

Division of Transportation System Development Northwest Region – Eau Claire Office 718 W. Clairemont Ave. Eau Claire, WI 54701

Telephone: 715-836-3911 Toll Free: 800-590-1868 Facsimile (FAX): 715-392-7863 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 <u>stacey.rusch@dot.wi.gov</u>

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 State of Wisconsin Department of Natural Resources dnr.wi.gov

Water Resources Application for Project Permits

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Form 3500-053 (R 3/14)

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.

Landowner Name (lirst and last hame, 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 co	de) Alte	ernate Pho	ne 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							
No. Store Astronom								
Mailing Address	City		State	ZIP Code				
	Phone Number (include area code		ernate Pho	ne Number				
Section 2: Primary Project Contact								
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	Phone Number (include area code) Alter						
Section 4: Project or Site Location Project Name	County							
STH 128 Bridge B 55 0266	St Croix		du U	wii 🔾 village				
Location Address/Description	St. CIOIX	of Ca	ly					
STH 128 and IH 94 Interchange - See Attachment 1 for	Project Location Man							
Public Land Survey System (PLSS) – Provide the section, rand	ae, township information and latitude and	lonaitude	e in decimal	degrees, if available.				
	O E	J						
<u>NW</u> $\frac{1}{4}$ of <u>SW</u> $\frac{1}{4}$ of Section <u>3</u> , Township <u>28</u>	3N, Range15_⊙ ₩	l atituda	_					
If this site is not wholly contained in the quarter quarter sect	ion more description:	Lanuac		Longitude				
Project is also located in: SW 1/4 of NW 1/4 of Secti	on 3, T28N, R15W							
SW 1/4 of SW 1/4 of Section	on 3, T28N, R15W							
SE 1/4 of NE 1/4 of Section	n 4, T28N, R15W							
NE 1/4 of SE 1/4 of Section	n 4, T28N, R15W							
SE 1/4 of SE 1/4 of Section	4, T28N, R15W							

() No

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	0
to the protocols developed by the DNR Bureau of Natural Heritage Conservation	Yes
(BNHC)? dnr.wi.gov/topic/ERReview/	

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: Pr	ee 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.

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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.

4/29/15

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

Project Manager

Title

Stacey Rusch

Printed Name of Landowner / Authorized Representative

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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Wetland Delineation Report

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Appendix A (Tables and Figures)

- Project Location Map
- Wisconsin Wetland Inventory Map
- 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)

- Figure 1: Wetland Plot 1
- Figure 2: Upland Plot 1
- Figure 3: Wetland Plot 2
- Figure 4: Upland Plot 2
- Figure 5: Wetland Plot 3
- o Figure 6: Upland Plot 3
- o Figure 7: Wetland Plot 4
- Figure 8: Upland Plot 4
- Figure 9: Wetland Plot 5
- 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 <u>US Army Corps of Engineers 1987 Wetland</u> <u>Delineation Manual</u> and the <u>US Army Corps of Engineers 2012 Midwest Supplement</u> 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

 United States Agriculture Department- Natural Resource Conservation Service
 Web Soil Survey Hydric soil map

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 <u>US Army Corps of Engineers 1987 Wetland Delineation Manual</u>. 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 <u>US Army Corps of Engineers 1987 Wetland Delineation Manual</u> 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 ≥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 ≥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 <u>US Army Corps of Engineers 1987 Wetland Delineation</u> <u>Manual</u> 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

<u>Santiago silt loam, 2 to 6 percent slopes</u>- 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)

- <u>Monitoring form 1 (Wetland 1)</u>: 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).
- <u>Monitoring form 2 (Upland 1)</u>: 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)
 - <u>Monitoring form 3 (Wetland 2)</u>: 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).
 - <u>Monitoring form 4 (Upland 2)</u>: 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)
 - <u>Monitoring form 5 (Wetland 3)</u>: 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.
 - <u>Monitoring form 6 (Upland 3)</u>: 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)
 - <u>Monitoring form 7 (Wetland 4)</u>: 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).
 - <u>Monitoring form 8 (Upland 4)</u>: 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)
 - <u>Monitoring form 9 (Wetland 5)</u>: 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).
 - <u>Monitoring form 10 (Upland 5)</u>: 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







NRCS Hydric Soils Map



Map Unit Legend

	Wisconsin (WI109)		
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmB	Amery loam, 2 to 6 percent slopes	mery loam, 2 to 6 percent 7.4 slopes	
AuA	Auburndale silt loam, 0 to 3 0.9 percent slopes		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	SaB Santiago silt loam, 2 to 6 percent slopes		15.0%
VaC2	Vlasaty silt loam, 6 to 12 percent 0.6 slopes, eroded		0.9%
Totals for Area of Interest		64.1	100.0%







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:	For projects in:		
Jackson, Trempealeau, Buffalo, Clark, Eau Claire, Pepin, Pierce, St.Croix, Dunn, and Chippewa Counties;	Douglas, Bayfield, Ashland, Burnett, Washburn, Sawyer, Polk, Barron, Rusk and Taylor Counties;		
Return to:	Return to:		
Nick Schaff	Amy Adrihan	Project Design I.D. #:	1021-01-00
Environmental Coordinator	Environmental Coordinator	Project Construction I.D. #:	1021-01-70
WisDOT - Northwest Region	WisDOT - Northwest Region	Project Title : BALDWIN	- MENOMONIE
718 W. Clairemont Ave.	1701 N. 4th Street	STH 128 BRIDGE H	3-55-0266
Eau Claire, WI 54701	Superior, WI 54880	County : ST.	CROIX
Phone : (715) 836-2068	Phone: (715) 392-7972	Construction Year :	2016
Facsimile (FAX):	Facsimile (FAX):	Date this form is completed :	2/20/2015
NicholasA.schaff@dot.wi.gov	Amy.Adrihan@dot.wi.gov		

Prepared by (name & phone #) :

Stacey Rusch, (715) 836-3919

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

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

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:

NO

YES

- 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.
- A A reas should be reported to the nearest 0.001 acre if possible

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)	М	0.017	1.0	М	0.017		
2	WET 2-M (STA 260+35 - STA 260+80 RT)	М	0.022	1.0	М	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)	М	0.005	1.0	М	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)

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.

This form is located on the WisDOT Intranet at: http://dtd-d4/TSS/Environmental/docs/2006_wetland_tracking_form.xls Also avaliable at: \\WIS31FP1\N3Public\tss\environment\Forms\2006_wetland_tracking_form.xls

Appendix B

Monitoring Forms

Routine Wetland Delineation Data Form										
	(1987 CO	E Wet	lands Del	lineation Ma	nua	ıl, 20	010 Midwest Supplement)			
Wetland Site:	1021-01-00 I-94 Interchange		Date: 7/1/12							
Applicant/Ow	mer: WisDOT						County:	St. Croix		
Investigator(s): Lindsay Tekler and Derek H	uebscl	h				State: W	Γ		
Normal climati this time of yea	c conditions on site typical for r? Yes		Γ	Do "normal c	ircu	ımst	ances" exist on the site?	X	YES	NO
Transect #:			I	s the site sig	nific	cant	ly disturbed (Atypical Situation	on)?	YES X	NO
Plot #: Wet 1			I	s the area po	enti	.ially	y naturally problematic?		YES X	NO
Plot Descripti	on: STH 128 N of Kwik Trip		L T	Type of atypi	cal c	or p	roblem area (soils, vegetation	, hydrolog	y)?	
	、		· .	Veg	eta	ıtic	n			
Dominant speci dominance mea Strata = Herbs	es are the most abundant species in sure are also dominant. Non-domi (H) 5'radius plot; 30' radius plot fo	each s nant sp or: Tre	tratum tha becies used es (T) >3"	tt sum to 50% d if dominant dbh, Shrubs	o of 1 spe (S) <	tota cies <3" (l dominance measure. Any ad s are equal in number. lbh, >3.2' tall, & Woody Vines (ditional sp V)	ecies comprisin	g 20% of total
D	ominant Species	%	Indicate	or Stratum			Non-Dominant Species	%	Indicator	Stratum
1.	Carex utriculata Yellow Lake Sedge	30	OBL	Н		1.	Phalaris arundinacaeae Reed Canary Grass	10	FACW	H
2.	Poa pratensis Kentucky Bluegrass	30	FAC	Н		2.	Taraxacum officinale Common dandelion	2	FACU	Н
3.	Salix interior Sandbar Willow	70	FACW	v s		3.	Solidago canadensis Canada Goldenrod	5	FACU	Н
4.	Fraxinus pennsylvanica Green Ash	5	FACW	V T		4.	Arctium lappa Greater Burdock	3	UPL	Н
5.			-			5.	<i>Typha angustifolia</i> Narrow-leafed Cattail	2	OBL	Н
6.			:			6.	<i>Ulmus americana</i> American Elm	3	FACW	S
7.				•		7.				
8.						8.				
9.						9.				
10.					1	10.				
	Dominance Test: %	of do	minant s	pecies (all s	trat	ta) 1	that are OBL, FACW, and/	or FAC?		100%
	Prevalence Index Worksheet:						Hydrophytic Veg	etation In	dicators	
Total % Cover	of: Multiply By:				Do Pr	omir	nance Test is >50% lence Index is < or =3.01		X YES	NO
OBL species:	1				M	orp!	hological Adaptations* (Provide	supporting	XEO	NO
FACW species	2				da ^r	ıta ir	n Remarks or on a separate sheet	t) (Translation)	1ES 	
FAC species: 2						ODIC	maue rigorophytic vegetation1	(Expiain)	YES	UM

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

Hydrophytic Vegetation Present? Yes/No

Prevalence Index (B/A):								
Hydrology								
Recorded Data (desc	ribe in remarks):							
Stream, lake, or tide gauge	Aerial photog	raphs Monitoring well	Other:					
No Recorded Data Available								
Growing Season Dates/Days:								
	(To evaluate hydrologi	ic data from stream gauges/g.w. wells)						
Field Observations:								
Surface water present?:Yes XNo	Depth (inches)	Water in well?:YesNo	Depth (inches)					
Water table present?:XYes _No	16 Depth (inches)	Saturation Present?: X_YesNo	11 Depth (inches)					
Remarks:								

FACU species:

UPL species:

TOTAL (A):

4

_____ 5 ____ ____ TOTAL (B): _____

_____.

		وي المحمد في محمد								
Primary 5 S H X S V S L L L L L L S S	Indicators: (1 or n urface Water (A1) ligh Water Table (A2 aturation (A3) Vater Marks (B1) ediment Deposits (B3) ulgal Mat or Crust (B ron Deposits (B5) nundation Visible on parsely Vegetated Co Vater-Stained Leaves	nore req 2) 2) 4) Aerial In oncave St (B9)	Wetlan uired, check all that app	nd Hydrology (y) Aquatic Fauna (B13) Frue Aquatic Plants (Hydrogen Sulfide Od Dxidized Rhizospher Presence of Reduced Recent Iron Reductio Thin Muck Surface (Gauge or Well Data (Dther (Explain in Ref	Indicato B14) or (C1) es on Living Iron (C4) n in Tilled S C7) D9) narks)	PTS: Sec 	condary Indicator Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Visi Stunted or Stre Geomorphic P FAC-Neutral T FAC-Neut (OBL & F	rs: (2 or more required) racks (B6) orns (B10) fater Table (C2) ows (C8) ible on Aerial (C9) essed Plants (D1) osition (D2) Fest (D5) ral Test (3:0) ACW : FACU & UPL)		
Remarks		· · · · · · · · · · · · · · ·								
r			Soils (Describe to de	epth needed to docun	nent the ind	icator, or confirm the a	bsence of indicators)	·		
Map Unit	Name (Series & ha	ase):		Drainage Cla	ISS:		-	Permeability:		
Taxonom	y (Subgroup):			Field Observ	ations Cor	nfirm Mapped Type?	, 	YES NO		
Depth (Inches)	Texture	atrix %	Matrix Color $(G = Gleved)$	Color	0/2	Type ¹	Location ²	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	С	M	· · · · · · · · · · · · · · · · · · ·		
	-									
Type ¹ C=	concentration D=d	lepletion	RM=reduced matrix CS	S=coated sand grai	ns Locati	ion ² : PL=Pore Linin	g M=Matrix			
Hydric S	Soils Indicators:	-				<u></u>	Indicators fo	or Problematic Hydric Soils*		
Hii Hii Bla Hy Str 2 c De *Indicator	Hydric Solis Indicators: Histosol (A1) Thick Dark Surfa Histic Epipedon (A2) Sandy Mucky Mi Black Histic (A3) 5 cm Mucky Pear Hydrogen Sulfide (A4) Sandy Gleyed Mi Stratified Layers (A5) Sandy Redox (S5) 2 cm Muck (A10) Stripped Matrix (Depleted Below dark surface(A11)) *Indicators of hydrophytic vegetation and wetland hydrology mus			face (A12) Loamy Mucky Mineral (F1) Mineral (S1) Loamy Gleyed Matrix (F2) Coass sat or Peat (S3) Depleted Matrix (F3) Iron/I Matrix (S4) Matrix (F3) Other S5) X_ Redox Dark Surface (F6) Other x (S6) Depleted Dark Surface (F7) etage matrix be present, unless disturbed or problematic. Ist be present. Ist be present.			Coast Prair Iron/Mang, Other (Ex	ıst Prairie Redox (A16) ı/Manganese Masses (F12) :her (Explain in Remarks)		

1			<u>N. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.</u>	Wetland	l Deter	mination				
Wetland V Note: The 19 Wetland H Note: Accord prevalent veg fringe to be S Soil Type	egetation Present? 87 Corps Wetland Delin (ydrology Present? ling the 1987 Corp Wetla tetation . The root zone : PD = 2" and PD, VPD =	eation Mar ands Delin is usually of = 12", the of Drain	nual requires that greater than 5 eation Manual, wetland hydrolo lefined to be ≤ 12 inches. We depth of water table required to age Class	X YES 0% of all dominant spec X YES gy criteria are met if soi efine the major portion result in saturation in th ermeability	ies be OBL, I l is saturated as ≤ to 50% c e major portie Canj	NO FACW, or FAC. NO within the major portion or $r \le 6$ inches. Estimating th on of the root zone can be of llary Fringe	f the root zone of the he saturated capillary calculated below. +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 \geq 6"/hr = 12".

 Wetland Soils Present?
 X
 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.
 Wetland Type:

 Duration Met?
 X
 YES
 NO
 M
 RPE

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

Duration Met?	A YES			IVI	i	 RPL	
If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season?						RPF	
				WS		BOG	are a statement
Is This Plot a Wetland?	X YES	NO		SM		AB	
Plot ID:				DM			-

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site	1021-01-00 I-94 Interchang		lands Dem		<u> </u>	2010 Midwest Supp	Date: $7/11/2$	2012		zantesse en annundet (1997) missionen antesse er		
Applicant/Ow	vner: WisDOT	<u> </u>		County: St. C				Croix	Croix			
Investigator(s): Lindsay Tekler and Derel	c Huebsch	h		State: WI							
Normal climati this time of yea	ic conditions on site typical for ar? Yes		Do	o "normal c	normal circumstances" exist on the site? X YES							
Transect #:			Is	the site sign	nificar	ntly disturbed (Atypi	cal Situation)?	X	YES	NO		
Plot #: Up 1			Is	the area po	tential	ly naturally problem	natic?		YES 7	K NO		
Plot Descripti	ion: STH 128 N of Kwik Tr	ip	Ту	pe of atypi	cal or	problem area (soils,	vegetation, hyc	irology	v)? Mowed V	eg. & Soils		
				Veg	etati	on						
Dominant speci dominance mea Strata = Herbs	ies are the most abundant specie asure are also dominant. Non-d (H) 5'radius plot: 30' radius pl	s in each s ominant sp ot for: Tre	tratum that becies used $(T) > 3$ " d	sum to 50% if dominant	5 of tot speci	tal dominance measu es are equal in numb dbh >3.2' tall & Woo	re. Any additio er. ody Vines (V)	nal spe	ecies comprisi	ng 20% of total		
	Dominant Species	%	Indicator	r Stratum	$\overline{\Pi}$	Non-Dominant	Species	%	Indicator	Stratum		
1	Poa pratensis	30	FAC	ц		Carex pennsylva	nica	Q	OPI	IJ		
	Kentucky Bluegrass		TAC		1.	Pennsylvania Sec Phalaris arundin	lge aceae	0	FACTU			
<i>Z</i> .					2.	Reed Canary Gra	iss nale	8	FACW			
3.					3.	Common Dandel	ion	4	FACU	H		
4.					4.	Birdsfoot Trefoil	ию 	5	FACU	H		
5.					5.	Yarrow	<i>ium</i>	5	FACU	Н		
6.	······································				6.							
7.					7.							
8.												
9.				-	9.							
10.					10	•						
	Dominance Test	: % of do	ominant sp	ecies (all s	trata)) that are OBL, FA	CW, and/or F	AC?		100%		
	Prevalence Index Workshe	et:			Dom	Hydroj inance Test is >50%	phytic Vegetat	ion In	dicators	NO		
Total % Cover	of: Multiply By:				Prev	alence Index is < or =	3.01		<u> </u>	NO		
OBL species:	1				Mor	phological Adaptation	s* (Provide supp	orting	YES	NO		
FACW species	: 2				Prob	lematic Hydrophytic	Vegetation1 (Exp	olain)	— YES	NO		
FAC species:	3			*1	diaata	w of hydric soil and woth	and hydrology must	ha nuan		had an problematia		
FACU species:	4				luicato	is of hydric son and wena	mu nyurology musi	be pres	cit, amess distai	bed of problematic.		
UPL species:	5					Hydrop	hytic Vegeta	ation	Present?			
TOTAL (A): Prevalence	TOTAL (B):						Yes/No)				
Index (B/A):	an a			<u> </u>	Irolo							
Real	orded Data (decor	ihe in rem	arks).	1190		76J			an danna qalarini galaradan di kara	and a subscription and a particular subscription of the subscription of the subscription of the subscription of		
Strea	m, lake, or tide gauge Recorded Data Available		_ Aerial pl	hotographs		Monitoring wel	1 Oth	er:				
Growing Seas	son Dates/Days:	(To	evaluate hvo	drologic data	from s	stream gauges/g.w. wel	ls)					
Field Observ Surface water p	vations: present?: Yes X No		Depth (inch	es) Wate	er in w	vell?: Yes	_No X No		_ Depth (incl	hes)		
marer table pre	100 A_100	L	-chu (men	coj oau	aart (11	1 iosenier i os				n×07		
Remarks:												

Primary Indicators: (1 or more required, check all that apply) Sufface Soil Cracts (D6) Intight Water Table (A2) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Sufface Soil Cracts (D6) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Sufface Soil Cracts (D6) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Sufface Soil Cracts (D6) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Sufface Soil Cracts (D6) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Sufface Soil Cracts (D6) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Sufface Soil Cracts (D6) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Sufface Soil Cracts (D6) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) March Mark (M1) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) Drain Agenite Faunt (B1) March Mark (M1) Drain Agenite Faunt (B1) Research (B2) Faunt (B1) Faunt (B1) March Mark (M1) Drain Agenite Faunt (B1) Research (B2) Faunt (B1) Faunt (B1) Mark (M1) Drain Agenite Faunt (B1) Research (B2) Faunt (B1) Faunt (B1) Mark (M2) Drain Agenit Faunt (B1) Research (B2)		· ·		Wetlar	nd Hydrology l	ndicato	rs:	Seconda	ry Indicator	s: (2 or mo	re required)		
Imply Water Table (A2) The Aquatic Films (B44) Durninge Patterns (B10) Manualities (A3) Ibyobsem Sutified Oder (C3) Dyo-Season (Water Table (C2) Water Marker (B1) Outlinger Mithers (B10) Dyo-Season (Water Table (C2) Marker (B1) Outlinger Mithers (B10) Statutation Vision (C3) Statutation Vision (C3) Marker (B1) Outlinger Mithers (B1) Descence Water Table (C2) Statutation Vision (C3) Marker (B1) Outlinger Mithers (B1) Data Marker Statutation Vision (C1) Presence of Referent Ion (C4) Marker (B1) Outlinger Mithers (B1) Data Statutation Vision (C2) Presence of Referent Ion (C4) Water Statutation (B1) Outlinger Mithers (C1) Presence of Referent Ion (C4) Presence of Referent Ion (C4) Water Statutation (B2) Descent Ion Vision (D2) Presence of Referent Ion (C4) Presence of Referent Ion (C4) Mary Units Name (Refere & bases): Traininger Cases: Presence of Referent Ion (C4) Presence of Referent Ion (C4) Taxonony (Stotypologic): Field Outline Action Resentation (C1) Referent Ion (C4) Presence Ion (C4) Type' Caseoncommation Developted on Actin (C2) Coolidion (C4) Referent Ion (C4) Presence Ion (C4) Type' Case	Primary	Indicators: (1 or m Surface Water (A1)	ore req	uired, check all that app	ly) Aquatic Fauna (B13)				Surface Soil C	racks (B6)			
Seturation (A3) Hydrogen Salida Odar (C1) Dry.Sessor Water Tables (C2) Water Mater (B1) Oxatized Mixrepheres on Living Roots (C3) Comprise Mixreps (C3) Duft Deposits (B3) Presence of Reduced Ion (C4) Saturada Visible on Acrial (S9) Aug Mater Table (C2) Exemption Root (C4) Saturada Visible on Acrial (S9) Mage Mater Chast (C4) Reservit non Root (C4) Saturada or Nisoline (C1) Mage Mater Chast (C4) Reservit non Root (C4) Saturada or Nisoline (C1) Mage Mater Chast (C4) Gauge or Well Data (D2) FAC-Neutral Tors (: :) Water Saturada Visible on Acrial Insegue (T17) This Mack Satura (C7) FAC-Neutral Tors (: :) Water Saturada Visible on Acrial Insegue (T17) This Mack Satura (C7) FAC-Neutral Tors (: :) Water Saturada Visible on Acrial Insegue (T17) Def Castura (C17) FAC-Neutral Tors (: :) Map Unith Nature (Sate & Janes) Data (C2) Data (C2) VES () No Map Unith Nature (Sate & Janes) Data (C2) Color K (C2) (C2) (C2) (C2) (C2) (C2) (C2) (C2		High Water Table (A2))	*	True Aquatic Plants (I	314)			Drainage Patte	rns (B10)			
water Marke (1)		Esturation $(A2)$,	I	Hydrogen Sulfide Odd	or (C1)		· · · ·	Den Casaan W	(E-1-)- ((70)		
Solution Deposits (02) Solution State (03) Solution State (03) Adjal Mai ve Cred (34) Presence of Radiced for (C4) Solutid of Streed Phans (D1) Adjal Mai ve Cred (34) Recent Iron Reduction in Tiled Solik (C6) Genomphic Position (D2) Inundation Visible on Arrial (rosy) Ditter (157) FAC-Neutral Test (2) Water-Stated Langers (D7) This Mark Strees (C7) FAC-Neutral Test (2) Water-Stated Langers (D7) Other (Explain in Remarks) Remarks: Remarks: No wetland hydrology indicators. Solid (C6) Genomphic Position (C7) Map Unit Name (Series & hase): Drainage Class: Permeshilty: Taxoneouv (Subgroup): Heid Observations: Confirm Mapped Type? YES \$* NO Map Unit Name (Series & hase): Drainage Class: Remarks: Remarks Indexing in the absence of heideators No Remarks No Type? C-concentration D -depletion RM=reduced matrix CS=conted sand grains Location? Remarks: Hydric Solis Indicators: Indicators for Problematic Hydric Solis* Indicators for Problematic Hydric Solis* Hydric Solis Indicators: Sandy Macky Mamm (S1) Langer Ydric Solis* IntexAmager Advice Solis*		Water Marks (B1)			vidized Rhizosphere	s on Living	Roots (C3)	1	Cravfish Burro	ater Table (C			
		Sediment Deposits (B2	!)				10003 (05)		Saturation Visi	ble on Aeria	al (C9)		
inclusted in the construction of the decision in Thilde Solis (C5)		Orift Deposits (B3) Algal Mat or Crust (B4	I)	H	Presence of Reduced I	ron (C4)			Stunted or Stre Geomorphic Po	ssed Plants osition (D2)	(DI)		
Instalation Visible on Aerial Imagery (2): Supared Vegetated Concess Surface (38) Gauge or Well Data (D9) FAC-Neutral Test (15) Mark Test (7) Concentration the discusses Surface (38) Concentration the discusses of indicators: Soulds (Describe to depth received to document the indicator, or confirm the discusse of indicators) Map Unit Nume (Series & have): Drainage Class: Permeability: Texture 5 Map Unit Nume (Series & have): Drainage Class: Permeability: Texture 5 Map Unit Nume (Series & have): Drainage Class: Permeability: Texture 5 Map Unit Nume (Series & have): Drainage Class: Permeability: Texture 5 Marrix toolor Remarks Color 4 (C.D.R.K. (S)) (P, M) Remarks Texture 5 Matrix Color (Generation Color 4 (C.D.R.K. (S)) (P, M) Remarks Type' Oreconcentration D=deplotion RM-reduced matrix CS-coated sand grains Location? Hydric Soils Indicators: Indicators for Problematic Hydric Soils Histesol (A1) Sen Mucky Pare Pare (S3) Depleted Matrix (C3) Coak Marks (C1) Sen Mucky Pare Pare (S3) Depleted Matrix (C3) Coak Marks (C1) Sen Mucky Pare Pare (S3) Depleted Matrix (C3) Coak Marks (Pare Pare (S3) Depleted		fron Deposits (B5)	.)	I	Recent Iron Reduction	i in Tilled So	oils (C6)		Geomorphice 1	(D2)			
	I	nundation Visible on A	Aerial In	nagery (B7) 7	Thin Muck Surface (C	.7)		1	FAC-Neutral T	Cest (D5)	(\cdot, \cdot)		
Water-Standel Laws (DP) Other (Explain in Remarks) Ramarks: No wetland hydrology indicators: Permeability: Map Unit Name (Series & hase): Drainage Class: Permeability: Taxonomy (Subgroup): Field Observations Confirm Mapped Type? VES Difference Map Unit Name (Series & hase): Drainage Class: Redox Features No Mapping Toxine % G:G:Given) Color % (CD, EM, CS) Permeability: Taxonomy (Subgroup): Field Observations Confirm Mapped Type? VES Difference No Mapping Coconcentration D=depletion RM=reduced matrix CS=conted sand grains: Location?; PL=Pore Lining M=Matrix Matrix Matrix Hydrogs Subfield (A) Sandy Muchy Mitterd (S1) Lawary Muchy Mitterd (S1) Lawary Graph Muchy Mitterd (S1) Lowary Muchy Mitterd (S1) Coconcentration D=depletion RM=reduced matrix (S4) Depleted Matrix (S1) Coconstraining end (A1) Historio (A1) Sandy Muchy Mitterd (S1) Lawary Muchy Mitterd (S1) Lawary Muchy Mitterd (S1) Coconstraines (A1)		Sparsely Vegetated Co	ncave Si	urface (B8) (Fauge or Well Data (I				(OBL & F.	ACW : FACU	& UPL)		
Solis (Describe to depth needed to document the indicator, or confirm the absence of indicators) Map Unit Nume (Series & hase): Drainage Class: Permeability: Taxonomy (Subgroup): Field Observations Confirm Mapped Type? YES NO Depin Texture % (Ge-Gleyed) Color 4/2 Clouelloir Remarks Depin Texture % (Ge-Gleyed) Color 4/2 (Cl_D,RM, CS) (P1, M) Remarks Type! Co-concentruition D-depletion RM=reduced matrix CS=coated sand grains Location? PL-Pore Lining M=Matrix Indicators for Problematic Hydric Soils* Historial (A) Soin MaxPeriod (A) Soin MaxPeriod (A) Loamy Gleyed Matrix (C2) Conter Parite Redox (A) Black Hartin (A3) Soin MaxPeriod (A) Soin MaxPeriod (A) Down Gleyed Matrix (C2) Down Parite Redox (A) Statific Layers (A) Soin MaxPeriod (A) Back Karfaec (FP) Down Gleyed Matrix (S) Depleted Matrix (C2) Down Parite Redox (A) 2.cm Mark surfaec (FR) Soin MaxPeriod (S) Loamy Gleyed Matrix (S) Depleted Matrix (C2) Down MaxPeriod (C2) Do		Water-Stained Leaves	(B9)	(Other (Explain in Ren	narks)							
Notice (bit is indicated to document the indicator, or contirm the absence of indicators) Deputi Name (Series & base): Dermeability: Taxonomy (Subgroup): Field Observations Confirm Mapped Type? YES NO Matrix Redox Features Optimization Confirm Mapped Type? YES NO Deputi (no.be) Texture 1% Redox Features Optimization Confirm Mapped Type? YES NO Type? Concentration De-depletion RM=reduced matrix CS=coated sand grains Location?: PL=Pore Lining M=Matrix Hydric Soils Indicators: Indicator S for Problematic Hydric Soils* Hydric Soils Indicators: Indicator S for Problematic Hydric Soils* Hydric Soils Indicators: Indicator S for Problematic Hydric Soils* Hydric Soils Indicators: Indicator S for Problematic Hydric Soils* Hydric Soils Indicators: Indicator S for Problematic Hydric Soils* Hydric Soils Indicators: Indicator Sof Problematic Hydric Soils* <th cols<="" td=""><td>Remarks</td><td>: No wetland hydr</td><td>ology II</td><td>ndicators.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th>	<td>Remarks</td> <td>: No wetland hydr</td> <td>ology II</td> <td>ndicators.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Remarks	: No wetland hydr	ology II	ndicators.								
Map Unit Name (Series & hase): Drange Class: Permetability: Taxonomy (Subgroup): Field Observations Confirm Mapped Type? YES NO Deptition Texture % (Co-Clevel) % Control (Control (Cont(Control (Control (Control (Control (Control (Control (Solls (Describe to de	epth needed to docum	ent the indic	ator, or confir	m the absence	e of indicators)			chelbelander Hilferon and de la	
Taxnony (Subgroup): Field Observations Confirm Mapped Type? YES YES YES NO Depth Textures Matrix Matrix Color Color 56 Location? Remarks Depth Texture 56 (CD.RM, CS) Location? Remarks Type? Color 56 (CD.RM, CS) Location? Remarks Type? Concentration D=depletion RM-reduced matrix CS-conted sand grains Location? Indicators for Problematic Hydric Soils* Hydric Soils Indicators: Indicator for Problematic Hydric Soils* Indicators for Problematic Hydric Soils* Histic Epipeden (A2) Sandy Mucky Mineral (S1) Loany Mucky Mineral (F1) Const Prairie Redox (A16) Black Histis (A3) Se and Mucky Pater Prest Const Prairie Redox (A16) Const Prairie Redox (A16) Jpdrogen Salide (A4) Sandy Kleck (S5) Depleted Matrix (S6) Depleted Datk Surface (F17) Const Prairie Redox Ch16) Jpdrogen Salide (A4) Sandy Kleck (S6) Depleted Datk Surface (F7) Const Prairie Redox Ch16) Other (ESplain in Remarks) Stripped Matrix (S6) Depleted Dark Surface (F7) Redox Depressions (F3) Other (ESplain in Remarks) No	Map Unit	Name (Series & ha	se):		Drainage Clas	ss:				Permeab	ility:	1	
Depth Redox Features Depth Texture % Matrix Color (G= Gleged) Color % I.C.D.R.M., CS) Location ¹ (PL, M) Remarks Image: Construction of the construction of t	Taxonom	y (Subgroup):			Field Observa	ations Con	firm Mapped	Type?	anna an	YE	ES	NO	
Light Texture % Main X Color Color % (C,D),M, (CS) Listing Remarks (Index)	Donth	<u>Ma</u>	atrix	Mateiry Calar			True	Redox Feat	tures				
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Type! C=concentration D=depletion RM=reduced matrix CS=conted sand grains Location ² : PL=Pore Lining M=Matrix Hydric Soils Indicators: Indicators for Problematic Hydric Soils* Histosol (A1) Thick Dark Surface (A12) Loamy Gleyed Matrix (F2) Coast Prairie Redox (A16) Black Histic (A3) 5 cm Mucky Peat or Peat (S3) Domy Gleyed Matrix (F3) Coast Prairie Redox (A16) Black Histic (A3) 5 cm Mucky Peat or Peat (S3) Depleted Matrix (F3) Other (Explain in Remarks) Stratified Layers (A5) Sandy Redox (S5) Redox Dark Surface (F6) Depleted Below dark surface(A11) Stratified Layers (A5) Sandy Redox (S5) Redox Dark Surface (F6) Depleted Below dark surface(F6) Depleted Below dark surface; road fill. VES NO Wetland Determination Wetland Determination Wetland Determination Wetland Hydrology reuses that greater than 50% of all dominant species be OBL, FACW, or FAC. Wetland Hydrology reuses that greater than 50% of all dominant species be OBL, FACW, or FAC. Wetland Hydrology reuses that greater than 50% of all dominant species be OBL, FACW, or FAC. Wetland Hydrology reuses that greater than 50% of all dominant species be OBL, FACW, or FAC. <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>													
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Instite Explosion (A2)	Hi	istosol (A1)		Thick Dark Su	rface (A12)	Loamy	Mucky Miner	al (F1)	~ · ·	· ъ	10		
Hydrogen Suifale (A4) Sandy Gleyed Matrix (S4)	Bl	ack Histic (A3)		5 cm Mucky P	eat or Peat (S1)	Loamy	Gleyed Matrix	- (F2) -	Coast Prair	ie Redox (A mese Masse	16) s (F12)		
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Depleted Below dark surface(A11)	2.0	cm Muck (A10)		Sandy Redox (Stripped Matri	SS) x (S6)	Deplete	d Dark Surfac	e (F7)					
*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? X YES NO Note: The 1987 Corps Wetland Delineation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC. NO Wetland Hydrology Present? YES X 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 512 inches. We define the major portion as ≤ to 50% or ≤ 6 inches. Estimating the saturated capillary fringe to be 570 = 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"/thm = 18", at ≥6"/thm = 12".	De	epleted Below dark sur	rface(A1	1) 11	-	Redox	Depressions (H	78)					
Remarks: No soil sample obtained, refusal at surface; road fill. Wetland Determination Wetland Delincation Manual requires that greater than 50% of all dominant species be OBL, FACW, or FAC. Wetland Hydrology Present? NO Note: According the 1987 Corp Wetlands Delincation 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 sually defined to be \$12 inches. We define the major portion as \$10 Stype 2 or inches. Estimating the saturated capillary fringe to be \$27 and PD, VPD - 12", the depth of water table required to result in saturation in the major portion of the root zone on the 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"/nr = 18", at ≥6"/nr = 12".	*Indicator	rs of hydrophytic veg	etation a	and wetland hydrology m	ust be present, unles	s disturbed	or problemat	ic.			an		
Wetland Determination Wetland Vegetation Present? NO Note: Set to 20% or < 6 inches. Set define the major portion of the root zone on the calculated below. Soil Type Drainage Class Permeability Capillary Fringe + 46°=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 = 12", the depth of water table at 6-18" below surface depending on the soil type. SPD=6", PD & VPD at Criteria	Remarks	:: ample obtained, ref	fusal at	surface; road fill.				,					
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Wetland Hydrology Present? YES X 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 \$< 60 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	Note: The 19	987 Corps Wetland Deline	ation Ma	nual requires that greater than 50	0% of all dominant specie	es be OBL, FA	CW, or FAC.						
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 $\leq 1050\%$ 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. 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 MM RPF WS BOG	Wetland F	Iydrology Present?			YES		X NO						
initial to be SPD = 2" and PD, VPD = 12", the depth of water table required to result in subtration in the major portion of the root zone can be calculated below. Soil Type	Note: Accord	ding the 1987 Corp Wetlar getation The root zone is	nds Deline	eation Manual, wetland hydrolo lefined to be <12 inches. We d	gy criteria are met if soil	is saturated w s \leq to 50% or	ithin the major p	ortion of the roc	ot zone of the				
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".	fringe to be	SPD = 2" and PD , $VPD =$	12", the d	lepth of water table required to a	result in saturation in the	major portion	of the root zone	can be calculate	ed below.				
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". <table> Wetland Soils Present? Image: Sed Structure Structure</table>	Soil Type		Drair	nage Class P	ermeability	Capill	ary Fringe	+6"	"=W.T. Depth	Criteria _			
SIDe VID at Solid Present? YES X 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. 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. Wetland Type: Duration Met? YES NO M RPE If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season? NO M RPF WS BOG SM AB Duration Met? YES X NO	The 1989 M	anual requires saturation to $x = 18^{\circ}$ or $x = 18^{\circ}$	o the surfa	ace defined by a water table at 6	-18" below surface deper	nding on the s	oil type.						
Note: A wetland resonant. Ites	Wetland S	лііs Present?	t <u>∼</u> 07Ш =		VFS	~							
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 M RPE If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season? SS RPF Is This Plot a Wetland? YES X NO SM AB	Note: A we	tland restoration site (mar	n-induced	wetland) is considered a distur	bed (atypical) situation i	n the 1987 Co	rp Wetlands De	lineation Manua	al. Soil indicator	s are often not	t reliable indicate	ors since	
Duration Met? YES NO M RPE If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season? SS RPF Is This Plot a Wetland? YES X NO	they reflect	pre-restoration conditions	rather that	an post-restoration conditions.	In accordance with the 1 ited evidence that the we	987 Manual, tland resulted	in such cases wh	ere necessary, a	a wetland determ	ination can be	made based on	the	
Duration Met? YES NO M RPE If all 3 parameters are met, are they or would they normally be present during a significant portion of the growing season? SS RPF Is This Plot a Wetland? YES X NO SM AB		y		,, , , , , , , , , , , , , ,						Wetland	і Туре:		
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? Plot ID: SS RPF SS	Duration	Met?			YES		NO		M		RPE		
Is This Plot a Wetland? Is This Plot a Wetland? YES X NO BOG	If all 3 parar	neters are met, are they or	would th	ey normally be present during	a significant portion of the	ne growing se	ason?		SS	<u> </u>	RPF		
Is This Plot a Wetland? YES X NO SM AB									WS		BOG		
	a second of the												

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I-94 Interchange	Date: 7/	1/2012			•
Applicant/Owner: WisDOT	County:	St. Croi	x		
Investigator(s): Lindsay Tekler and Derek Huebsch	State: W	[
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 Situatio	n)?	YES	X	NO
Plot #: Wet 2	Is the area potentially naturally problematic?		YES	X	NO
Plot Description: North of Kwik Trip, STH 128	hydrolog	y)?			
	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" dbb, Shrubs (S) <3" dbb, >3,2' tall, & Woody Vines (V)

51 at 1003 (1) 51 radius pior, 50 radius pior 101. 1100s (1) -5 uoir, -51 uoir, -52 uoi										
· D	ominant Species	%	Indicator	Stratum		Non-Dominant Species	%	Indicator	Stratum	
1.	<i>Typha angustifolia</i> Narrow Leafed Cattail	40	OBL	Н	1.	Carex vulpinoidea Fox Sedge	20	FACW	Н	
2.	<i>Typha latifolia</i> Broad leafed Cattail	30	OBL	Н	2.					
3.	Phalaris arundinaceae Reed Canary Grass	30	FACW	Н	3.					
4.					4.					
5.					5.					
6.					6.					
7.					7.					
8.					8.					
9.					⁹ .					
10.					10.					
	-	100%								

	Prevalence Index Worksheet:	Hydrophytic Vegetation Indicators
Total % Cover of:	Multiply By:	Dominance Test is >50% <u>X</u> YES <u>NO</u>
		Prevalence Index is < or =3.01 YES NO
OBL species:	1	Morphological Adaptations* (Provide supporting data in Permarka or on a separate sheet) YES NO
FACW species:	2	Problematic Hydrophytic Vegetation1 (Explain) YES NO
FAC species:	3	
FACU species:	4	"indicators of nyuric son and wenand nyurology must be present, unless disturbed or problematic.
UPL species:	5	Hydrophytic Vegetation Present?
TOTAL (A):	TOTAL (B):	Yes/No
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?:YesXNo	Depth (inches) Water in well?: Yes No Depth (inches)
Water table present?:XYesNo	5 Depth (inches) Saturation Present?: X Yes No 0 Depth (inches)
	· ·
Remarks:	

Primary	Indicators: (1 or m	ore requ	Wetla uired, check all that app	nd Hydrology I ly)	Indicato	rs:	Seconda	ary India	cators:	(2 or more	e required)			
s	urface Water (A1)			Aquatic Fauna (B13)	B14)			Surface Soil Cracks (B6)						
_X H	ligh Water Table (A2))	······	The Aquatio T fails (514)		_X	Drainage Patterns (B10)						
x s	aturation (A3)		-	Hydrogen Sulfide Od	or (C1)			Dry-Seas	on Wate	er Table (C2	2)			
V	Vater Marks (B1)			Oxidized Rhizosphere	s on Living	g Roots (C3)		Crayfish	Burrow	s (C8)	(00)			
	ediment Deposits (B2) Drift Deposits (B3)	.)		Presence of Reduced	fron (C4)			Saturation Stunted of	n Visibl	ed Plants (I	(C9) D1)			
A	Igal Mat or Crust (B4)		Recent Iron Reduction	in Tilled S	Soils (C6)	_X_	Geomorp	hic Pos	ition (D2)				
<u>I</u> I	ron Deposits (B5)	A	(D 7)	This Music Surface (1 m 1 mou .	(ee)	v	EAC No	steel Tor	-+ (D 5)				
II	nundation visible on A	Aeriai im	lagery (B7)	Gauge or Well Data (ר) ופר		_^	FAC-Net	Neutra	al Test (3	; ; 0)			
U	Water Steined Leowee			Other (Evaluin in Rea	oorka)			(OI	BL & FAC	CW : FACU&	: UPL)			
Pomarks	•	(69)			laiks)							an a		
Remarks	•		Soils (D. 11 / 1	11				6 ! 4! .						
X			SOUS (Describe to d	epth needed to docum	ent the ind	cator, or confirm	the absenc	e of indic	ators)	Dama aab ili				
Map Unit	Name (Series & ha	se):		Drainage Cla	ss:	C) () 10	F 0			Permeabili				
Taxonom	y (Subgroup):			Field Observ	ations Coi	ifirm Mapped	Type?			YES		NO		
Denth	M;	atrix	Matrix Color		1	Type ¹	edox Fea	Locati	on ²					
(Inches)	Texture	%	(G= Gleyed)	Color	%	(C,D,RM,	CS)	(PL, N	M)	a	Remarks			
0-4	Sandy Loam	90	10YR 3/2	7.5YR 5/8	10	С		М						
4-20	Sand	100	10YR 5/3											
											-			
					_									
Type ¹ C=	concentration D=d	epletion	RM=reduced matrix C	S=coated sand grain	ns Locat	on ² : PL=Pore 1	Lining M=	Matrix	I					
Hydric S	Soils Indicators:			oga (ng tanang sa			99999999999999999999999999999999999999	Indicat	ors for	Problema	tic Hydric	Soils*		
Hi	stosol (A1)		Thick Dark Su	urface (A12)	Loam	y Mucky Minera	l (F1)					anna airtean ai		
Hi	stic Epipedon (A2)		Sandy Mucky	Mineral (S1) Peat or Peat (S3)	Loam	y Gleyed Matrix	(F2)	Coast	t Prairie Mangan	Redox (A1	6) (F12)			
Hy	vdrogen Sulfide (A4)		Sandy Gleyed	Matrix (S4)	Deple	ted Matrix (F3)	(TC)	Oth	er (Expl	ain in Rema	urks)			
Str	ratified Layers (A5)		Sandy Redox Stripped Matr	(S5) ix (S6)	A Ket Denle	ted Dark Surface	(F0) (F7)							
De	pleted Below dark su	rface(A1	1) Support third	in (50)	Redox	Depressions (F8	B)							
*Indicator	s of hydrophytic veg	etation a	and wetland hydrology m	ust be present, unle	ss disturbe	d or problemati	c.							
Remarks	:													
				1							maxaa aa ahaa ahaa ahaa ahaa ahaa ahaa a			
				Wetland	l Deter	mination								
Wotland W	agatation Present?			V VFS										
Note: The 10	egetation r resent:	ation Mar	nual requires that greater than 4	A ILS	es be OBL									
Wetland H	ivdrology Present?		nual requires that greater than .	X YES	·									
Note: Accord	ling the 1987 Corp Wetla	nds Deline	eation Manual, wetland hydrol	ogy criteria are met if soi	l is saturated	within the major po	rtion of the ro	oot zone of	the					
prevalent veg	getation. The root zone i $SPD = 2^{\circ}$ and PD VPD =	s usually d	leftined to be ≤ 12 inches. We lepth of water table required to	define the major portion a result in saturation in the	as \leq to 50% c	$r \le 6$ inches. Estime on of the root zone of	ating the satu can be calcula	rated capill ted below.	ary					
Soil Type		Drair	hage Class]	Permeability	Capi	llary Fringe	+6	5"=W.T. I	Depth C	riteria				
The 1989 Ma SPD=6" PT	anual requires saturation () & VPD at $\leq 6''/hr = 18'$	o the surfa	ace defined by a water table at	6-18" below surface depe	nding on the	soil type.								
Wetland S	oile Present?	к <u>-</u> 0 /ш	12.	X VES										
Note: A we they reflect presence of	tland restoration site (ma pre-restoration conditions hydrophytic vegetation a	n-induced s rather that	wetland) is considered a distu an post-restoration conditions.	rbed (atypical) situation In accordance with the ented evidence that the w	in the 1987 (1987 Manua etland result	Corp Wetlands Deli , in such cases whe ed from human acti	neation Manu re necessary, vities.	ual. Soil in a wetland	dicators a determin	are often not 1 ation can be r	eliable indicat nade based on	ors since the		
presence of	_,, regennin a		,							Wetland	Туре:			
Duration	Met?		•	X YES		NO		X	М		RPE			
If all 3 paran	neters are met, are they o	r would th	ney normally be present during	a significant portion of	the growing :	eason?			SS		RPF			
				[]		lJ			WS		BOG			
Is This Plo	ot a Wetland?			X YES		NO			SM DM		AB			
, I	TUE ED:								DIVI					

(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 H	Iuebscl	h				State: WI					
Normal climatic conditions on site typical for this time of year? Yes		Do	"normal ci	rc	umstances" exist on the	site?	x	YES	NO		
Transect #:		Is th	ne site sign	ifi	cantly disturbed (Atypic	cal Situation)?	X	YES	NO		
Plot #: Up 2		Is th	ne area pot	en	tially naturally problem	atic?		YES X	NO NO		
Plot Description:		Тур	e of atypic	al	or problem area (soils,	vegetation, hydr	olog	y)? Mowed Ve	g. & Soils		
			Vege	eta	ation						
Dominant species are the most abundant species in dominance measure are also dominant. Non-dom Strata = Herbs (\mathbf{H}) 5'radius plot; 30' radius plot.	1 each s iinant sp for: Tre	tratum that su becies used if es (T) >3" dbł	um to 50% dominant 1, Shrubs (i	of sp S)	f total dominance measur ecies are equal in numbe <3" dbh, >3.2' tall, & Woo	re. Any addition er. dy Vines (V)	al spe	ecies comprisir	ng 20% of total		
Dominant Species	%	Indicator	Stratum	Π	Non-Dominant	Species	%	Indicator	Stratum		
Poa pratensis Kentucky Bluegrass	- 30	FAC	Н		1. Carex pennsylvar. Pennsylvania Sed	nica ge	8	OBL	Н		
		1		11				1			

۷.		2.	Reed Canary Grass	0	FACW	п
3.		3	Taraxacum officinale Common Dandelion	4	FACU	Н
4.		4.	Lotus Corniculatus Birdsfoot Trefoil	5	FACU	Н
5.		5	Achillea Millefolium Yarrow	5	FACU	Η
6.		6				
7.		7.				
8.		8				
9.		9				
10.		10				

Dominance Test: % of dominant specie	100%		
Prevalence Index Worksheet:	dicators		
Total % Cover of: Multiply By:	Dominance Test is >50% Prevalence Index is < or =3.01	<u>X YES</u> <u>NO</u> VES <u>NO</u>	
OBL species: 1	Morphological Adaptations* (Provide supporting	YES NO	
FACW species: 2	Problematic Hydrophytic Vegetation1 (Explain)	YES NO	
FAC species: 3	*Indicators of hydric soil and wetland hydrology must be prese	ent, unless disturbed or problematic.	
FACU species: 4			
UPL species: 5	Hydrophytic Vegetation	Present?	
TOTAL (A): TOTAL (B):	Yes/No		

Hydrology

Index (B/A):

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

D			Wetla	nd Hydrology I	ndicato	rs:	Secondar	y Indicators	: (2 or mo	re required)		
Primary In	noicators: (1 or more that is a second secon	ore requ	ured, check all that app	My) Aquatic Fauna (B13)			Surface Soil Cracks (B6)					
Hi	gh Water Table (A2)			True Aquatic Plants (E	814)	·	E	Drainage Patter	ns (B10)			
Sat	turation (A3)			Hydrogen Sulfide Odo	ogen Sulfide Odor (C1) Dry-Season Water Table (C2							
Wa	ater Marks (B1)			Oxidized Rhizospheres	s on Living	Roots (C3)	C	Crayfish Burrov	ws (C8)	1 (20)		
Sec Dr	diment Deposits (B2) ift Deposits (B3))		Presence of Reduced l	ron (C4)			aturation Visit	ole on Aeria sed Plants (1 (C9) (D1)		
	gal Mat or Crust (B4)		Recent Iron Reduction	in Tilled S	oils (C6)	G	eomorphic Po	sition (D2)	÷		
Iro Inu	n Deposits (B5) indation Visible on A	Aerial Im	agery (B7)	Thin Muck Surface (C	7)		F	AC-Neutral T	est (D5)			
Sp:	arsely Vegetated Cor	ncave Su	rface (B8)	Gauge or Well Data (I)9)			FAC-Neut	tral Test ((:) & UP()		
Wa	ater-Stained Leaves ((B9)		Other (Explain in Rem	arks)			(ODL & FA	CW / FACO	a orig		
Remarks:	No wetland hydro	ology in	dicators.				алуын түүнүктөлүсүстэнтэгэн байлан	ήματο C.C.C.A.μ.				
	-		Soils (Describe to d	lepth needed to docume	ent the indic	cator, or confirm	n the absence	of indicators)				
Map Unit N	ame (Series & has	se):		Drainage Clas	s:				Permeabi	ility:		
Taxonomy	(Subgroup):			Field Observa	tions Con	firm Mapped	Туре?		YE	S NO		
	Ma	atrix				R	edox Feat	ures				
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type (C,D,RM,	CS)	Location ² (PL, M)		Remarks		
Type ¹ C=c	oncentration D=de	epletion	RM=reduced matrix C	S=coated sand grain	s Locatio	on ² : PL=Pore	Lining M=M	⁄latrix				
Hydric So	oils Indicators:					and the second	I	Indicators fo	r Problem	natic Hydric Soils*		
Hist Hist Blac Hyd Stra 2 cn Dep *Indicators	Histosol (A1) Thick Dark Surface (A12) Loamy Mucky Mineral (F1) Histosol (A2) Sandy Mucky Mineral (S1) Loamy Mucky Mineral (F1) Black Histic (A3) 5 cm Mucky Peat or Peat (S3) Depleted Matrix (F2) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Sandy Gleyed Matrix (S4) Medox (S5) Depleted Matrix (F3) Other (Explain in Remarks) 2 cm Muck (A10) Stripped Matrix (S6) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Depleted Below dark surface(A11) Redox Depressions (F8) Redox Depressions (F8)											
Remarks:									<u></u>	*********		
NO SOII SAN	nple obtained, rei	usai at	surface; road fill.									
				Wetland	Detern	nination						
Wetland Ve	getation Present?			X YES		NO						
Note: The 198' Wetland Hy	7 Corps Wetland Deline	ation Man	ual requires that greater than :	50% of all dominant specie	es be OBL, F.	ACW, or FAC.						
Note: Accordin prevalent vege fringe to be SP	ing the 1987 Corp Wetlan tation . The root zone is D = 2" and PD, VPD =	nds Deline s usually de 12", the de	tation Manual, wetland hydrol efined to be ≤ 12 inches. We epth of water table required to	ogy criteria are met if soil define the major portion as result in saturation in the	is saturated v s \leq to 50% or major portion	within the major point ≤ 6 inches. Estimation of the root zone	ortion of the room nating the satura can be calculate	t zone of the ted capillary d below.				
Soil Type		Drain	age Class	Permeability	Capill	lary Fringe	+6"	=W.T. Depth	Criteria			
The 1989 Man SPD=6", PD &	ual requires saturation to & VPD at <6"/hr =18', at	o the surfa t $\geq 6''/hr =$	ce defined by a water table at 12".	6-18" below surface deper	nding on the s	oil type.						
Wetland So Note: A wetla they reflect pro- presence of hy	ils Present? and restoration site (man e-restoration conditions vdrophytic vegetation ar	n-induced rather tha id wetland	wetland) is considered a distu n post-restoration conditions. I hydrology if there is docume	YES rbed (atypical) situation i . In accordance with the 1 ented evidence that the we	n the 1987 C 987 Manual, tland resulted	X NO orp Wetlands Del in such cases who i from human acti	ineation Manua ere necessary, a vities.	I. Soil indicators wetland determi	s are often not nation can be	t reliable indicators since made based on the		
Dunk	(a +9							ъл	Wetland	d Type:		
If all 3 parame	ters are met, are they or	r would the	ey normally be present during	g a significant portion of th	ie growing se	eason?		SS		RPF		
-	-			-	-			ws		BOG		
Is This Plot	a Wetland?			YES		X NO		SM		AB		
PI	ot ID:					·		DM				

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I94 interchange	Dat	Date: 7/11/2012						
Applicant/Owner: WisDOT	Cοι	unty: St. Ci	roix					
Investigator(s): Lindsay Tekler and Derek Huebsch	Stat	te: 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 Si	ituation)?		YES		X	NO	
Plot #: Wet 3	Is the area potentially naturally problematic?			YES		Х	NO	
Plot Description: Across from wet 4	Type of atypical or problem area (soils, veget	tation, hydro	logy	')?				

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)

Strata - HCIUS	(II) 5 Taulus plot, 50 Taulus plot I		cs(1) > abc	i, Sinuos ($\frac{3}{1}$	$\frac{1}{10000000000000000000000000000000000$			
D	ominant Species	%	Indicator	Stratum		Non-Dominant Species	%	Indicator	Stratum
1.	<i>Typha angustifolia</i> Narrow Leaf Cattail	40	OBL	Н	1.	<i>Typha latifolia</i> Broad Leaf Cattail	10	OBL	Н
- 2.	Phalaris arundinacea	30	FACW	Н	2.				
3.					3.				
4.					4.				
5.					5.				
6.					6.				
7.					7.				
8.					8.				
9.					9.				
10.					10.				
	Dominance Test: %	6 of do	minant spe	cies (all st	rata)	that are OBL, FACW, and/or F	FAC?		100%
	Prevalence Index Worksheet:					Hydrophytic Vegetat	tion In	dicators	
Total % Cover	of: Multiply By:				Domi	nance Test is >50%		X YES	NO
OBL species:	1				Morr	hence muex is < or =5.01 shological Adaptations* (Provide supp	orting	YES	NO
FACW species.					data	n Remarks or on a separate sheet)		YES	NO
FAC (r species.	2	-			Prob	ematic Hydrophytic Vegetation1 (Exp	olain)	YES	NO
FAC species:	3			*In	dicator	s of hydric soil and wetland hydrology must	t be pres	ent, unless disturb	ed or problematic.
FACU species:	4						•		-
UPL species:	5					Hydrophytic Vegeta	ation	Present?	
TOTAL (A): Prevalence	TOTAL (B):	•				Yes/No	0		
Index (B/A):									

Hydrology

Recorded Data (describ	e in remarks):		
Stream, lake, or tide gauge	Aerial photog	raphs Monitoring well (Other:
No Recorded Data Available			
Growing Season Dates/Days:			
	(To evaluate hydrologi	ic data from stream gauges/g.w. wells)	
Field Observations:			
Surface water present?:YesXNo	Depth (inches)	Water in well?:YesNo	Depth (inches)
Water table present?:XYesNo	16 Depth (inches)	Saturation Present?:X_YesNo	14 Depth (inches)
Remarks:			

														·
			Wetla	and I	Hydrology]	Indicato	rs:	Second	lary Indi	icators	: (2 (or mor	e required	l) .
Primary I	Indicators: (1 or m urface Water (A1)	nore req	uired, check all that ap	oply) Aquat	tic Fauna (B13)				Surface	Soil Cra	acks	(B6)	^	
н	igh Water Table (A2)		True	Aquatic Plants (1	B14)		· · · · · · · · · · · · · · · · · · ·	Drainag	e Patter	ns (B	10)		
	aturation (A3)			Hydro	ogen Sulfide Ode	Dry-Season Water Table (C2)								
W	/ater Marks (B1)			Oxidi	zed Rhizosphere	Crayfish	Burrov	vs (C	8)	-7				
Se	ediment Deposits (B2 prift Deposits (B3)	2)		Prese	nce of Reduced	Iron (C4)			Saturation Stunted	on Visit or Stres	ole on sed F	i Aerial Plants (I	(C9) D1)	
A	Igal Mat or Crust (B4	4)		Recer	nt Iron Reduction	n in Tilled S	oils (C6)	X	Geomor	phic Po	sitior	n (D2)		
Ir	on Deposits (B5)	A amin1 Ten		Thin	Music Surface ((77)	0115 (00)	v	FAC Na	utrol T	ant (T	15)		
	parsely Vegetated Co	meave Si	urface (B8)	Gauge	e or Well Data (D9)		_^	FAC-NC	Neutra	al Te	est (2:0)	
v,	ater-Stained Leaves	(B9)	······································	Other	(Explain in Ren	narks)			. (0	BL & FA	CW :	FACU &	ι UPL)	
Remarks:		(25)			(200))								
			Soils (Describe to	depth 1	needed to docum	ent the indi	cator, or co	onfirm the absen	ice of indi	cators)		() () () () () () () () () () () () () (
Map Unit 1	Name (Series & ha	ase):			Drainage Cla	ss:				Í	Per	meabil	ity:	
Taxonomy	(Subgroup):			ŀ	Field Observ	ations Con	firm Map	ped Type?				YES	3	NO
	M	atrix	<u></u>				r	Redox Fe	atures					<u> </u>
Depth	Texture	%	Matrix Color		Color			Гуре ¹	Locat	tion ²	I		Remarks	
(Inches)	Loam	0/	(G= Gleyed)	7	5VR 4/4	6	(C,D	,RM, CS)	(PL, M	M)	-			
5-20	Silt Loam	70	G1 5/10Y	7	5YR 4/6	30	C		M		G	eved N	 Aatrix	
	- Shit Ebahi	70			.511(4/0									
Type ¹ C=	concentration D=d	enletior	RM=reduced matrix	CS=co	pated sand grain	ns Locati	on ² : PL=F	Pore Lining M	 =Matrix		1			
Hydric S	Soils Indicators:	optonon			area balla Bran				Indica	tors fo	r Pr	oblem	atic Hydr	ric Soils*
His	stosol (A1)		Thick Dark S	Surface	(A12)	Loamy	/ Mucky M	(ineral (F1)						
His	stic Epipedon (A2)		Sandy Muck	cy Mine	ral (S1)	Loan	ny Gleyed	Matrix (F2)	Coas	st Prairi /Manga	e Rec	lox (Al	6) (F12)	
Hy	drogen Sulfide (A4)		Sandy Gleye	ed Matr	ix (S4)	Deplet	ed Matrix	(F3)	Otł	ier (Exp	olain	in Rem	(F12) arks)	
Str	atified Layers (A5)		Sandy Redox	x (S5) trix (S6	5	Redox Deplet	ed Dark Surf	ace (F6) irface (F7)						
De	pleted Below dark su	irface(Al	.1) Supped Wa	100 AL	,)	Redox	Depression	ns (F8)						
*Indicator	s of hydrophytic veg	getation	and wetland hydrology	must b	e present, unle	ss disturbed	t or proble	ematic.				MSC 444	<u></u>	
Remarks:	:							:						
A <mark>B-100-000-000-000-000-000-000-000-000-00</mark>			anna an				• . •						anan ana amin'ny fanina ana amin'ny fana	
1					Wetland	1 Deteri	ninatio	<u>n</u>	adimentationalisedationalisedationalised	Maingrowing and an and an and an				
Wetland V	egetation Present?				X YES			NO						
Note: The 19	87 Corps Wetland Delin	eation Ma	nual requires that greater than	n 50% of	f all dominant spec	ies be OBL, F	ACW, or FA	AC.						
Wetland H	ydrology Present?				X YES			NO						
Note: Accord prevalent veg fringe to be S	ling the 1987 Corp Wetle getation . The root zone $3PD = 2^{\circ}$ and PD, VPD =	ands Delin is usually = 12", the	eation Manual, wetland hydr defined to be ≤ 12 inches. W depth of water table required	rology cr /e define to result	iteria are met if soi the major portion in saturation in th	l is saturated v as ≤ to 50% or e major portic	within the ma r \leq 6 inches. on of the root	ajor portion of the Estimating the sat t zone can be calcu	root zone of turated capil lated below	f the llary				
Soil Type		Drai	nage Class	Perme	eability	Capil	lary Fringe	e +	-6" = W.T.	Depth	Crite	ria	-	
The 1989 Ma SPD=6", PD	nual requires saturation & VPD at <6"/hr =18',	to the surf at ≥6"/hr	ace defined by a water table a = 12".	at 6-18"	below surface depe	ending on the	soil type.							
Wetland S Note: A wet they reflect p presence of h	oils Present? tland restoration site (ma pre-restoration condition hydrophytic vegetation a	an-induced is rather th and wetlan	l wetland) is considered a dis an post-restoration condition d hydrology if there is docur	sturbed (ns. In ac mented e	X YES (atypical) situation (cordance with the evidence that the w	in the 1987 C 1987 Manual retland resulte	Corp Wetland , in such case d from huma	NO ls Delineation Ma es where necessar an activities.	nual. Soil i y, a wetland	ndicators I determi	are onation	ften not 1 can be	reliable indio made based	cators since on the
	-				L J		[]			1	W	etland	Туре:	
Duration A	Met?	ار از الارتيان	hay normally be served a - *	na o di	X YES	tha more -	encon?	NO	X	M			RPE	
II all 3 param	ieters are met, are they (or would t	ney normany be present durn	ing a sigi	micant portion of	are growing s	cason (SS			RPF	
Is This Die	at a Wetland?				X VFC			NO		WS SM	+		BUG AR	
15 I IIIS P 10	Plot ID:									DM	-		<u>הע</u>	

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

TT (1 1 0')	1001 01 00 1041 4 1					D (7/11/	010					
wetland Site:	1021-01-00 I-94 Interchange			· · · ·		Date: //11/.	2012					
Applicant/Ow	vner: WisDOT					County: St.	County: St. Croix					
Investigator(s): Lindsay Tekler and Derek Hu	State: WI										
Normal climatic conditions on site typical for this time of year? Yes Do "norm						"normal circumstances" exist on the site? X YES						
Transect #:			Is t	he site sign	ifican	tly disturbed (Atypical Situation)?	Х	YES	NO			
Plot #: Up 3		-	Is t	he area pot	ential	y naturally problematic?		YES	K NO			
Plot Description	n:		Тур	e of atypic	alor	problem area (soils, vegetation, hyder	irology	/)? Mowed V	eg. & Soils			
Barren				Vege	etati	Dn						
Dominant speci dominance mea Strata = Herbs	es are the most abundant species in sure are also dominant. Non-domi (H) 5'radius plot; 30' radius plot fo	each st nant sp or: Tre	ratum that s becies used in thes $(\mathbf{T}) > 3$ " db	um to 50% f dominant h, Shrubs (of tot specie S) <3"	al dominance measure. Any additions are equal in number. dbh, >3.2' tall, & Woody Vines (V)	nal spe	cies comprisi	ng 20% of total			
D	Dominant Species	%	Indicator	Stratum		Non-Dominant Species	%	Indicator	Stratum			
1.	Poa pratensis Kentucky Bluegrass	15	FAC	Н	1.	Solidago canadensis Canada Goldenrod	5	FACU	Н			
2.	Phalaris arundinaceae 10 FACW H 2. Asclepias syriaca Common Milkweed								Н			
3.	-		3.	Taraxacum officinale Common Dandelion	3	FACU	· H					
4.	Lotus Corniculatus	5	FACU	Н								

4.		4.	Lotus Corniculatus Birdsfoot Trefoil	5	FACU	Н
5.		5.	Achillea Millefolium Yarrow	5	FACU	Η
6.		6.			1	
7.		7.				
8.		8.				
. 9.	· · ·	9.				
10.		10.				

	100%						
	Prevalence Index Worksheet: Hydrophytic Vegetation						
Total % Cover of:	Multiply By:		Dominance Test is >50%	X YES	NO		
	interest by by t		Prevalence Index is < or =3.01	YES	NO		
OBL species:	1		Morphological Adaptations* (Provide supporting	VES	NO		
FACW species.	2		data in Remarks or on a separate sheet)	11.5			
FACT species.	**	_	Problematic Hydrophytic Vegetation1 (Explain)	YES	NO		
FAC species:	3	_					
EACU species	4		*Indicators of hydric soil and wetland hydrology must be prese	ent, unless distu	rbed or problematic.		
FACU species:		17 Tanar		_			
UPL species:	5	,	Hydrophytic Vegetation	Present?			
			Yes/No				
101AL (A):	TOTAL (B):						
Prevalence							
Index (B/A):							

Hydrology

Recorded Data	(describe	in remarks):		
Stream, lake, or tide gaug	ge	Aerial photo	graphs Monitoring well	Other:
No Recorded Data A	ailable			
Growing Season Dates/Days:				
		(To evaluate hydrolog	gic data from stream gauges/g.w. wells)	
Field Observations:				
Surface water present?:Yes	_XNo	Depth (inches)	Water in well?:YesNo	Depth (inches)
Water table present?:Yes	_XNo	Depth (inches)	Saturation Present?:YesX_N	lo Depth (inches)
Remarks:				

. i imai y i	ndicators: (1 or	more requ	ired, check all that a	pply)			Secon	ual y Inuicator	's: (2 or n	lore required)			
Su	urface Water (A1)			Aquatic Fauna (B13)	B14)			Surface Soil C	racks (B6))			
Hi	igh Water Table (A	2)	·	The Aquatic Plants (I	514)			_ Drainage Patterns (B10)					
Sa	aturation (A3)			Hydrogen Sulfide Odd	or (C1)		Dry-Season Water Table (C2)						
W	ater Marks (B1)			Oxidized Rhizosphere	s on Living	Roots (C3)	Crayfish Burrows (C8)						
Se	rift Deposits (B3)	32)		Presence of Reduced 1	fron (C4)			Sturation Visible on Aerial (C9) Stunted or Stressed Plants (D1)					
_ Al	Igal Mat or Crust (I	gal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geo								2)			
_ Irc	undation Visible or	1 Aerial Im	agery (B7)	Thin Muck Surface (C	27)	. ,	X	FAC-Neutral	Fest (D5)				
Sp	arsely Vegetated (Concave Su	rface (B8)	Gauge or Well Data (I	D9)			FAC-Neut	ral Test	(1:0)			
w	ater-Stained Leave	s (B9)		Other (Explain in Ren	narks)			(OBL & F	AUW : FAU	LU & UFL)			
emarks:	No wetland hyd	lrology in	dicators.										
			Soils (Describe to	o depth needed to docum	ent the indi	cator, or confi	irm the abser	nce of indicators))				
ap Unit N	Name (Series & I	nase):		Drainage Cla	ss:				Permea	ıbility:			
axonomy	(Subgroup):			Field Observa	ations Con	firm Mappe	d Type?		J	ÆS	NC		
	N				Redox Fe	eatures							
Depth Inches)	Texture	%	Matrix Color $(G = Gleved)$	Color	%		pe ¹ M CS)	(PL M)		Remarks			
<u>intenes</u>						(0,0,10		(12,111)					
									-				
<u></u>									1				
									-				
vpe ¹ C=c	concentration D=	depletion	RM=reduced matrix	CS=coated sand grain	ns Locatio	on ² : PL=Por	re Lining M	I=Matrix	- L				
vdric S	oils Indicators	•						Indicators f	or Proble	ematic Hvdri	c Soils		
Hist Hist Bla Hyc Stra	tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4 atified Layers (A5))	Thick Dark Sandy Muci 5 cm Muck Sandy Gley Sandy Redd	Surface (A12) ky Mineral (S1) y Peat or Peat (S3) ed Matrix (S4) ox (S5)	Loamy Loamy Depleta Redox	Mucky Mine Gleyed Matr ed Matrix (F3 Dark Surface	eral (F1) rix (F2) 3) e (F6)	Coast Prain Iron/Mang Other (Ex	rie Redox (anese Mas xplain in R	(A16) ses (F12) emarks)			
Hiss Hiss Bla Hyc Stra 2 cr Dep Indicators	tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4 atified Layers (A5) m Muck (A10) pleted Below dark s s of hydrophytic ve) surface(A11 segetation a	Thick Dark Sandy Muck 5 cm Muck Sandy Gley Sandy Redo Sandy Redo Stripped Ma 1)	Surface (A12) ky Mineral (S1) y Peat or Peat (S3) ed Matrix (S4) xx (S5) atrix (S6) must be present, unles	Loamy Loamy Deplete Redox Deplete Redox	Mucky Mine Gleyed Matr ed Matrix (F3 Dark Surface ed Dark Surfa Depressions (l or problema	eral (F1) rix (F2) 8) e (F6) ace (F7) (F8) atic.	Coast Prain Iron/Mang Other (Ex	rie Redox (anese Mas xplain in R	(A16) ses (F12) emarks)			
Hist Hist Bla Hyc Stra 2 cr Dep Indicators cemarks: fo soil san	tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4 atified Layers (A5) m Muck (A10) oleted Below dark s of hydrophytic very mple obtained, r) surface(A11 egetation a refusal at :	Thick Dark Sandy Muck 5 cm Muck Sandy Gley Sandy Redo Stripped Ma t) nd wetland hydrology surface; road fill.	Surface (A12) ky Mineral (S1) y Peat or Peat (S3) ed Matrix (S4) ox (S5) atrix (S6) y must be present, unles	Loamy Loamy Deplete Redox Deplete Redox ss disturbed	Mucky Mine Gleyed Matr ed Matrix (F3 Dark Surface ed Dark Surfa Depressions (l or problema	eral (F1) rix (F2) 3) e (F6) ace (F7) (F8) atic.	Coast Prain Iron/Mang Other (Ex	rie Redox (anese Mas xplain in R	(A16) ses (F12) emarks)			
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Hist Hist Bla Bla Stra 2 cr Dep Indicators emarks: o soil san Vetland Ve ote: The 198 Vetland Hy ote: Accordi evalent vege nge to be SI	tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4 atified Layers (A5) m Muck (A10) oleted Below dark s of hydrophytic vo mple obtained, r egetation Present? 87 Corps Wetland Deli ydrology Present? ing the 1987 Corp We etation . The root zone PD = 2" and PD, VPD) surface(A11 segetation a refusal at a meation Manu- tlands Deline b is usually de = 12°, the de	Thick Dark Sandy Muci 5 cm Muck Sandy Gley Sandy Redc Stripped Ma Stripped Ma 1) and wetland hydrology surface; road fill.	Surface (A12) ky Mineral (S1) y Peat or Peat (S3) ed Matrix (S4) ox (S5) atrix (S6) Wetland X YES rology criteria are met if soil y define the major portion a to result in saturation in the	Loamy Loamy Depleta Redox Bedox Se disturbed Depleta Redox Se disturbed	Mucky Mine Gleyed Matr ed Matrix (F3 Dark Surface ed Dark Surfa Depressions (l or problema nination ACW, or FAC. X NO within the major ≤ 6 inches. Est n of the root zor	eral (F1) rix (F2) 3) e (F6) ace (F7) (F8) atic.) r portion of the timating the sa ne can be calcu	Coast Prain	rie Redox (anese Mas xplain in R	(A16) ses (F12) emarks)	-		
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Hist Hist Bla Hyc Stra 2 cr Dep Indicators emarks: o soil san 'etland Ve ite: The 198 'etland Hy ite: Accordi ivalent vege nge to be SI il Type e 1989 Mar D=6", PD	tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4 atified Layers (A5) m Muck (A10) oleted Below dark s of hydrophytic vo mple obtained, r egetation Present? 87 Corps Wetland Deli ydrology Present? ing the 1987 Corp We etation . The root zono PD = 2" and PD, VPD nual requires saturation & VPD at <6"/hr =18") surface(A11 egetation a refusal at a ineation Manu- tlands Deline z is usually du $= 12^{\circ}$, the du Drain- n to the surfact , at $\geq 6^{\circ}/hr =$	Thick Dark Sandy Muci 5 cm Muck Sandy Gley Sandy Redc Stripped Ma Stripped Ma Stripped Ma Stripped Ma Stripped Ma al) and wetland hydrology surface; road fill.	Surface (A12) ky Mineral (S1) y Peat or Peat (S3) ed Matrix (S4) ox (S5) atrix (S6) Wetland X YES rology criteria are met if soil y define the major portion a to result in saturation in the Permeability at 6-18" below surface depe	Loamy Loamy Deplete Redox Deplete Redox ss disturbed Determ es be OBL, F. is saturated v ss \leq to 50% or e major portio Capill nding on the s	Mucky Mine Gleyed Matr ed Matrix (F3 Dark Surface ed Dark Surfa Depressions (I or problema nination ACW, or FAC. X NO vithin the major ≤ 6 inches. Est n of the root zor lary Fringe soil type.	eral (F1) rix (F2) 3) e (F6) ace (F7) (F8) atic.	Coast Prain Iron/Mang Other (Ex Other (Ex root zone of the turated capillary lated below.	rie Redox (anese Mas xplain in R	(A16) ses (F12) emarks)			
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Hist Hist Bla Stra 2 cr Dep Indicators emarks: o soil sar /etland Ve ote: The 198 /etland Hy ote: Accordi evalent vege nge to be SI oil Type te 1989 Mar 'D=6", PD /etland Sc ote: A wetl ey reflect pr esence of hy uration W all 3 parame	tosol (A1) tic Epipedon (A2) ck Histic (A3) drogen Sulfide (A4) atified Layers (A5) m Muck (A10) pleted Below dark is s of hydrophytic vi mple obtained, r egetation Present? 37 Corps Wetland Deliv ydrology Present? ing the 1987 Corp We teation. The root zone PD = 2" and PD, VPD mual requires saturation & VPD at <6"/hr =18" bils Present? and restoration site (n re-restoration site (n re-resto) surface(A11 segetation a refusal at : an eation Manu- thands Deline is usually de = 12", the de Drain- n to the surfact , at ≥ 6 "/hr = nan-induced - ons rather tha and wetland	Thick Dark Sandy Muci 5 cm Muck Sandy Gley Sandy Redu Stripped Ma Stripped Ma Stripped Ma Stripped Ma Stripped Ma Surface; road fill. ual requires that greater that eation Manual, wetland hyd efined to be ≤12 inches. W epth of water table required age Class ce defined by a water table 12". wetland) is considered a di in post-restoration conditio I hydrology if there is docu	Surface (A12) ky Mineral (S1) y Peat or Peat (S3) ed Matrix (S4) xx (S5) atrix (S6) Wetland X YES n 50% of all dominant speci YES rology criteria are met if soil Ve define the major portion a to result in saturation in the Permeability at 6-18" below surface depe YES isturbed (atypical) situation ns. In accordance with the mented evidence that the we YES ing a significant portion of t	Loamy Loamy Deplete Redox Deplete Redox s disturbed I Determ es be OBL, F. is saturated v is \leq to 50% or e major portion Capill nding on the s in the 1987 C 1987 Manual, etland resulted he growing so	Mucky Mine Gleyed Matr ed Matrix (F3 Dark Surface ed Dark Surface ed Dark Surface or problema mination \square NC ACW, or FAC. X NO vithin the major ≤ 6 inches. Est n of the root zor lary Fringe soil type. X NO orp Wetlands D in such cases w d from human a \square NC eason?	eral (F1) rix (F2) 3) e (F6) ace (F7) (F8) atic. D D protion of the timating the sa ne can be calcu 	Coast Prain Iron/Mang Other (Ex Other (Ex root zone of the turated capillary lated below. +6''=W.T. Depth	rie Redox (anese Mas cplain in R criteria	(A16) ses (F12) emarks) not reliable indica be made based or and Type: RPE RPF BOG	ttors since the		

	(1987 CO)	E Wetlands	Deline	eation Ma	nual, 2	010 Midwest Supp	lement)				
Wetland Site:	1021-01-00 194			29,000 million and an			Date: 7/11/2	2012 ·			
Applicant/Own	ner: WisDOT						County: St.	Croix			
Investigator(s)	: Lindsay Tekler and Derek Hu	ıebsch					State: WI		-		
Normal climatic	conditions on site typical for		Do	"normal c	ircums	tances" exist on the	site?	x	YES	NO	
this time of year	r? Yes			· · ·	. (*	1 1 1 1 1 7 4 7 1	1.0% // 20		NTO N		
Transect #:			Is ti	he site sigr	ufican	ly disturbed (Atypi	cal Situation)?	_	YES X	NO	
Plot #: Wet 4			IS U	ne area potentially liaturally problematic?							
Plot Description	511.		1 y j			stoblem area (sons,	vegetation, nyc	irology):		
~		1	.1 .	veg	etatio	<u>on</u>	1 1 1			2000/ 01 1	
Dominant specie	es are the most abundant species in sure are also dominant Non-domi	each stratur	n that s	um to 50% f dominant	of tota specie	al dominance measures are equal in number	re. Any additio	onal spe	cies comprisin	g 20% of total	
Strata = Herbs ((H) 5'radius plot; 30' radius plot fo	or: Trees (T) >3" dbl	h, Shrubs (Specie S) <3"	dbh, >3.2' tall, & WOO	dy Vines (V)				
D	ominant Species	% Inc	icator	Stratum	Í	Non-Dominant	Species	%	Indicator	Stratum	
1	Carex stricta	15 (ופו	ц	1						
1.	Tussock Sedge	15 0	JDL	11							
2.	<i>Fraxinus pennsylvanica</i> Green Ash	40 FA	ACW	Т	2.						
3.					3.						
4											
-											
5.					5.						
6.					6.						
7.					7.						
8.					8.						
9.					9.						
10.					10.						
لىمىيى بەرەم جىنىتىنى كەن	D T T					that are OBLEA	CW and/an I		1990	1000/	
	Dominance Test: %		ant spe	cies (all s	rata)	Inat are ODL, FA	C w, and/or F			100%	
T-4-1.0/ Comm	Malfala Day				Domi	Hydrof nance Test is >50%	mytic vegetat	ion in	X YES	NO	
Total % Cover	or: Multiply By:				Preva	lence Index is < or =3	5.01		YES	NO	
OBL species:	1				Morp data i	hological Adaptation: n Remarks or on a se	s* (Provide supp parate sheet)	orting	YES	NO	
FACW species:	2				Probl	ematic Hydrophytic V	Vegetation1 (Exp	olain)	YES	NO	
FAC species:	3			*1-	diantor	of bydric soil and wotla	nd hydrology must	ho nros	nt unlose disturb	ad ar problematic	
FACU species:	4				anator	, or nyuric son anu wella	na nyarotogy musi	or hread	ing unicos uistul D	a or problematic.	
UPL species:	5					Hydrop	hytic Vegeta	ation	Present?		
TOTAL (A):	TOTAL (B):						Yes/No	0			
Prevalence											
Index (B/A):				<u> </u>	1 .						
~			Hingicanococococococococococococococococococo	Hyd	rolo	gy	10111711111111111111111111111111111111				
Reco	rded Data (describe	in remarks)	: miclat	otomo-1-		Monitoria11		0			
Stream	n, lake, or tide gauge	At	riai pri	otographs		Monitoring weil		ier:			
Growing Sease	on Dates/Days.										
Stowing Orda		(To evalu	ate hydr	rologic data	from st	ream gauges/g.w. wel	ls)				
Field Observa	ations:		-								
Surface water pr	resent?:YesXNo	Depth	(inches	s) Wate	er in w	ell?:Yes	No		_ Depth (inch	es)	
Water table pres	sent?: X_YesNo	16 Dept (inch	h es)	Satur	ration	Present?:XYes	sNo	14	Depth (inch-	es)	
Remarks:											

Primary	Indicators: (1 or m	ore requ	W uired, check all the	etland at apply)	Hydrology I	Indicato	ors:	Seconda	ry Indi	cators	(2 or mor	re required)	
·	Surface Water (A1)			_ Aqu _ True	atic Fauna (B13) e Aquatic Plants (I	314)			Surface :	Soil Cra	icks $(B6)$		
1	nigli water Table (A2)			Und	rogen Sulfide Odd	r(C1)			Dramage Fatterns (B10)				
\$	Saturation (A3)			IIyu	nogen Sumde Out	_X	Dry-Sea	son Wat	er Table (C	2)			
_X	Water Marks (B1) Sediment Deposits (B2)		_ Oxio	dized Rhizosphere	s on Living	g Roots (C3	3)	Crayfish Saturatic	Burrow Burrow	/s (C8) le on Aeriai	1 (C9)	
J	Drift Deposits (B3)	/	_	_ Pres	ence of Reduced I	fron (C4)	-		Stunted	or Stress	sed Plants (D1)	
<u> </u>	Algal Mat or Crust (B4 ron Deposits (B5))		Rec	ent Iron Reduction	in Tilled S	Soils (C6)	_X	Geomor	phic Pos	sition (D2)		
]	nundation Visible on A	Aerial Im	agery (B7)	_ Thir	1 Muck Surface (C	:7)		_X	FAC-Ne	utral Te	st (D5)		
_X Sparsely Vegetated Concave Surface (B8)					ge or Well Data (I	C 9)			FAC-	Neutra	al Test(CW:FACU	2:0) & UPL)	
Water-Stained Leaves (B9)					er (Explain in Ren	narks)			(,	
Remarks	•												
			Soils (Descril	e to depth	n needed to docum	ent the ind	icator, or co	onfirm the absence	e of indic	cators)			
Map Unit	Name (Series & ha	se):			Drainage Clas	ss:					Permeabi	lity:	
Taxonom	Taxonomy (Subgroup):					ations Co	nfirm Map	pped Type?			YE	S	NO
	Ma	atrix						Redox Fea	tures				
Depth (Inches)	Texture	%	Matrix Colo (G= Gleyed	r)	Color	%	(C,D	Type ¹ D,RM, CS)	Locati (PL, 1	ion² M)		Remarks	
0-4	Silt Loam	100	10YR 3/2										
4-20	Loam	75	10YR 4/2		10YR 4/6	25	C		M				
	,												
Type ¹ C=	-concentration D=de	epletion	RM=reduced mat	rix CS=c	coated sand grain	is Locati	ion ² : PL=F	Pore Lining M=	Matrix				
Hydric	Soils Indicators:				and a second	Y a Te and the Allowed Street and The Street			Indicat	tors for	· Problem	atic Hydrid	e Soils*
H H B H St 2 D	istosol (A1) istic Epipedon (A2) lack Histic (A3) ydrogen Sulfide (A4) ratified Layers (A5) cm Muck (A10) epleted Below dark sur	face(A1	Inick D Sandy N Sandy N Sandy C Sandy C Sandy R Sandy R Stripped	ark Surfac Jucky Mir ucky Peat Jeyed Ma Ledox (S5) I Matrix (S	face (A12) Loamy Mucky Mineral (F1) 4ineral (S1) Loamy Gleyed Matrix (F2) at or Peat (S3) X Depleted Matrix (F3) Aatrix (S4) Redox Dark Surface (F6) (S6) Depleted Dark Surface (F7) Redox Depressions (F8) Redox Depressions (F8)					t Prairie Mangar her (Exp	e Redox (A) nese Masses lain in Rem	16) s (F12) arks)	·
*Indicato	rs of hydrophytic veg	etation a	ind wetland hydrol	ogy must	be present, unles	s disturbe	d or proble	ematic.					
Remarks													
					Wetland	Deter	minatio	<u> </u>		an ny manana amin'ny am	9/70///////////////////////////////////	ald bir manaa baliya hake baliya ala ba	
	29 7 - Maria ya Kanana kata kata kata kata kata kata kata ka				vi cuanu	Detter		/ 11 	V-unistitutesentiscum			2	
Wetland V	egetation Present?				X YES			NO					
Note: The 1	987 Corps Wetland Deline	ation Man	ual requires that greate	r than 50%	of all dominant speci	es be OBL, I	FACW, or FA	AC.					
Wetland I	Iydrology Present?				X YES			NO					
Note: Accor prevalent ve fringe to be	ding the 1987 Corp Wetlar getation. The root zone is SPD = 2" and PD, VPD =	nds Deline s usually d 12", the d	ation Manual, wetland efined to be ≤12 inche epth of water table requ	hydrology o s. We defin nired to resu	criteria are met if soil te the major portion a lt in saturation in the	is saturated s \leq to 50% c major portic	within the ma or ≤ 6 inches. on of the root	ajor portion of the ro Estimating the satur t zone can be calculat	ot zone of ated capill ted below.	the lary			
Soil Type		Drain	age Class	Perm	neability	Capi	llary Fringe	e +6'	"=W.T.]	Depth C	Criteria		
The 1989 M SPD=6", PI	anual requires saturation to D & VPD at <6"/hr =18', a	o the surfa t ≥6"/hr =	ce defined by a water to 12".	able at 6-18	" below surface deper	nding on the	soil type.						
Wetland S	Soils Present?				X YES			NO					
Note: A we they reflect presence of	tland restoration site (mar pre-restoration conditions hydrophytic vegetation ar	n-induced rather thand wetland	wetland) is considered in post-restoration cond hydrology if there is a	a disturbed litions. In a locumented	l (atypical) situation i accordance with the 1 evidence that the we	in the 1987 (987 Manual tland resulte	Corp Wetland , in such case ed from huma	ls Delineation Manues es where necessary, an activities.	al. Soil in a wetland	dicators determin	are often not ation can be	reliable indicat made based on	the
					[]		F1				Wetland	Туре:	
Duration	Met? neters are met, are they are	would it	ay normally be success	during a ci-	X YES	he mowing -	eason?	NO		M		RPE	
המחים היים היים היים היים היים היים היים ה	neters are met, die they of	wound th	cy normany oe present	auring a SI	gameant portion of t	ne growing s	n. (1901) .			<u>55</u>		RPF	
Is This Pl	ot a Wetland?				X YES			NO		SM		AB	
	······				Lawrence and the second		· · · · · · · · · · · · · · · · · · ·				·····	ł	

Plot ID:

DM

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

	(1987 CO	E Wetlan	as Del	Ineation Mai	iual, 2	010 Midwest Supplement)						
Wetland Site: 1	1021-01-00 194					Date: 7/11/20	012					
Applicant/Own	ner: WisDOT					County: St.	Croix					
Investigator(s)	: Lindsay Tekler and Derek H	uebsch		2000 Million and an annual		State: WI						
Normal climatic	conditions on site typical for		Т	Do "normal ci	rcums	tances" exist on the site?	x	YES	NO			
this time of year	·? Yes						Δ	1110				
Transect #:			I	s the site sign	ifican	tly disturbed (Atypical Situation)?	X	YES	NO			
Plot #: Up 4			I	s the area pot	ential	y naturally problematic?		YES X	NO			
Plot Description	on:	and the second se	Γ	Гуре of atypic	al or j	oroblem area (soils, vegetation, hydi	rology	y)? Soils				
				. Vege	etati)n						
Dominant specie dominance meas	es are the most abundant species in sure are also dominant. Non-domi	each strati nant speci	um tha	at sum to 50% d if dominant	of tot specie	al dominance measure. Any addition s are equal in number.	nal spe	cies comprisin	g 20% of total			
Strata = Heros (H) 5 radius plot; 30 radius plot fo	or: Trees ($(1) > 3^{\prime\prime}$	dbh, Shrubs (S) <3″ H	dbh, >3.2' tall, & Woody Vines (V)	0/					
D	Solidazo azradoraia	70 II	naicau	or Stratum		Ron-Dominant Species	<u> %</u>	Indicator	Stratum			
1.	Canada Goldenrod	30	FACU	J H	1.	Ruous ladeus	8	FACU	Н			
	Phalaris arundinacaa					Red Raspoenty Bromus inarmis						
2.	Reed Canary Grass	15 1	FACW	V H	2.	Smooth Brome	5	FACU	Н			
3.	<i>Fraxinus pennsylvanica</i> Green Ash	30 1	FACW	νT	3.							
4.					4.	· · · · · · · · · · · · · · · · · · ·						
5.					5.							
6.					6.							
7.					7.							
8.					8.							
9.					9.							
10.					10.							
	Dominance Test: %	of domi	nant s	species (all st	II rata)	that are OBL, FACW, and/or FA	AC?		66%			
	Prevalence Index Worksheet:					Hydrophytic Vegetation	on In	dicators				
Total % Cover of	of: Multiply By:				Domi	nance Test is >50%		X YES	NO			
OBL species:	1				Morn	lence Index 18 < or =3.01 hological Adaptations* (Provide suppo	rtino	YES	NO			
FACW species	3				data i	n Remarks or on a separate sheet)	g	YES	NO			
EAC	2				Probl	ematic Hydrophytic Vegetation1 (Expl	ain)	YES	NO			
FAU species:	ð			*In	dicator	of hydric soil and wetland hydrology must h	be prese	ent, unless disturbe	ed or problematic.			
FACU species:	4					· · ·		n -				
UPL species:	5					Hydrophytic Vegeta	tion]	Present?				
TOTAL (A): Prevalence Index (B/A):	TOTAL (B):					Yes/No						
1111CA (D/A).	n man an a			ц	rola	· · · · · · · · · · · · · · · · · · ·						
Dass	rdad Data (dag-site-	in normani-	a).	<u> 11yu</u>	1 010	5J	×=		I			
Kecol	rueu Data (describe	in remarks	S): April -	nhotographs		Monitoring wall						
No Ro Growing Seaso	ecorded Data Available	F	Aeriai	photographs			л:					
~	•	(To eval	luate hy	ydrologic data	from st	ream gauges/g.w. wells)						
Field Observa	Field Observations:											
Surface water pr	resent?: Yes X No	Dept	th (incl	hes) Wate	r in w	ell?:YesNo		Depth (inche	es)			
water table pres	Vater table present?: Yes X No Depth (inches) Saturation Present?: Yes X No Depth (inches)											
Remarks:												

D	In Bastone (1 or m		Wetlan	d Hydrology I	Indicators	1 d 9 g	Secondary Indic	ators: (2 d	or more required)			
Primary	Surface Water (A1)	ore requ		y) quatic Fauna (B13)			Surface S	oil Cracks ((B6)			
	High Water Table (A2))	T	rue Aquatic Plants (I	314)		Drainage	Patterns (B	10)			
	Saturation (A3)		H	ydrogen Sulfide Odo	or (C1)		Dry-Seaso	Dry-Season Water Table (C2)				
<u> </u>	Water Marks (B1)		O	xidized Rhizosphere	s on Living R	oots (C3)	Crayfish I	Burrows (C	8)			
	Sediment Deposits (B2 Drift Deposits (B3)	.)		resence of Reduced I	ron (C4)		Saturation Stunted or	Visible on Stressed F	Aerial (C9) Plants (D1)			
	Algal Mat or Crust (B4)	I.	agent Iron Reduction	in Tilled Soi		Geomorph	ic Position	a (D2)			
]	Iron Deposits (B5)					IS (CU)	X FACIN-					
	Inundation Visible on A	Aerial Im	agery (B7) 1.	nin Muck Surface (C	(7) נפר	,	XFAC-Neu FAC-N	Veutral T	est (2:1)			
`	Water Stained Leaves			ther (Evaluin in Per	orte)		(OB	L & FACW :	FACU & UPL)			
 Remarks	vv alei-Stamed Leaves	(69)	0	uner (Explain in Ken								
Kemark			Soils (Describe to de	nth needed to docum	ent the indica	tor or confirm t	he absence of indica	tors)	ารกระบบการการการการการการการการการการการการการก			
Man Unit	Name (Series & ha	se).	Dons (Deserve to de	Drainage Clas	ss.			Per	meability:			
Taxonom	Wallie (Sches & ha			Field Observa	ations Confi	m Manned Ty	upe?	ves				
1 4 1011011	iy (Subgroup).	atrix				Rec	lox Features			110		
Depth	Tartura		Matrix Color	Color		Type ¹	Locatio	n ²	Remarks	000 THEORY CONTRACTOR		
(Inches)	Texture	70	(G= Gleyed)	Color	%	(C,D,RM, C	S) (PL, N	f) .				
			· · · · · · · · · · · · · · · · · · ·									
						² DI D I I						
Type ¹ C=	=concentration D=d	epletion	RM=reduced matrix CS	=coated sand grain	ns Location	": PL=Pore Li	ning M=Matrix	and the second		~		
Hydric	Soils Indicators:			<u> </u>	<u>19</u> 02-1990-1990-1990-1990-1990-1990-1990-19		Indicato	rs for Pr	oblematic Hydric S	Soils*		
H H	istosol (A1) istic Epipedon (A2)		Sandy Mucky N	face (A12) Aineral (S1)	Loamy N	Aucky Mineral (Netrix (F	F1) (2) Coast	Prairie Rec	lox (A16)			
B	lack Histic (A3)		5 cm Mucky Pe	at or Peat (S3)	Depleted	Matrix (F3)	2)Iron/N	(anganese)	Masses (F12)			
	tratified Layers (A5)		Sandy Gleyed M Sandy Redox (S	Matrix (S4)	Redox D	ark Surface (F6)Otne	r (Explain	in Remarks)			
2	cm Muck (A10)		Stripped Matrix	(S6)	Depleted	Dark Surface (I	7)					
D *Indicato	epleted Below dark sur	rface(Al	l) and wetland hydrology mu	ist be present, unles	Redox D	r problematic.						
Remarks	s: No soil sample of	otained.	refusal at surface; roa	d fill.		- Pr 0.810-111-11-1				,		
	•	· · · · · ,	, , , , , , , , , , , , , , ,									
				Wetland	Determ	ination			n ny na vonan sa			
para and an				[]								
Wetland V	Vegetation Present?			X YES		NO						
Note: The 1	987 Corps Wetland Deline	eation Mar	ual requires that greater than 50	% of all dominant speci	es be OBL, FAC	CW, or FAC.						
Note: Agoor	rding the 1987 Corr Wetle	nde Deline	action Manual wetland hydrolog	u oriteria are met if soil	is saturated wit	hin the major porti	on of the root zone of t	he				
prevalent ve fringe to be	egetation . The root zone i SPD = $2^{\circ\circ}$ and PD, VPD =	s usually d 12", the d	lefined to be ≤ 12 inches. We determine the second seco	effine the major portion a esult in saturation in the	is saturated with $s \le to 50\%$ or \le major portion of	6 inches. Estimati of the root zone car	ng the saturated capilla be calculated below.	ry				
Soil Type		Drain	nage Class Pe	ermeability	Capilla	ry Fringe	+6"=W.T. D	epth Crite	ria			
The 1989 M SPD=6", Pl	fanual requires saturation t D & VPD at <6"/hr =18', a	to the surfa at ≥ 6 "/hr =	tee defined by a water table at 6- = 12".	-18" below surface depe	nding on the soi	l type.						
Wetland	Soils Present?			YES		X NO						
Note: A we they reflect presence of	etland restoration site (ma pre-restoration conditions hydrophytic vegetation a	n-induced s rather tha nd wetland	wetland) is considered a disturt an post-restoration conditions. I d hydrology if there is documen	bed (atypical) situation is In accordance with the is ted evidence that the we	in the 1987 Cor 1987 Manual, in etland resulted f	p Wetlands Deline i such cases where rom human activit	ation Manual. Soil inc necessary, a wetland c ies.	licators are o etermination	ften not reliable indicator a can be made based on the	rs since he		
1								W	etland Type:			
1						1 1						
Duration	Met?	. 1. ادا برمین م	ou normally ha present during	YES	ha monting acc	X NO		<u>M</u>	RPE			
Duration If all 3 para	Met? meters are met, are they o	r would th	ey normally be present during a	YES YES	he growing seas	X NO		M SS	RPE RPF			
Duration If all 3 para	Met? meters are met, are they o	r would th	ey normally be present during a	YES YES	he growing seas	X NO		M SS SM	RPE RPF BOG			

(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	x	YES			NO		
Transect #:	Is the site significantly disturbed (Atypi	cal Situation)?		YES		X	NO	
Plot #: Wet 5	Is the area potentially naturally problem	atic?		YES		Χ	NO	
Plot Description:	vegetation, hydro	ology	/)?					

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 i	or: Tre	$es(1) > 3^{"} dbl$	i, Shrubs (<u>(S) <</u>	$3^{\prime\prime}$ dbh, >3.2' tall, & Woody Vines (V)
D	ominant Species	%	Indicator	Stratum		Non-Dominant Species % Indicator Stratum
1.	<i>Typha angustifolia</i> Narrow Leaf Cattail	80	OBL	Н	1	Phalaris arundinacea10FACWHReed Canary Grass10FACWH
2.		-			2	Poa Pratensis 30 FAC H
3.					3	3. Solidago canadensis 5 FACU H
4.					4	Schoenoplectus tabernaemontani 8 OBL H 4. Soft-Stem Club Rush 8 OBL H
5.					5	5.
· 6 .		-			6	6.
7.					7	7.
8.					8	8
9.		•			9	9
10.					1	0
·····	Dominance Test: %	6 of do	minant spe	cies (all s	trata	a) that are OBL, FACW, and/or FAC? 100%
	Prevalence Index Worksheet:					Hydrophytic Vegetation Indicators
Total % Cover	of Multiply By				Doi	minance Test is >50% <u>X</u> YES NO
	i interaction of the second se				Pre	evalence Index is < or =3.01 YES NO
OBL species:	I	-			M0 dot)rphological Adaptations [*] (Provide supporting YES NO
FACW species:	2	-			Pro	oblematic Hydrophytic Vegetation1 (Explain) YES NO
FAC species:	3	-		*Īr	ndicat	tors of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
FACU species:	4	-				· · · · · · · · · · · · · · · · · · ·
UPL species:	5	-				Hydrophytic Vegetation Present?
TOTAL (A): Prevalence Index (B/A):	TOTAL (B):	-				Y es/INO

Hydrology

Recorded Data (describe in remarks):		
Stream, lake, or tide gauge	Aerial photograph	s Monitoring well Other	r:
No Recorded Data Availa	ble		
Growing Season Dates/Days:			
	(To evaluate hydrologic da	ta from stream gauges/g.w. wells)	
Field Observations:			
Surface water present?:YesX_	No Depth Wa	ter in well?:YesNo	Depth (inches)
Water table present?:XYes	_No _20 Depth Sat	uration Present?: <u>X</u> Yes <u>No</u>	18 Depth (inches)
Remarks:			

Wetland Primary Indicators: (1 or more required, check all that apply)				ad Hydrology (y) Aquatic Fauna (B13) Frue Aquatic Plants (Hydrogen Sulfide Od Dxidized Rhizosphere Presence of Reduced Recent Iron Reductio Chin Muck Surface (Gauge or Well Data (Indicato B14) or (C1) es on Livin Iron (C4) n in Tilled C7) D9) narks)	g Roots (C3) Soils (C6)	Secondar S C C S S XG XF	 condary 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	S:		Sails Describe to de	anth needed to docum	ent the ind	licator or confirm	the absence	of indicators)	9414447499944458888888888888888888888888888	<u></u>	
Man Unit	Name (Series & ha		Drainage Cla	ISS:			or mulcators)	Permeability:			
Taxonom	v (Subgroup):			Field Observ	ations Co	nfirm Mapped T	vpe?		YES	NO	
	M	atrix			na n	Re	dox Feat	ures			
Depth (Inches)	Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, C	CS)	Location ² (PL, M)	Remarks		
0-10	Loam	98	7.5YR 2.5/1	7.5YR 4/6	2	C	N	4			
10-20	Clay Loam	60	G1 5/10Y	7.5YR 4/6	40	C	N	А	Gleyed Matrix		
Type ¹ C=	=concentration D=d	epletion	RM=reduced matrix CS	S=coated sand grai	ns Locat	ion ² : PL=Pore L	ining M=N	latrix			
Hydric	Soils Indicators:	r		8			I	ndicators fo	or Problematic Hydri	c Soils*	
Hydric Sons Indicators. Histosol (A1) Thick Dark Surfat Histic Epipedon (A2) Sandy Mucky Mit Black Histic (A3) 5 cm Mucky Peat Hydrogen Sulfide (A4) Sandy Gleyed Ma Stratified Layers (A5) Sandy Redox (S5) 2 cm Muck (A10) Stripped Matrix (5) Depleted Below dark surface(A11) *Indicators of hydrophytic vegetation and wetland hydrology must			rface (A12) Mineral (S1) eat or Peat (S3) Matrix (S4) S5) x (S6) ust be present, unle	Loam X_Loa Deple Redo Deple Redo ss disturbe	y Mucky Mineral my Gleyed Matrix eted Matrix (F3) x Dark Surface (F4 eted Dark Surface (x Depressions (F8) et or problematic	(F1) (F2) 5) (F7)	Coast Prairie Redox (A16) Iron/Manganese Masses (F12) Other (Explain in Remarks)				
Remarks	S:					·					
L			anne en anno contra anna anna Mathair (1998) anna anna	Wetland	1 Deter	mination					
				YY SUIGH	a Dettel	144 144 64 6 1 V 18	***************************************	n an	2000-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	<u>12000-000-000-000-000-000-000-000-000-00</u>	

		••••••										
Wetland Vegetation Present?	X	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?	X	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 \leq 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 Perme	abilit	Capillary	7 Frin	ge+6"	=W.T.	Depth C	riteria					
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 \geq 6"/hr = 12".												
Wetland Soils Present?	X	YES		NO								
Note: A wetland restoration site (man-induced wetland) is considered a disturbed (they reflect pre-restoration conditions rather than post-restoration conditions. In acc presence of hydrophytic vegetation and wetland hydrology if there is documented e	atypica cordanc vidence	 situation in the 1987 Corp with the 1987 Manual, in a that the wetland resulted from 	Wetla such c om hu	nds Delineation Manua ases where necessary, a man activities.	l. Soil ii wetland	ndicators a l determina	are often n ation can b	ot reliable indicators since be made based on the				
							Wetlaı	nd Type:				
Duration Met?	X	YES		NO	X	М		RPE				
If all 3 parameters are met, are they or would they normally be present during a sign	nificant	portion of the growing sease	on?			SS		RPF				
						WS		BOG				
Is This Plot a Wetland?	X	YES		NO		SM		AB				
Plot ID:						DM						

(1987 COE Wetlands Delineation Manual, 2010 Midwest Supplement)

Wetland Site: 1021-01-00 I94	te: 7/11/201	2							
Applicant/Owner: WisDOT	County: St. Croix								
Investigator(s): Lindsay Tekler and Derek Huebsch	te: 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 Sit	ituation)?	X	YES		NO			
Plot #: Up 5	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) $>2^{\circ}$ the Shrubs (S) $<2^{\circ}$ the $>2^{\circ}$ the $>2^{\circ}$

Strata - Heibs	$\operatorname{strata} = \operatorname{Herbs}(\mathbf{n}) \operatorname{Stratus}(\mathbf{v})$ $\operatorname{Herbs}(\mathbf{v})$ $\operatorname{Herbs}(\mathbf{v})$										
D	ominant Species	%	Indicator	Stratum		Non-Dominant Species	%	Indicator	Stratum		
1.	Poa pratensis Kentucky Bluegrass	80	FAC	H	1.	Solidago canadensis Canada Goldenrod	10	FACU	Η		
2.					2.	Salix interior Sandbar Willow	2	FACW	Н		
3.					3.						
4.					4.						
5.					5.						
6.					6.						
7					7.						
8.					8.						
9.					9.						
10.					10.						
	Dominance Test: %	of do	minant spe	cies (all st	rata)	that are OBL, FACW, and/or F	FAC?	1	00%		
	Prevalence Index Worksheet:			Hydrophytic Vegetation Indicators							

		12110000	Hydrophytic vegetation indicators						
Total % Cover of:	Multiply By:		Dominance Test is >50%	X YES	NO				
0.007			Prevalence index is < or =3.01	YES	NU				
OBL species:	1		Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)	YES	NO				
FACW species:	<i>L</i>		Problematic Hydrophytic Vegetation1 (Explain)	VES	NO				
FAC species:	3				110				
FACU species:	4		*Indicators of hydric soil and wetland hydrology must be prese	ent, unless disturb	ed or problematic.				
UPL species:	5		Hydrophytic Vegetation	Present?					
TOTAL (A):	TOTAL (B):		Yes/No						
Index (D/A).									
Index LD/AL									

Hydrology

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

		an a											
Primary Indicators: (1 or 	· more req A2)	Wetlan uired, check all that apply A T	Id Hydrology J y) Quatic Fauna (B13) rue Aquatic Plants (J Iydrogen Sulfide Ode	Indicator B14) or (C1)	' S:	Secondar	adary Indicators: (2 or more required) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)						
	(B2) (B4)	C P R	Dividized Rhizosphere resence of Reduced lecent Iron Reduction		Crayfish Burrows (C8) Saturation Visible on Aerial (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2)								
Inundation Visible of Sparsely Vegetated Water-Stained Leav	on Aerial Ir Concave S es (B9)	nagery (B7) T urface (B8) G	hin Muck Surface (C auge or Well Data (J)ther (Explain in Ren	C7) v D9) narks)		F	FAC-Neutral Test (D5) FAC-Neutral Test (:) (OBL & FACW : FACU & UPL)						
Remarks: No hydrology	indicato	rs present											
		Soils (Describe to de	pth needed to docum	ent the indic	ator, or confirm t	he absence	of indicators)			5			
Map Unit Name (Series &	hase):		Drainage Cla	ss:	•			ility:	6 4 1				
Taxonomy (Subgroup):			Field Observa	ations Conf	irm Mapped Ty	/ne?		YF	s	NO			
	Matrix				PP	day Feat	nroc			1 21.9			
Depth (Inches) Texture	%	Matrix Color (G= Gleyed)	Color	%	Type ¹ (C,D,RM, C	S)	Location ² (PL, M)		Remarks				
										ş., s.,			
										· · · · ·			
								+					
					2					· · ·			
Type ⁻ C=concentration D=	=depletior	n RM=reduced matrix CS	=coated sand gran	ns Locatio	n ⁻ : PL=Pore Li	ning M=N	Aatrix						
Hydric Soils Indicators	S:]	Indicators fo	r Problen	natic Hydri	c Soils*			
Histosof (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4 Stratified Layers (A5) 2 cm Muck (A10) Depleted Below dark *Indicators of hydrophytic v Remarks:	‡)) surface(A1 vegetation	Thick Dark Sur Sandy Mucky M Sandy Mucky Pe Sandy Gleyed M Sandy Redox (S Stripped Matrix stripped Matrix and wetland hydrology mu	face (A12) Aineral (S1) at or Peat (S3) Matrix (S4) (S5) (S6) ist be present, unles	lineral (S1)					Coast Prairie Redox (A16) Iron/Manganese Masses (F12) Other (Explain in Remarks)				
No soil sample obtained,	refusal at	t surface; road fill.							r				
Construction and the second			Wetland	Determ	ination								
Wetland Vegetation Present? Note: The 1987 Corps Wetland Dei Wetland Hydrology Present? Note: According the 1987 Corp We prevalent vegetation . The root zon fringe to be SPD = 2" and PD, VPD	lineation Ma etlands Delin te is usually $o = 12^{\circ}$, the o	nual requires that greater than 50 eation Manual, wetland hydrolog defined to be ≤ 12 inches. We de depth of water table required to re	YES % of all dominant speci YES gy criteria are met if soil efine the major portion a esult in saturation in the	es be OBL, FA is saturated w is \leq to 50% or \leq e major portion	XNO aCW , or FAC.NOXNOithin the major porti ≤ 6 inches. Estimati of the root zone car	on of the roo ing the satura in be calculate	t zone of the ted capillary d below.						
Soil Type	Drai	nage Class Pe	ermeability	Capilla	ary Fringe	+6"	=W.T. Depth (Criteria					
The 1989 Manual requires saturation SPD=6", PD & VPD at <6"/hr =18	on to the surf s', at ≥6"/hr	ace defined by a water table at 6- = 12".	-18" below surface depe	nding on the so	bil type.				2.4				
Wetland Soils Present? Note: A wetland restoration site (n they reflect pre-restoration conditi presence of hydrophytic vegetation	man-induced ons rather th n and wetlan	d wetland) is considered a disturt an post-restoration conditions. I d hydrology if there is documen	YES bed (atypical) situation in accordance with the l ted evidence that the we	in the 1987 Co 1987 Manual, i etland resulted	X NO rp Wetlands Deline n such cases where from human activit	ation Manua necessary, a ies.	 Soil indicators wetland determine 	are often not nation can be	t reliable indicates made based on	tors since the			
Duration Mat 9					VNO			wetland					
If all 3 parameters are met are the	v or would t	ev normally be present during a	Significant portion of F	he orowing ee	A NO								
and parameters are met, are me	, or would li	icy normany of present during a	a significant portion of t	ne Browing set	40011.			╡	KPF RC				
							WS		BOG				
Is This Plot a Wetland? Plot ID:			YES .		X NO		DM		AB				

Appendix C

Photos











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: <u>http://www.dnr.state.wi.us/air/compenf/asbestos/reqfees.htm</u> 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 <u>http://www.dnr.state.wi.us/air/compenf/asbestos/notify.htm</u>. 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