
Prevalence Index is < or =3.01	☐ YES	☐ NO
Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)	☐ YES	☐ NO
Problematic Hydrophytic Vegetation1 (Explain)	☐ YES	☐ NO

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

Hydrophytic Vegetation Present?

Yes/No

Hydrology

Recorded Data (describe in remarks): Stream, lake, or tide gauge _____ Aerial photographs _____ Monitoring well _____ Other: _____	
No Recorded Data Available	
Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations: Surface water present?: ☐ Yes ☒ No _____ Depth (inches) _____ Water table present?: ☒ Yes ☐ No _____ 5 _____ Depth (inches) _____ Water in well?: ☐ Yes ☐ No _____ Depth (inches) _____ Saturation Present?: ☒ Yes ☐ No _____ 0 _____ Depth (inches) _____	
Remarks: 	

Wetland Hydrology Indicators:				Secondary Indicators: (2 or more required)			
Primary Indicators: (1 or more required, check all that apply)							
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)		☐ Drainage Patterns (B10)			
☒ High Water Table (A2)	☐ True Aquatic Plants (B14)	☒		☐			
☒ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)		☐			
☐ Water Marks (B1)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)		☐			
☐ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial (C9)		☐			
☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Stunted or Stressed Plants (D1)		☒			
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☒ Geomorphic Position (D2)		☒			
☐ Iron Deposits (B5)	☐ Gauge or Well Data (D9)	☒		☒			
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☒		☒			
☐ Sparsely Vegetated Concave Surface (B8)		☒		☒			
☐ Water-Stained Leaves (B9)		☒		☒			
				FAC-Neutral Test (3 : 0) (OBL & FACW : FACU & UPL)			
Remarks:							

Soils (Describe to depth needed to document the indicator, or confirm the absence of indicators)								
Map Unit Name (Series & hase):				Drainage Class:				
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				
Matrix				Redox Features				
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks
0-4	Sandy Loam	90	10YR 3/2	7.5YR 5/8	10	C	M	
4-20	Sand	100	10YR 5/3					
Type ¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location ² : PL=Pore Lining M=Matrix								
Hydric Soils Indicators:				Indicators for Problematic Hydric Soils*				
☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)	☐ Coast Prairie Redox (A16)					
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☐ Loamy Gleyed Matrix (F2)	☐ Iron/Manganese Masses (F12)					
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)					
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☒ Redox Dark Surface (F6)						
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)						
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)						
☐ Depleted Below dark surface(A11)								
*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Remarks:								

Wetland Determination																											
Wetland Vegetation Present? ☒ YES ☐ NO																											
Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.																											
Wetland Hydrology Present? ☒ YES ☐ NO																											
Note: According to the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation . The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.																											
Soil Type	Drainage Class	Permeability	Capillary Fringe +6"=W.T. Depth Criteria																								
The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type. SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".																											
Wetland Soils Present? ☒ YES ☐ NO																											
Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.																											
Duration Met? ☒ YES ☐ NO																											
If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?																											
Is This Plot a Wetland? ☒ YES ☐ NO																											
Plot ID:																											
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Wetland Type:																											
X	M		RPE																								
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Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I-94 Interchange		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
Transect #:	Is the site significantly disturbed (Atypical Situation)?	X	YES
Plot #: Up 2	Is the area potentially naturally problematic?		YES
Plot Description:	Type of atypical or problem area (soils, vegetation, hydrology)? Mowed Veg. & Soils		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.

Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Poa pratensis</i> Kentucky Bluegrass	30	FAC	H	1.	<i>Carex pennsylvanica</i> Pennsylvania Sedge	8	OBL	H
2.					2.	<i>Phalaris arundinaceae</i> Reed Canary Grass	8	FACW	H
3.					3.	<i>Taraxacum officinale</i> Common Dandelion	4	FACU	H
4.					4.	<i>Lotus Corniculatus</i> Birdsfoot Trefoil	5	FACU	H
5.					5.	<i>Achillea Millefolium</i> Yarrow	5	FACU	H
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC? **100%**

Prevalence Index Worksheet:		Hydrophytic Vegetation Indicators	
Total % Cover of:	Multiply By:	Dominance Test is >50% X YES Prevalence Index is < or =3.01 YES Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) YES Problematic Hydrophytic Vegetation1 (Explain) YES	
OBL species: _____	1 _____	*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes/No	
FACW species: _____	2 _____		
FAC species: _____	3 _____		
FACU species: _____	4 _____		
UPL species: _____	5 _____		
TOTAL (A): _____	TOTAL (B): _____		
Prevalence Index (B/A): _____			

Hydrology

Recorded Data (describe in remarks): Stream, lake, or tide gauge _____ Aerial photographs _____ Monitoring well _____ Other: _____	
No Recorded Data Available Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations: Surface water present?: _____ Yes _____ X _____ No _____ Depth (inches) _____ Water table present?: _____ Yes _____ X _____ No _____ Depth (inches) _____ Water in well?: _____ Yes _____ No _____ Depth (inches) _____ Saturation Present?: _____ Yes _____ X _____ No _____ Depth (inches) _____	
Remarks: _____ _____ _____	

Wetland Hydrology Indicators:			
Primary Indicators: (1 or more required, check all that apply)		Secondary Indicators: (2 or more required)	
☐ Surface Water (A1)	☐ Aquatic Fauna (B13)	☐ Surface Soil Cracks (B6)	
☐ High Water Table (A2)	☐ True Aquatic Plants (B14)	☐ Drainage Patterns (B10)	
☐ Saturation (A3)	☐ Hydrogen Sulfide Odor (C1)	☐ Dry-Season Water Table (C2)	
☐ Water Marks (B1)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Crayfish Burrows (C8)	
☐ Sediment Deposits (B2)	☐ Presence of Reduced Iron (C4)	☐ Saturation Visible on Aerial (C9)	
☐ Drift Deposits (B3)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Stunted or Stressed Plants (D1)	
☐ Algal Mat or Crust (B4)	☐ Thin Muck Surface (C7)	☐ Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Gauge or Well Data (D9)	☐ FAC-Neutral Test (D5)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	FAC-Neutral Test (:) (OBL & FACW : FACU & UPL)	
☐ Sparsely Vegetated Concave Surface (B8)			
☐ Water-Stained Leaves (B9)			
Remarks: No wetland hydrology indicators.			

Soils (Describe to depth needed to document the indicator, or confirm the absence of indicators)									
Map Unit Name (Series & hase):				Drainage Class:				Permeability:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				☐ YES ☐ NO	
Matrix				Redox Features					
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks	
Type ¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location ² : PL=Pore Lining M=Matrix									
Hydric Soils Indicators:					Indicators for Problematic Hydric Soils*				
☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)							
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☐ Loamy Gleyed Matrix (F2)	☐ Coast Prairie Redox (A16)						
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)	☐ Iron/Manganese Masses (F12)						
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☐ Redox Dark Surface (F6)	☐ Other (Explain in Remarks)						
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)							
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)							
☐ Depleted Below dark surface(A11)									
*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.									
Remarks: No soil sample obtained, refusal at surface; road fill.									

Wetland Determination																																	
Wetland Vegetation Present?					☒ YES ☐ NO																												
Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.																																	
Wetland Hydrology Present?					☐ YES ☒ NO																												
Note: According the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation . The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.																																	
Soil Type	Drainage Class	Permeability	Capillary Fringe	+6"=W.T. Depth Criteria																													
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Duration Met?					☐ YES ☐ NO																												
If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?																																	
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Wetland Type:																																	
	M		RPE																														
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Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I94 interchange		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
Transect #:	Is the site significantly disturbed (Atypical Situation)?		YES
Plot #: Wet 3	Is the area potentially naturally problematic?		YES
Plot Description: Across from wet 4	Type of atypical or problem area (soils, vegetation, hydrology)?		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.
Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Typha angustifolia</i> Narrow Leaf Cattail	40	OBL	H	1.	<i>Typha latifolia</i> Broad Leaf Cattail	10	OBL	H
2.	<i>Phalaris arundinacea</i>	30	FACW	H	2.				
3.					3.				
4.					4.				
5.					5.				
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

100%

Prevalence Index Worksheet:

Total % Cover of: Multiply By:

OBL species: _____ 1 _____

FACW species: _____ 2 _____

FAC species: _____ 3 _____

FACU species: _____ 4 _____

UPL species: _____ 5 _____

TOTAL (A): _____ TOTAL (B): _____

Prevalence Index (B/A): _____

Hydrophytic Vegetation Indicators

Dominance Test is >50% ☒ YES ☐ NO

Prevalence Index is < or =3.01 ☐ YES ☐ NO

Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) ☐ YES ☐ NO

Problematic Hydrophytic Vegetation1 (Explain) ☐ YES ☐ NO

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

Hydrophytic Vegetation Present?
Yes/No

Hydrology

Recorded Data (describe in remarks):	
Stream, lake, or tide gauge _____	Aerial photographs _____ Monitoring well _____ Other: _____
No Recorded Data Available	
Growing Season Dates/Days: _____	
(To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations:	
Surface water present?: ☐ Yes ☒ No	Depth (inches) _____ Water in well?: ☐ Yes ☐ No
Water table present?: ☒ Yes ☐ No	16 Depth (inches) _____ Saturation Present?: ☒ Yes ☐ No
Remarks:	

Wetland Hydrology Indicators:

Primary Indicators: (1 or more required, check all that apply)

☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Water-Stained Leaves (B9)

☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators: (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)
FAC-Neutral Test (2 : 0)
(OBL & FACW : FACU & UPL)

Remarks:

Soils (Describe to depth needed to document the indicator, or confirm the absence of indicators)

Map Unit Name (Series & hase):				Drainage Class:				Permeability:			
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				☐ YES ☐ NO			
Matrix				Redox Features							
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks			
0-5	Loam	94	7.5YR 3/1	7.5YR 4/4	6	C	M				
5-20	Silt Loam	70	G1 5/10Y	7.5YR 4/6	30	C	M	Gleyed Matrix			

Type¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location²: PL=Pore Lining M=Matrix

Hydric Soils Indicators:

Indicators for Problematic Hydric Soils*

☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☒ Loamy Gleyed Matrix (F2)	☐ Iron/Manganese Masses (F12)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☐ Redox Dark Surface (F6)	
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)	
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)	
☐ Depleted Below dark surface(A11)			

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

Remarks:

Wetland Determination

Wetland Vegetation Present?

☒

YES

☐

NO

Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.

Wetland Hydrology Present?

☒

YES

☐

NO

Note: According the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation. The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.

Soil Type _____ Drainage Class _____ Permeability _____ Capillary Fringe _____ +6"=W.T. Depth Criteria _____

The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type.
SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".

Wetland Soils Present?

☒

YES

☐

NO

Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.

Duration Met?

☒

YES

☐

NO

If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?

Is This Plot a Wetland?

☒

YES

☐

NO

Plot ID:

Wetland Type:

X	M			RPE
	SS			RPF
	WS			BOG
	SM			AB
	DM			

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I-94 Interchange		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
Transect #:	Is the site significantly disturbed (Atypical Situation)?	X	YES
Plot #: Up 3	Is the area potentially naturally problematic?		YES
Plot Description:	Type of atypical or problem area (soils, vegetation, hydrology)? Mowed Veg. & Soils		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.
Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Poa pratensis</i>	15	FAC	H	1.	<i>Solidago canadensis</i>	5	FACU	H
	Kentucky Bluegrass					Canada Goldenrod			
2.	<i>Phalaris arundinaceae</i>	10	FACW	H	2.	<i>Asclepias syriaca</i>	3	FACU	H
	Reed Canary Grass					Common Milkweed			
3.					3.	<i>Taraxacum officinale</i>	3	FACU	H
						Common Dandelion			
4.					4.	<i>Lotus Corniculatus</i>	5	FACU	H
						Birdsfoot Trefoil			
5.					5.	<i>Achillea Millefolium</i>	5	FACU	H
						Yarrow			
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

100%

Prevalence Index Worksheet:

Total % Cover of: _____ Multiply By: _____

OBL species: _____ 1 _____

FACW species: _____ 2 _____

FAC species: _____ 3 _____

FACU species: _____ 4 _____

UPL species: _____ 5 _____

TOTAL (A): _____ TOTAL (B): _____

Prevalence Index (B/A): _____

Hydrophytic Vegetation Indicators

Dominance Test is >50% ☒ YES ☐ NO

Prevalence Index is < or =3.01 ☐ YES ☐ NO

Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) ☐ YES ☐ NO

Problematic Hydrophytic Vegetation1 (Explain) ☐ YES ☐ NO

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

Hydrophytic Vegetation Present?

Yes/No

Hydrology

Recorded Data (describe in remarks): Stream, lake, or tide gauge _____ Aerial photographs _____ Monitoring well _____ Other: _____	
No Recorded Data Available Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations: Surface water present?: ☐ Yes ☒ No _____ Depth (inches) _____ Water in well?: ☐ Yes ☒ No _____ Depth (inches) _____ Water table present?: ☐ Yes ☒ No _____ Depth (inches) _____ Saturation Present?: ☐ Yes ☒ No _____ Depth (inches) _____	
Remarks: 	

Wetland Hydrology Indicators:

Primary Indicators: (1 or more required, check all that apply)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Aquatic Fauna (B13) |
| ☐ High Water Table (A2) | ☐ True Aquatic Plants (B14) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☐ Presence of Reduced Iron (C4) |
| ☐ Drift Deposits (B3) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Algal Mat or Crust (B4) | ☐ Thin Muck Surface (C7) |
| ☐ Iron Deposits (B5) | ☐ Gauge or Well Data (D9) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Sparsely Vegetated Concave Surface (B8) | |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators: (2 or more required)

- | |
|--|
| ☐ Surface Soil Cracks (B6) |
| ☐ Drainage Patterns (B10) |
| ☐ Dry-Season Water Table (C2) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial (C9) |
| ☐ Stunted or Stressed Plants (D1) |
| ☐ Geomorphic Position (D2) |

☒ FAC-Neutral Test (D5)

FAC-Neutral Test (1 : 0)
(OBL & FACW : FACU & UPL)

Remarks: No wetland hydrology indicators.

Soils (Describe to depth needed to document the indicator, or confirm the absence of indicators)

Map Unit Name (Series & hase):				Drainage Class:				Permeability:			
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				☐ YES ☐ NO			
Matrix				Redox Features							
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks			

Type¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location²: PL=Pore Lining M=Matrix

Hydric Soils Indicators:

Indicators for Problematic Hydric Soils*

☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)	☐ Coast Prairie Redox (A16)
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☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☐ Redox Dark Surface (F6)	
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)	
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)	
☐ Depleted Below dark surface(A11)			

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

Remarks:

No soil sample obtained, refusal at surface; road fill.

Wetland Determination

Wetland Vegetation Present?

☒ YES ☐ NO

Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.

Wetland Hydrology Present?

☐ YES ☒ NO

Note: According the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation. The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.

Soil Type _____ Drainage Class _____ Permeability _____ Capillary Fringe _____ +6"=W.T. Depth Criteria _____

The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type.

SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".

Wetland Soils Present?

☐ YES ☒ NO

Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.

Duration Met?

☐ YES ☐ NO

If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?

Is This Plot a Wetland?

☐ YES ☒ NO

Plot ID:

Wetland Type:

	M			RPE
	SS			RPF
	WS			BOG
	SM			AB
	DM			

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I94		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	☒ YES	☐ NO
Transect #:	Is the site significantly disturbed (Atypical Situation)?	☐ YES	☒ NO
Plot #: Wet 4	Is the area potentially naturally problematic?	☐ YES	☒ NO
Plot Description:	Type of atypical or problem area (soils, vegetation, hydrology)?		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.

Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species				%	Indicator	Stratum	Non-Dominant Species				%	Indicator	Stratum
1.	<i>Carex stricta</i>			15	OBL	H	1.						
	Tussock Sedge												
2.	<i>Fraxinus pennsylvanica</i>			40	FACW	T	2.						
	Green Ash												
3.							3.						
4.							4.						
5.							5.						
6.							6.						
7.							7.						
8.							8.						
9.							9.						
10.							10.						

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

100%

Prevalence Index Worksheet:

Total % Cover of: _____ Multiply By: _____

OBL species: _____ 1 _____

FACW species: _____ 2 _____

FAC species: _____ 3 _____

FACU species: _____ 4 _____

UPL species: _____ 5 _____

TOTAL (A): _____ TOTAL (B): _____

Prevalence Index (B/A): _____

Hydrophytic Vegetation Indicators

Dominance Test is >50% ☒ YES ☐ NO

Prevalence Index is < or =3.01 ☐ YES ☐ NO

Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) ☐ YES ☐ NO

Problematic Hydrophytic Vegetation1 (Explain) ☐ YES ☐ NO

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

Hydrophytic Vegetation Present?

Yes/No

Hydrology

Recorded Data (describe in remarks):	
Stream, lake, or tide gauge _____	Aerial photographs _____ Monitoring well _____ Other: _____
No Recorded Data Available	
Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations:	
Surface water present?: ☐ Yes ☒ No _____	Depth (inches) _____ Water in well?: ☐ Yes ☐ No _____
Water table present?: ☒ Yes ☐ No _____	16 _____ Depth (inches) _____ Saturation Present?: ☒ Yes ☐ No _____
14 _____ Depth (inches) _____	
Remarks: _____	

Wetland Hydrology Indicators:**Primary Indicators:** (1 or more required, check all that apply)

☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☒ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☒ Sparsely Vegetated Concave Surface (B8)
☐ Water-Stained Leaves (B9)

☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators: (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)
FAC-Neutral Test (2:0)
(OBL & FACW : FACU & UPL)

Remarks:**Soils** (Describe to depth needed to document the indicator, or confirm the absence of indicators)

Map Unit Name (Series & hase):				Drainage Class:				Permeability:			
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				☐ YES ☐ NO			
Matrix				Redox Features							
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks			
0-4	Silt Loam	100	10YR 3/2								
4-20	Loam	75	10YR 4/2	10YR 4/6	25	C	M				

Type¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location²: PL=Pore Lining M=Matrix**Hydric Soils Indicators:****Indicators for Problematic Hydric Soils***

☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☐ Loamy Gleyed Matrix (F2)	☐ Iron/Manganese Masses (F12)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☒ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☐ Redox Dark Surface (F6)	
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)	
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)	
☐ Depleted Below dark surface(A11)			

Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*Remarks:****Wetland Determination****Wetland Vegetation Present?**☒ YES ☐ NO

Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.

Wetland Hydrology Present?☒ YES ☐ NO

Note: According the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation. The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.

Soil Type _____ Drainage Class _____ Permeability _____ Capillary Fringe _____ +6"=W.T. Depth Criteria _____

The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type.
SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".**Wetland Soils Present?**☒ YES ☐ NO

Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.

Duration Met?☒ YES ☐ NO

If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?

Is This Plot a Wetland?☒ YES ☐ NO

Plot ID:

Wetland Type:

	M		RPE
	SS		RPF
X	WS		BOG
	SM		AB
	DM		

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I94		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	☒ X	YES ☐ NO ☐
Transect #:	Is the site significantly disturbed (Atypical Situation)?	☒ X	YES ☐ NO ☐
Plot #: Up 4	Is the area potentially naturally problematic?	☐	YES ☒ X NO ☐
Plot Description:		Type of atypical or problem area (soils, vegetation, hydrology)? Soils	

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number. Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)									
Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Solidago canadensis</i> Canada Goldenrod	30	FACU	H	1.	<i>Rubus idaeus</i> Red Raspberry	8	FACU	H
2.	<i>Phalaris arundinacea</i> Reed Canary Grass	15	FACW	H	2.	<i>Bromus inermis</i> Smooth Brome	5	FACU	H
3.	<i>Fraxinus pennsylvanica</i> Green Ash	30	FACW	T	3.				
4.					4.				
5.					5.				
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

66%

Prevalence Index Worksheet:

Total % Cover of:	Multiply By:
OBL species: _____	1 _____
FACW species: _____	2 _____
FAC species: _____	3 _____
FACU species: _____	4 _____
UPL species: _____	5 _____
TOTAL (A): _____	TOTAL (B): _____
Prevalence Index (B/A): _____	

Hydrophytic Vegetation Indicators

Dominance Test is >50%	☒ X YES	☐ NO
Prevalence Index is < or =3.01	☐ YES	☐ NO
Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)	☐ YES	☐ NO
Problematic Hydrophytic Vegetation1 (Explain)	☐ YES	☐ NO

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

Hydrophytic Vegetation Present?
Yes/No

Hydrology

Recorded Data (describe in remarks): Stream, lake, or tide gauge _____ Aerial photographs _____ Monitoring well _____ Other: _____	
No Recorded Data Available	
Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations: Surface water present?: ☐ Yes ☒ X No _____ Depth (inches) _____ Water table present?: ☐ Yes ☒ X No _____ Depth (inches) _____ Water in well?: ☐ Yes ☐ No _____ Depth (inches) _____ Saturation Present?: ☐ Yes ☒ X No _____ Depth (inches) _____	
Remarks: _____ _____ _____	

Wetland Hydrology Indicators:**Primary Indicators:** (1 or more required, check all that apply)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Aquatic Fauna (B13) |
| ☐ High Water Table (A2) | ☐ True Aquatic Plants (B14) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☐ Presence of Reduced Iron (C4) |
| ☐ Drift Deposits (B3) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Algal Mat or Crust (B4) | ☐ Thin Muck Surface (C7) |
| ☐ Iron Deposits (B5) | ☐ Gauge or Well Data (D9) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Sparsely Vegetated Concave Surface (B8) | |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators: (2 or more required)

- | |
|--|
| ☐ Surface Soil Cracks (B6) |
| ☐ Drainage Patterns (B10) |
| ☐ Dry-Season Water Table (C2) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial (C9) |
| ☐ Stunted or Stressed Plants (D1) |
| ☐ Geomorphic Position (D2) |

☒ FAC-Neutral Test (D5)**FAC-Neutral Test (2:1)**
(OBL & FACW : FACU & UPL)**Remarks:****Soils** (Describe to depth needed to document the indicator, or confirm the absence of indicators)

Map Unit Name (Series & hase):				Drainage Class:				Permeability:			
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?				☐ YES ☐ NO			
Matrix				Redox Features							
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks			

Type¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location²: PL=Pore Lining M=Matrix**Hydric Soils Indicators:****Indicators for Problematic Hydric Soils***

☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☐ Loamy Gleyed Matrix (F2)	☐ Iron/Manganese Masses (F12)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☐ Redox Dark Surface (F6)	
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)	
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)	
☐ Depleted Below dark surface(A11)			

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

Remarks: No soil sample obtained, refusal at surface; road fill.**Wetland Determination****Wetland Vegetation Present?**☒

YES

☐

NO

Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.

Wetland Hydrology Present?☐

YES

☒

NO

Note: According to the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation. The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.

Soil Type _____ Drainage Class _____ Permeability _____ Capillary Fringe _____ +6"=W.T. Depth Criteria _____

The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type.

SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".

Wetland Soils Present?☐

YES

☒

NO

Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.

Duration Met?☐

YES

☒

NO

If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?

Is This Plot a Wetland?☐

YES

☒

NO

Plot ID:

Wetland Type:

	M		RPE
	SS		RPF
	WS		BOG
	SM		AB
	DM		

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I94		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
Transect #:	Is the site significantly disturbed (Atypical Situation)?		YES
Plot #: Wet 5	Is the area potentially naturally problematic?		YES
Plot Description:	Type of atypical or problem area (soils, vegetation, hydrology)?		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number. Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)									
Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Typha angustifolia</i> Narrow Leaf Cattail	80	OBL	H	1.	<i>Phalaris arundinacea</i> Reed Canary Grass	10	FACW	H
2.					2.	<i>Poa Pratensis</i> Kentucky Bluegrass	30	FAC	H
3.					3.	<i>Solidago canadensis</i> Canada Goldenrod	5	FACU	H
4.					4.	<i>Schoenoplectus tabernaemontani</i> Soft-Stem Club Rush	8	OBL	H
5.					5.				
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				
Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?								100%	
Prevalence Index Worksheet: Total % Cover of: _____ Multiply By: _____ OBL species: _____ 1 _____ FACW species: _____ 2 _____ FAC species: _____ 3 _____ FACU species: _____ 4 _____ UPL species: _____ 5 _____ TOTAL (A): _____ TOTAL (B): _____ Prevalence Index (B/A): _____					Hydrophytic Vegetation Indicators Dominance Test is >50% <u>X</u> YES _____ NO Prevalence Index is < or =3.01 _____ YES _____ NO Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) YES _____ NO Problematic Hydrophytic Vegetation1 (Explain) _____ YES _____ NO *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes/No				

Hydrology

Recorded Data (describe in remarks): Stream, lake, or tide gauge _____ Aerial photographs _____ Monitoring well _____ Other: _____			
No Recorded Data Available			
Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)			
Field Observations:			
Surface water present?:	_____ Yes _____ X _____ No	Depth (inches)	Water in well?: _____ Yes _____ No
Water table present?:	_____ X _____ Yes _____ No	20 _____ Depth (inches)	Saturation Present?: _____ X _____ Yes _____ No
		18 _____ Depth (inches)	
Remarks:			

Wetland Hydrology Indicators:**Primary Indicators:** (1 or more required, check all that apply)

☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)
☐ Water-Stained Leaves (B9)

☐ Aquatic Fauna (B13)
☐ True Aquatic Plants (B14)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Gauge or Well Data (D9)
☐ Other (Explain in Remarks)

Secondary Indicators: (2 or more required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☒ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)
FAC-Neutral Test (1:0)
(OBL & FACW : FACU & UPL)

Remarks:**Soils** (Describe to depth needed to document the indicator, or confirm the absence of indicators)

Map Unit Name (Series & hase):				Drainage Class:			Permeability:		
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?			☐ YES ☐ NO		
Matrix				Redox Features					
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	Remarks	
0-10	Loam	98	7.5YR 2.5/1	7.5YR 4/6	2	C	M		
10-20	Clay Loam	60	G1 5/10Y	7.5YR 4/6	40	C	M	Gleyed Matrix	

Type¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location²: PL=Pore Lining M=Matrix**Hydric Soils Indicators:****Indicators for Problematic Hydric Soils***

☐ Histosol (A1)	☐ Thick Dark Surface (A12)	☐ Loamy Mucky Mineral (F1)	☐ Coast Prairie Redox (A16)
☐ Histic Epipedon (A2)	☐ Sandy Mucky Mineral (S1)	☒ Loamy Gleyed Matrix (F2)	☐ Iron/Manganese Masses (F12)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3)	☐ Depleted Matrix (F3)	☐ Other (Explain in Remarks)
☐ Hydrogen Sulfide (A4)	☐ Sandy Gleyed Matrix (S4)	☐ Redox Dark Surface (F6)	
☐ Stratified Layers (A5)	☐ Sandy Redox (S5)	☐ Depleted Dark Surface (F7)	
☐ 2 cm Muck (A10)	☐ Stripped Matrix (S6)	☐ Redox Depressions (F8)	
☐ Depleted Below dark surface(A11)			

Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*Remarks:****Wetland Determination****Wetland Vegetation Present?**☒ YES ☐ NO

Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.

Wetland Hydrology Present?☒ YES ☐ NO

Note: According the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation. The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.

Soil Type _____ Drainage Class _____ Permeability _____ Capillary Fringe _____ +6"=W.T. Depth Criteria _____

The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type.
SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".**Wetland Soils Present?**☒ YES ☐ NO

Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.

Duration Met?☒ YES ☐ NO

If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?

Is This Plot a Wetland?☒ YES ☐ NO**Plot ID:****Wetland Type:**

X	M			RPE
	SS			RPF
	WS			BOG
	SM			AB
	DM			

Routine Wetland Delineation Data Form

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I94		Date: 7/11/2012	
Applicant/Owner: WisDOT		County: St. Croix	
Investigator(s): Lindsay Tekler and Derek Huebsch		State: WI	
Normal climatic conditions on site typical for this time of year? Yes	Do "normal circumstances" exist on the site?	X	YES
Transect #:	Is the site significantly disturbed (Atypical Situation)?	X	YES
Plot #: Up 5	Is the area potentially naturally problematic?		YES
Plot Description:	Type of atypical or problem area (soils, vegetation, hydrology)? Soils		

Vegetation

Dominant species are the most abundant species in each stratum that sum to 50% of total dominance measure. Any additional species comprising 20% of total dominance measure are also dominant. Non-dominant species used if dominant species are equal in number.
Strata = Herbs (H) 5' radius plot; 30' radius plot for: Trees (T) >3" dbh, Shrubs (S) <3" dbh, >3.2' tall, & Woody Vines (V)

Dominant Species		%	Indicator	Stratum	Non-Dominant Species		%	Indicator	Stratum
1.	<i>Poa pratensis</i> Kentucky Bluegrass	80	FAC	H	1.	<i>Solidago canadensis</i> Canada Goldenrod	10	FACU	H
2.					2.	<i>Salix interior</i> Sandbar Willow	2	FACW	H
3.					3.				
4.					4.				
5.					5.				
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				

Dominance Test: % of dominant species (all strata) that are OBL, FACW, and/or FAC?

100%

Prevalence Index Worksheet:

Total % Cover of:	Multiply By:
OBL species: _____	1 _____
FACW species: _____	2 _____
FAC species: _____	3 _____
FACU species: _____	4 _____
UPL species: _____	5 _____
TOTAL (A): _____	TOTAL (B): _____
Prevalence Index (B/A): _____	

Hydrophytic Vegetation Indicators

Dominance Test is >50%	☒ YES	☐ NO
Prevalence Index is < or =3.01	☐ YES	☐ NO
Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)	☐ YES	☐ NO
Problematic Hydrophytic Vegetation1 (Explain)	☐ YES	☐ NO

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

Hydrophytic Vegetation Present?

Yes/No

Hydrology

Recorded Data (describe in remarks): Stream, lake, or tide gauge _____ Aerial photographs _____ Monitoring well _____ Other: _____	
No Recorded Data Available Growing Season Dates/Days: _____ (To evaluate hydrologic data from stream gauges/g.w. wells)	
Field Observations: Surface water present?: _____ Yes _____ X _____ No _____ Depth (inches) _____ Water table present?: _____ Yes _____ X _____ No _____ Depth (inches) _____ Water in well?: _____ Yes _____ No _____ Depth (inches) _____ Saturation Present?: _____ Yes _____ X _____ No _____ Depth (inches) _____	
Remarks: 	

Wetland Hydrology Indicators:**Primary Indicators:** (1 or more required, check all that apply)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Aquatic Fauna (B13) |
| ☐ High Water Table (A2) | ☐ True Aquatic Plants (B14) |
| ☐ Saturation (A3) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Water Marks (B1) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Sediment Deposits (B2) | ☐ Presence of Reduced Iron (C4) |
| ☐ Drift Deposits (B3) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Algal Mat or Crust (B4) | ☐ Thin Muck Surface (C7) |
| ☐ Iron Deposits (B5) | ☐ Gauge or Well Data (D9) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Other (Explain in Remarks) |
| ☐ Sparsely Vegetated Concave Surface (B8) | |
| ☐ Water-Stained Leaves (B9) | |

Secondary Indicators: (2 or more required)

- | |
|--|
| ☐ Surface Soil Cracks (B6) |
| ☐ Drainage Patterns (B10) |
| ☐ Dry-Season Water Table (C2) |
| ☐ Crayfish Burrows (C8) |
| ☐ Saturation Visible on Aerial (C9) |
| ☐ Stunted or Stressed Plants (D1) |
| ☐ Geomorphic Position (D2) |

☐ FAC-Neutral Test (D5)**FAC-Neutral Test (:)**
(OBL & FACW : FACU & UPL)**Remarks:** No hydrology indicators present**Soils** (Describe to depth needed to document the indicator, or confirm the absence of indicators)

Map Unit Name (Series & base):	Drainage Class:	Permeability:
Taxonomy (Subgroup):	Field Observations Confirm Mapped Type?	☐ YES ☐ NO

Matrix				Redox Features				Remarks
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, CS)	Location ² (PL, M)	

Type¹ C=concentration D=depletion RM=reduced matrix CS=coated sand grains Location²: PL=Pore Lining M=Matrix**Hydric Soils Indicators:****Indicators for Problematic Hydric Soils***

- | | | | |
|---|---|---|--|
| ☐ Histosol (A1) | ☐ Thick Dark Surface (A12) | ☐ Loamy Mucky Mineral (F1) | ☐ Coast Prairie Redox (A16) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Mucky Mineral (S1) | ☐ Loamy Gleyed Matrix (F2) | ☐ Iron/Manganese Masses (F12) |
| ☐ Black Histic (A3) | ☐ 5 cm Mucky Peat or Peat (S3) | ☐ Depleted Matrix (F3) | ☐ Other (Explain in Remarks) |
| ☐ Hydrogen Sulfide (A4) | ☐ Sandy Gleyed Matrix (S4) | ☐ Redox Dark Surface (F6) | |
| ☐ Stratified Layers (A5) | ☐ Sandy Redox (S5) | ☐ Depleted Dark Surface (F7) | |
| ☐ 2 cm Muck (A10) | ☐ Stripped Matrix (S6) | ☐ Redox Depressions (F8) | |
| ☐ Depleted Below dark surface(A11) | | | |

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

Remarks:

No soil sample obtained, refusal at surface; road fill.

Wetland Determination**Wetland Vegetation Present?**☐

YES

☒

NO

Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC.

Wetland Hydrology Present?☐

YES

☒

NO

Note: According to the 1987 Corp Wetlands Delineation Manual, wetland hydrology criteria are met if soil is saturated within the major portion of the root zone of the prevalent vegetation. The root zone is usually defined to be ≤12 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in saturation in the major portion of the root zone can be calculated below.

Soil Type _____ Drainage Class _____ Permeability _____ Capillary Fringe _____ +6"=W.T. Depth Criteria _____

The 1989 Manual requires saturation to the surface defined by a water table at 6-18" below surface depending on the soil type.

SPD=6", PD & VPD at <6"/hr =18", at ≥6"/hr = 12".

Wetland Soils Present?☐

YES

☒

NO

Note: A wetland restoration site (man-induced wetland) is considered a disturbed (atypical) situation in the 1987 Corp Wetlands Delineation Manual. Soil indicators are often not reliable indicators since they reflect pre-restoration conditions rather than post-restoration conditions. In accordance with the 1987 Manual, in such cases where necessary, a wetland determination can be made based on the presence of hydrophytic vegetation and wetland hydrology if there is documented evidence that the wetland resulted from human activities.

Duration Met?☐

YES

☒

NO

If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?

Is This Plot a Wetland?☐

YES

☒

NO

Plot ID:

Wetland Type:

	M		RPE
	SS		RPF
	WS		BOG
	SM		AB
	DM		

Appendix C

Photos





Figure 3: Wetland Plot 2



Figure 4: Upland Plot 2



Figure 5: Wetland Plot 3



Figure 6: Upland Plot 3



Figure 7: Wetland Plot 4



Figure 8: Upland Plot 4



Figure 9: Wetland Plot 5



Figure 10: Upland Plot 5

Attachment 3

WDNR Initial Project Review

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
West Central Region Headquarters
1300 West Clairemont Avenue
Eau Claire WI 54701

Scott Walker, Governor
Cathy Stepp, Secretary
Dan Bauman, Regional Director
Telephone 715-839-3700
FAX 715-839-6076
TTY Access via relay - 711



August 20, 2012

David Solberg, P.E.
DOT PDS Project Manager
DTSD NW Region – Eau Claire Office
718 West Clairemont Avenue
Eau Claire, WI 54701

Subject: **DNR Initial Project Review:**
Project I.D. 1021-01-00
IH 94
Baldwin - Menomonie
STH 128 Bridge B-55-0021
St Croix County
T28N R15W S3

Dear Mr. Solberg:

The Department has received the information you provided for the proposed above referenced project on a. According to your proposal, the purpose of this project is to replace the STH 128 bridge over IH 94. Proposed improvements include replacing the existing bridge with a bridge that meets current standards and accommodates a 6 lane highway, re-align STH 128 and the interchange to the west, construct ramps to provide appropriate ISD at STH 128, and new entrance ramps to be parallel type with 1,200 foot acceleration lane. The existing structure is a three span girder bridge.

Preliminary information has been reviewed by DNR staff for the project under the DOT/DNR Cooperative Agreement. Initial comments on the project as proposed are included below and assume that additional information will be provided that addresses all resource concerns identified.

A. Project-Specific Resource Concerns

Wetlands

There is potential for wetland impacts to occur as a result of this project and therefore wetland impacts must be avoided and/or minimized to the greatest extent possible. Unavoidable wetland impacts must be mitigated for in accordance with the DOT/DNR Cooperative Agreement and the Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline. The Department requests information regarding the amount and type of unavoidable wetland impacts.

B. Construction Site Considerations:

The following issues may be addressed in the Special Provisions and the contractor will be required to outline their construction methods in the Erosion Control Implementation Plan (ECIP).

Erosion control/Stormwater

Erosion control devices should be specified on the construction plans. All disturbed bank areas should be adequately protected and restored as soon as feasible.

An adequate erosion control implementation plan (ECIP) for the project must be developed by the contractor and submitted to this office for review at least 14 days prior to the preconstruction conference.

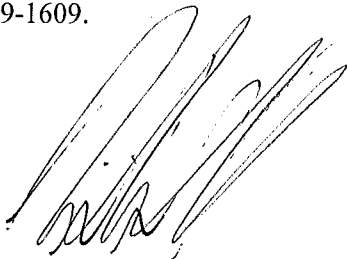
If erosion mat is used along stream banks, the department recommends that biodegradable and non-netted mat be used (e.g., Class I Type A Urban, Class I Type B Urban, or Class II Type C). Long-term netted mats may cause animals to become entrapped while moving in and out of the stream. Avoid the use of fine mesh matting that is tied or bonded at the mesh intersection such that the openings in the mesh are fixed in size.

Asbestos

A Notification of Demolition and/or Renovation and Application for Permit Exemption, DNR form 4500-113 (NR 406, 410, and 447 Wis. Adm. Code) may be required. Please refer to DOT FDM 21-35-45 and the DNR's notification requirements web page: <http://www.dnr.state.wi.us/air/compenf/asbestos/reqfees.htm> for further guidance on asbestos inspections and notifications. Contact Mark Davis, Air Management Specialist 608-266-3658, with questions on the form. The DNR's online notification system is available at <http://www.dnr.state.wi.us/air/compenf/asbestos/notify.htm>. The notification must be submitted 10 working days in advance of demolition projects.

The above comments represent the Department's initial concerns for the proposed project and do not constitute final concurrence. Final concurrence will be granted after review of plans and further consultation if necessary. If any of the concerns or information provided in this letter requires further clarification, please contact this office at (715) 839-1609.

Sincerely,



Nick Schaff
Environmental Analysis & Review Specialist

CC: Troy Stapelmann – WisDOT NW Region
Jessica Felix – WisDOT NW Region