

Final Report

**Agricultural Targeted Runoff Management &
 Notice of Discharge Grant Programs**

NOTICE: This document is required under s. 281.65, Wis. Stats., and chs. NR 153 and 154, 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 Targeted Runoff Management and Notice of Discharge 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							
Select Grant Type Small Scale Non Total Maximum Daily Load (TMDL)							
Project Name & Location							
Project Name Hendrickson Manure Storage Management							
Grant Number TRC-LW20-11000-13D				Governmental Unit Name Columbia County LWCD			
County Columbia		Watershed Name Duck Creek/Rocky Run			12-Digit HUC 070700050102		
Project Contact Name Kurt Calkins			Phone Number (608) 742-9670		E-mail Address kurt.calkins@co.columbia.wi.us		
<input type="checkbox"/> For a project with multiple site locations, an aerial photo map is attached with each site location labeled.							

Site Location - 1							
Name of Cost-Share Recipient Philip and Elaine Hendrickson					Animal Units 150	Nearest Receiving Waterbody Duck Creek	
Township 12	Range 11	E / W E	Section 12	Quarter NE	Quarter/Quarter SW	Latitude 43.5225	Longitude -89.1378
Compliance Requirements - 1							
Chs. NR 151 or 243 Wis. Adm. Code Notice Type NR 151		Notice letter attached <input checked="" type="checkbox"/>	Compliance achieved? If no, explain in site information <input checked="" type="radio"/> Yes <input type="radio"/> No			Compliance determination letter attached <input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Attached is a copy of the written statement the County provided to the landowner and cost-share recipient of the landowner's obligation to maintain compliance with performance standards & prohibitions on cropland and livestock facilities addressed by the cost-share agreement. Compliance at these sites must be maintained in perpetuity regardless of future cost sharing. The County has also placed a copy of this written statement in the County files.							

Summary of Results - 1							
Best Management Practice Installed	Quantity	Unit of Measure	Performance Standard/Prohibition Addressed	Total Installation Cost	Load Reduction		
Diversions	330	Feet	Code(s) 8,12		Phosphorus lbs/yr 20.5	Nitrogen lbs/yr	Sediment Tons/yr
Critical Area Stabilization	1.6	Acres	Code(s) 12		63.8		
Roof Runoff Systems	1	No.	Code(s) 8,12		9.5		
Livestock Fencing	530	Feet	Code(s) 12				
Manure Storage Systems	1	No.	Code(s) 9,4	\$267,368.00	150		
Waste Transfer Systems	1	No.	Code(s) 4,9				

Site Location Attachment - 1	
Check the box if the required information for the site is attached:	
<input checked="" type="checkbox"/> Photos of pre-and post-implementation of BMP(s)	<input checked="" type="checkbox"/> Load reduction modeling documents
<input checked="" type="checkbox"/> Aerial photo map of site with BMPs labeled	<input type="checkbox"/> Water quality monitoring results/summary, if applicable

Site Information - 1

Final Report

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Notice of Discharge Grant Programs

Form 3400-189A (R 8/15)

Page 2 of 2

Narrative space will expand to fit

A TRM grant was applied for to address a lot runoff issue as well as to help the landowner to be able to comply with his nutrient management plan. To address the lot runoff issue roof gutters, a diversion and cattle fencing were used to reduce the pollutant load from discharging into a nearby intermittent stream. A manure storage structure and waste transfer system was installed giving the landowner 9 months storage which allows him to meet his nutrient management plan and avoid winter application of liquid manure.

DNR may use this site as a success story to meet state and federal reporting needs.

Additional Project Information and/or Comments

Narrative space will expand to fit

Grantee Certification

A responsible government official (authorized signatory) must authorize and date the final report form prior to submittal to DNR.

I certify that, to the best of my knowledge, the project is complete and the information contained in this final report and attachments are correct and true.

Name of Authorized Government Official	Title of Authorized Government Official	Date
Kurt Calkins	LWCD Director	02/10/2016

For DNR Use Only

Received complete reports with all attachments Practices implemented were consistent with the grant agreement

Comments about this project:

Name of Region Nonpoint Source Coordinator	Date
Mike Gilbertson	03/09/2016

Send the Final Report and attachments to the Community Financial Assistance Grants Manager and to the Runoff Management Grant Coordinator. Keep a printed copy for the Region file.

Plan View



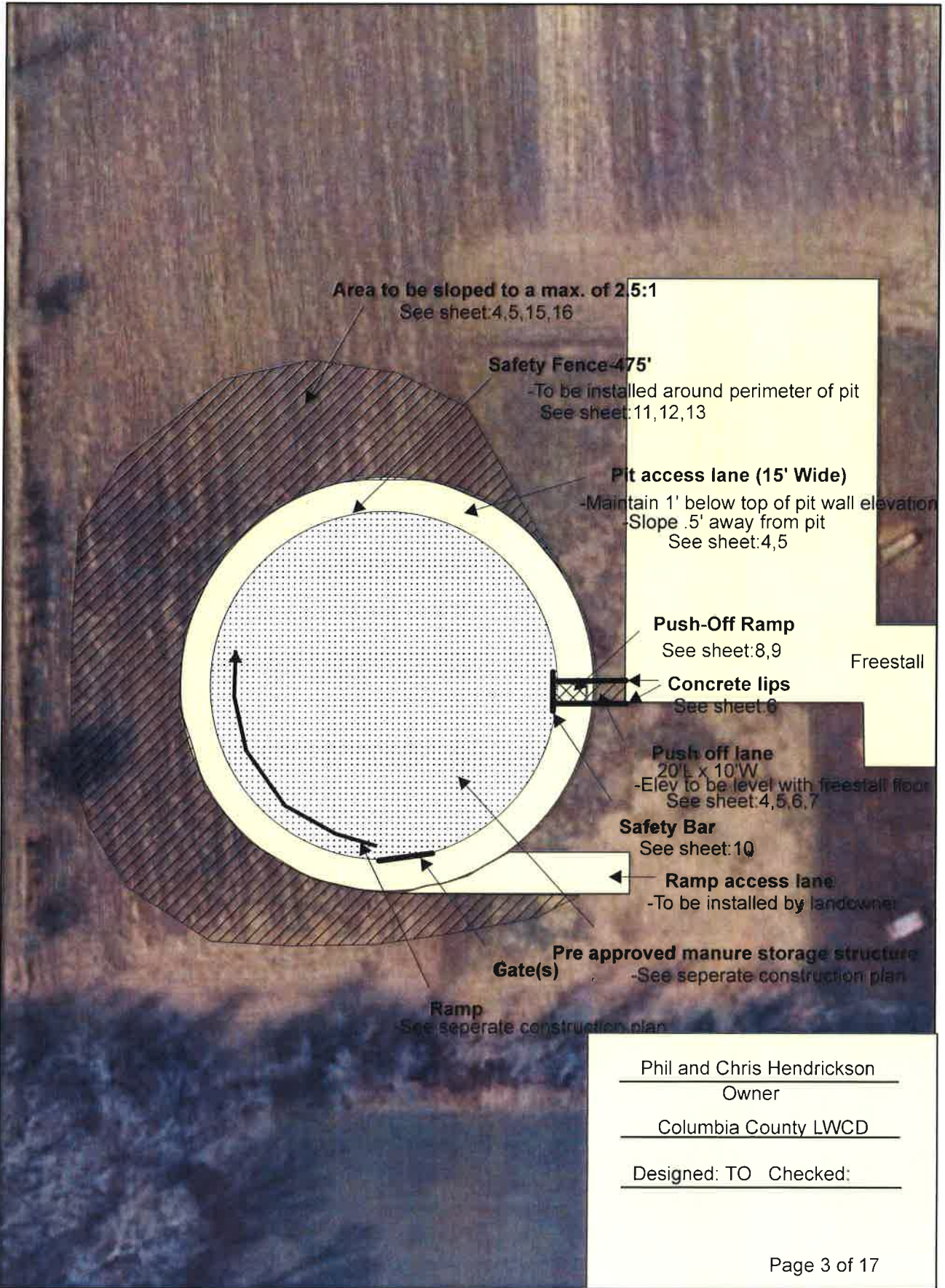
Phil Hendrickson

Owner

Columbia County LWCD

Designed: TO Checked:

Manure Storage Siting Plan View



Area to be sloped to a max. of 2.5:1
See sheet:4,5,15,16

Safety Fence-475'
-To be installed around perimeter of pit
See sheet:11,12,13

Pit access lane (15' Wide)
-Maintain 1' below top of pit wall elevation
-Slope .5' away from pit
See sheet:4,5

Push-Off Ramp
See sheet:8,9

Concrete lips
See sheet 6

Push off lane
20'L x 10'W
-Elev to be level with freestall floor
See sheet:4,5,6,7

Safety Bar
See sheet:10

Ramp access lane
-To be installed by landowner

Pre approved manure storage structure Gate(s)
-See separate construction plan

Ramp
-See separate construction plan

Freestall

Phil and Chris Hendrickson
Owner

Columbia County LWCD

Designed: TO Checked: _____

Hendrickson Manure Storage Management TRM #TRC-LW20-11000-13D
Photo Documentation



Barn before gutter installation



Barn after gutter installation



Manure transfer system



Manure storage



Runoff diversion



Livestock fencing

Existing

BUFFER DESIGN USING BARNY

OWNER: Phil Hendrickson

DESIGNER: TO

DATE: 4/28/2015

CHK BY: _____

DATE: _____

	Input	Output	1 Madison
			2 Appleton
Closest City of similar climate:	1		3 Wausau
			4 Eau Claire
Paved lot area:	6,392	sq ft	
Earth lot area:	126,948	sq ft	
Animal Lot size:		133,340 sq ft	
Is there a DESIGNED settling basin	2	Yes= 1; No= 2	
Animals on lot:	40 number	52 number	
Type of animal:	2	2	(Dairy = 1; Beef=2)
Ave. Animal Weight:	500 lbs	1,150 lbs	
Lot Use:	2		1= Heavy; 2= Medium; 3= Light)

TRIBUTARY AREAS

Tributary area:	203,018 sq ft	sq ft
Runoff Curve Number:	74	
Roof area:	5,330 sq ft	

108.0 lbs P per year
at D.S. Lot edge:

Maximum permissible P Output that can be released	15 lbs	Your choice based on impacted resources- Max is 15
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BUFFERS - Size by trial and error

First Buffer	Length:	ft (See Note Below)
	Slope:	
	"c" :	→
Second Buffer	Length:	ft
	Slope:	
	"c" :	

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

P (lbs) after the buffers: 108.0 lbs P per year
NO GOOD - Too much P released

BUFFER SIZING

Chosen Buffer Width	 feet	136,536 sq ft	Min. Acceptable Buffer Area
Chosen Buffer Length	 feet	0 feet	Min. Bfr. Len. Based on BARNY
		#DIV/0! feet	Min. Bfr. Len. Based on Area
		#DIV/0!	

Planned

BUFFER DESIGN USING BARNY

OWNER: Phil Hendrickson

DESIGNER: TO

DATE: 4/28/2015

CHK BY: _____

DATE: _____

Input

Output

- 1 Madison
- 2 Appleton
- 3 Wausau
- 4 Eau Claire

Closest City of similar climate: 1

Paved lot area: 8,785 sq ft

Earth lot area: 46,930 sq ft

Animal Lot size: 55,715 sq ft

Is there a DESIGNED settling basin 2 Yes= 1; No= 2

Animals on lot: 40 number 52 number

Type of animal: 2 2 (Dairy = 1; Beef=2)

Ave. Animal Weight: 500 lbs 1,150 lbs

Lot Use: 2 1= Heavy; 2= Medium; 3= Light)

TRIBUTARY AREAS

Tributary area: 29,650 sq ft sq ft

Runoff Curve Number: 74

Roof area: sq ft

89.3 lbs P per year
at D.S. Lot edge:

Maximum permissible P Output 15 lbs
that can be released

Your choice based on impacted
resources- Max is 15

BUFFERS - Size by trial and error

First Buffer Length: 230 ft (See Note Below)
Slope: 2.1 %
"c" : 0.44 →

Second Buffer Length: ft
Slope:
"c" :

P (lbs) after the buffers: **14.2** lbs P per year

GOOD - Buffer length, slope, and type is OK; proceed with final area sizing calcs below.

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

BUFFER SIZING

60,108 sq ft

Min. Acceptable Buffer Area

Chosen Buffer Width **307** feet

230 feet

Min. Bfr. Len. Based on BARNY

230 feet

Min. Bfr. Len. Based on Area

Chosen Buffer Length **230** feet Good Design

Multiple buffering opportunities in adjacent fields also



COLUMBIA COUNTY

Land & Water Conservation

608-742-9670
FAX: 608-742-9840
E-MAIL: land.conservation@co.columbia.wi.us
WEBSITE: www.co.columbia.wi.us

120 West Conant Street
P.O. Box 485
Portage, WI 53901

January 27, 2016

Philip and Elaine Hendrickson
N6787 County Hwy. B
Cambria, WI 53923

RE: Satisfaction of NR151 Water Quality Performance Standard Issue's

Phil,

This letter is to inform you that your livestock operation has satisfied the notices of violations regarding the State of Wisconsin NR 151 Water Quality Performance Standards. Through your cooperation we were able to use Targeted Runoff Management funding to address issues related to **NR 151.05** (*Manure Storage Structure Performance Standards*), **NR 151.055** (*Process Wastewater Handling Performance Standard*), **NR151.06** (*Clean Water Diversion Performance Standard*), **NR 151.07** (*Requirement to develop and land apply nutrients in accordance with a 590 Nutrient Management plan*), and **NR 151.08** (*Manure Management Prohibitions*). You are required to keep your facility in compliance with these provisions.

Should any questions come up or you see some challenges of management changes on the horizon, I urge you to contact our office as soon as possible so we can work with you to maintain compliance.

Thank you for your cooperation and financial input into this project. These projects are successful because of the collaboration between existing financial programs to assist farmers with these projects and commitment from landowners like you.

If you have questions feel free to contact me at 608-742-9675.

Sincerely,

Kurt R. Calkins, Director

Columbia County Land & Water Conservation Dept.