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Wisconsin Department of Natural Resources Bureau of Watershed Management (WT/3) 101 S. Webster Street PO Box 7921 Madison, WI 53707-7921 dnr.wi.gov

## **Final Report**

Urban Nonpoint Source & Storm Water Construction & Targeted Runoff Management Small-scale Urban TMDL Grant Program

Form 3400-189U (03/16)

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**NOTICE:** This document is required under s. 281.65 & s. 281.66, Wis. Stats., and chs. NR 153, 154, and 155. Wis. Adm. Code. A final project report must be submitted as part of the final reimbursement request. Personally identifiable information contained in this form will be used for determining reimbursement eligibility in the Urban Nonpoint Source & Storm Water and Targeted Runoff Management Grant Programs and will not be used for any other purpose.

**INSTRUCTIONS:** Send the completed, electronic copy of this form and all attachments to the Department of Natural Resources (DNR) Region Nonpoint Source Coordinator. Please read all instructions prior to completion.

Grant Type										
<ul><li>Urban Nonpoint Source Construction</li></ul>	n 🔘 T	RM Small-sca	ale Urban	TMDL						
Project & Location Information		Ĭ.c.	Frant Num	1						
Control of the Control of Control										
City of Middleton USC-LR10-13255-15B										
Project Name										
2017 Pheasant Branch Streambank Res		AND THE RESERVE OF THE PARTY OF THE PARTY.	hanceme	nt Proj	01 1.0W					
County				12-Digit HUC						
Dane		Yahara River			070900020603					
Project Contact Name	Phone	Number			E-mail Address					
Aaron Steber (consultant)		(708) 516	5-3317		aaron.steber@cardno.com					
For a project with multiple site locations	, an aerial p	ohoto map is a	attached v	vith each	site	location l	abeled.			
Site Location - 1	ام ام ۸	itional sites	mar he a	del a defe	Alba		hv olioki	na tha T	+ Loc] button.	
Site Location - 1	Auu						ру спскі	ng the [	+ Locj button.	
Site Name  Nearest Receiving Waterbody  Lake Mendota										
· ·					Range E / W Latitude Longitude					
SE SW	1	07	08	Е	-	allo				
Summary of Results - 1		-							the [+] button.	
Best Management Surface Are			ea Drainage		Load Reduction Tota				Total	
Practice Installed (sq. ft.)			Area (Acres)		SS %	TSS (tons/vr)	P (lbs/yr)	N (lbs/yr)	Construction Cost	
Shoreline Protected - NR154.04(31))	_	4,000	13,30		,,,	65	60	180	\$45,487	
Shore Hab. Restored - NR154.04(29)) 15,400			13,300			301	200	460	\$175,326	
Site Location Attachment - 1						\$175,520				
Check the box if the required information for	the site is a	attached:								
Photos of pre-and post-implementation of BMP(s)										
Aerial photo map of site with BMPs labeled Water quality monitoring results/summary, if applicable						plicable				
Site Information - 1	29(CC)					<u> </u>		5.84 St		
Narrative space will expand to fit.										
In order to fit surface area into the options for best management practices installed in the summary of results above we										
used shoreline protection for 200 linear feet of stone toe protection plus the bank grading area as well as streambank										
erosion estimates from BANCS and STEPL models completed in the stone toe locations (see final report). For shoreline										
habitat restored we used the 770 linear feet of rootwad composites installed plus the bank grading area and streambank										
erosion estimates from BANCS and STEPL models completed in rootwad composite locations (see final report).  Additionally 12 debris jams were removed during this project which were not used in the load reduction calculations.										
	ed during	this project	which w	ere not	used					

## **Additional Project Information**

Narrative space will expand to fit.

With the water quality and ecological connection to Pheasant Branch Marsh and Lake Mendota, the WDNR and the general public has expressed great interest in reducing sediment loading to Pheasant Branch. Since completion of this project and previous stabilization work, the City of Middleton has utilized Pheasant Branch streambank stabilization

+ Loc

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projects as a demonstration for a multitude of interested parties including WisDOT, City of Madison, WDNR, and others. Completion of this project will expand the demonstration of these techniques and, when combined with other stormwater measures being implemented by the City, create a go-to destination for field demonstration of water resource and ecological enhancements. Many of the eroded stream banks and valley slopes throughout the creek corridor have trees that are near or already have collapsed. This project incorporates this woody material into the bank stabilization design to re-use it on site. Rootwad composite revetments were installed consisting of a combination of hardwood rootwads (the intact lower trunk and rootmass of mature hardwood trees) and stone. These structures provide a biological armoring alternative that aids in dissipating energy of near-bank streamflows. Small spaces found in the rootwad composites provide cover for small fish, as well as reptiles and small mammals found in the riparian habitat. Long term stabilization is maintained through bank grading to increase flood flow capacity as well as the incorporation of surface vegetation roots with the stone rip rap.

Grantee Certification							
A responsible government official (authorized signatory DNR Regional Nonpoint Source Coordinator.							
I certify that, to the best of my knowledge, the project is correct and true.	s complete and the information contained in this final re	port and attachments is					
Name of Authorized Government Official	Title of Authorized Government Official	Date					
Matt Amundson	Director of Public Lands, Recreation & Forestry	02/22/2018					
For DNR Use Only							
Received complete reports with all attachments. Practices implemented were consistent with the grant agreement.							
Comments about this project:							
Name of Nonpoint Source Coordinator	Date						
Send the Final Report and attachments to the Commu	inity Financial Assistance Grants Manager and to the R on file	unoff Management					