Wisconsin Department of Natural Resources
Bureau of Watershed Management (WT/3)
101 S. Webster St.
Madison, WI 53703
PO Box 7921
Madison, WI 53707-7921

Final Report Form 3400-189 (rev. 7/30/09)

- **Targeted Runoff Management Grant Program (ch. NR 153)**
- **Notice of Discharge Program (ch. NR 153)**
- **Urban Nonpoint Source & Storm Water Management Grant Program (ch. NR 155)**

NOTICE: This Final Report is authorized under ss. 281.65 and 281.66., Wis. Stats., and chs. NR 153 and NR 155, Wis. Admin. Code. Personally identified information collected will be used for program administration and may be made available to requesters as required under Wisconsin Open Records Law [ss. 19.31-19.39, Wis. Stats.].

INSTRUCTIONS: Your grant agreement requires you to submit a Final Report with your final reimbursement request. This Final Report form must be used in conjunction with the "FINAL REPORT INSTRUCTIONS." The instructions detail how to complete and submit the report to DNR as described in the instructions.

1. GRANT TYPE. Check the one that applies.

- ☐ Targeted Runoff Management Grant – Agricultural
- ☐ Targeted Runoff Management Grant – Urban
- ☐ Urban Nonpoint Source & Storm Water Management Grant – Construction
- ☐ Urban Nonpoint Source & Storm Water Management Grant – Planning
- ☒ Notice of Discharge Grant

2. PROJECT NAME & LOCATION.

2.1. Project Name:	2.2. Grant Number:	
Leer Manure Management NOD	**LW04-62000-N12**	
2.3. Governmental Unit Name:	2.4. Primary Watershed Name:	2.5. Watershed Code:
Vernon County	**Lower Wisconsin**	**LW04**

NOTE FOR SECTION 2.6 (which follows):

Section 2.6. includes five (5) columns (A. through E.) for recording data about five (5) discrete site locations. If your grant has more than five (5) discrete project locations, attach additional columns for Section 2.6 as described in the instructions. If your project occurs in more than one 12-digit Hydrologic Unit Code (HUC), use the space in adjacent columns to record other HUC numbers.

2.6 Site Location(s) →	A.	B.	C.	D.	E.
Name of Cost-Share Recipient or Governmental Unit	**Vernon County**				
Cost-Share Agreement Number (Agricultural only)	**2012-01**				
12-Digit Hydrologic Unit Code(s) (HUC) Where Work Was Completed	**070700060204**				
Nearest Surface Receiving Water Affected					
Name:	**Harrison Creek**				
Waterbody Identification Code(s) (WBIC):	**070700060204**				
Nearest Impaired Water Affected					
Name:	**N.A.**				
Waterbody Identification Code(s) (WBIC):	**N.A.**				
Pollutants Reduced	**Manure** phos. sed. milkhouse waste	& C.K.			
Impairments/Impacts Addressed	**Yes**				

Find Instructions at http://dnr.wi.gov/runoff/financial.htm

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Project Location(s) (cont.) →	A.	B.	C.	D.	E.
Project Coordinates:					
Town	**12N**				
Range	**4W**				
Section	**24**				
Quarter	~~SE~~ NW				
Quarter-Quarter	~~NW~~ SE				
Latitude (degrees, minutes, seconds North of Equator; use the DNR's Surface Water Data Viewer (SWDV))	**43N. 30', 12"**				
Longitude (degrees, minutes, seconds W of Prime Meridian, use the SWDV)	**-90W, 48', 8.0"**				

3. SUMMARY OF RESULTS.

Table A. Agricultural Projects. – Ch. NR 151 Performance Standards and Prohibitions and Other Water Resources Management Priorities

A.1. Management Measures	Units of Measure	Quantity	Measurement Method Used
Sheet, rill and wind erosion	Acres meeting "T"	**410 acres**	**Snap Plus, includes 110 ac. of pasture.**
Manure Storage Facilities: New Construction/Alterations	Number of facilities	**2 facilities**	
	Number of animal units	**364 animal units**	
Manure Storage Facilities: Closure	Number of facilities	**0 facilities**	
Manure Storage Facilities: Failing/Leaking Facilities	Number of facilities	**1 facilities**	
	Number of animal units	**364 animal units**	
Clean Water Diversions in WQMA	Pollutant load reduction	**0 lbs.**	***See narrative**
	Number of farms with diversions	**1 farms**	**Roof Gutters and Ground Gutters**
	Number animal units	**364 animal units**	
Nutrient Management on Agricultural Land	Acres planned	**370 acres**	**Converted 70 of these acres to pastureland.**
Prohibition: Manure Storage Overflow	Number of farms	**1 farms**	
	Number of animal units	**364 animal units**	
Prohibition: Unconfined Manure Pile in WQMA	Number of farms	**0 farms**	
Prohibition: Direct Runoff From Feedlot/Stored Manure	Pollutant load reduction	**lbs.**	***See narrative**
	Number of facilities	**1 facilities**	
	Number of animal units	**364 animal units**	***See narrative**
Prohibition: Unlimited Livestock Access	Feet of bank protected	**0 feet**	
	Number of farms	**0 farms**	

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Table A. Agricultural Projects. (continued) A.2. Other Management Measures	Units of Measure	Quantity	Measurement Method Used
Streambank & Shoreline Protection	Units (use feet, acres or number as applicable)		
	Pollutant load reduction (if method available)		
Other: **Sediment**	Units (use feet, acres or number as applicable)	**tons/year**	**RUSLE**
	Pollutant load reduction (if method available)	**280**	**RUSLE**
Other: **Phosphorous**	Units (use feet, acres or number as applicable)	**lbs/yr**	**SnapPlus**
	Pollutant load reduction (if method available)	**410**	
Other: **Milkhouse Waste**	Units (use feet, acres or number as applicable)	**Gallons**	**Estimate 10 gal/cow/day**
	Pollutant load reduction (if method available)	**4900**	**Gal/day**

Table B. Urban Construction Projects Serving Developed Areas.			
B.1. Required Management Measures	Units of Measure	Quantity	Measurement Method Used
20-40% Total Suspended Solids (TSS) Reduction for NR 216 communities	TSS reduced	**lbs.**	
	TSS reduction	**%**	
B.2. Other Management Measures			
20-40% Reduction in TSS for non-NR 216 communities	TSS reduced	**lbs.**	
	TSS reduction	**%**	
Infiltration	Pre-development stay-on volume	**%**	
	Stay-on volume	**ft^3/year**	
Peak flow discharge for 2 year/24 hour design storm	Change in cubic feet per second for design year	**ft^3/sec**	
Protective areas	Bank protected	**feet**	
Fueling & maintenance areas	Oily sheen presence reduced	☐ **Yes** ☐ **No**	
Streambank & Shoreline Protection	Bank erosion reduced	**tons**	
	Bank protected	**feet**	
Other:	Pollutant load reduction (if method available)		
	Units (use feet, acres or number as applicable)		

Table C. Urban Planning Projects.			
C.1. Governmental unit(s) involved (list by name):			
C.2. Estimate total acres covered by the	Existing Developed Urban Areas	New Development	Total Acres

Find Instructions at http://dnr.wi.gov/runoff/financial.htm

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planning product:	acres	acres	acres

C.3. Products developed (check all below that apply)	Identify Documents by Name (if applicable)
☐ Storm Water Plan	
☐ Construction or Erosion Ordinances	
☐ Post-construction Storm Water Ordinances	
☐ Other Types of Storm Water Quality Ordinances	
☐ Financing Methods: identified and evaluated	
☐ Financing Methods: developed or implemented	
☐ I & E Plan	
☐ I & E Implementation Activities	
☐ Other:	

C.4. Identify the Storm Water goals addressed (check all that apply)	
☐ Reduce TSS	**Comments:**
☐ Maintain infiltration	
☐ Control Peak Flow	
☐ Protective Areas	
☐ Control of Fueling & Maintenance Areas	
☐ Remove Illicit Discharges	
☐ Other:	

4. Satisfaction of Notice Requirements. If cost sharing for this project was offered under a formal notice pursuant to chs. NR 151 or 243, provide information for each notice in the table below.

Notice Information				**Notice Satisfaction Information**		
Chs. NR 151 or 243 Notice Type	Issue Date	From (Name)	To (Name)	Satisfied? Yes	Satisfied? No	Date Letter Sent
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	

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5. Additional Information. (Space will expand to fit your text.)

Site Situation:

Farmer making large herd expansion without planning for waste storage or disposal. Overflowing manure storage pit. Pit constructed illegally and does not meet NRCS 313 Waste Storage standard. Storage structure very small, meant to contain approximately 1 week of liquid manure (sand bedding). Roof water falls directly on to dairy freestall floor and into waste storage pit. Pit was full most of the time so whenever rain fall occurred manure left the structure. Manure runoff path went through township road culvert to dryrun on ridge top. Runoff stayed concentrated until reaching the headwaters of Harrison creek a class I trout stream. No known fish kills. Pasture over stocked with animals causing severe erosion and manure runoff.

Runoff Sources:

Sediment & manure from feedlot

Milkhouse waste discharged to dry-run.

Cropland under intense conventional production.

Roof runoff into manure pit.

Liquid manure applications year round. Manure runoff from crop fields.

No nutrient management plan.

Overflowing manure pit - confined flow to stream headwaters and through neighbors back yard. Children came into contact with contaminated runoff.

6. Summary of Project Challenges. (Space will expand to fit your text.)

Landowner cooperation was very good. The Leer's recognized they had a serious problem, beyond what they could technically and financially deal with, farm on brink of bankrupcy. Time enough to design and install all the needed practices and management changes was a challenge.

Accomplished:

Milkhouse waste directly pumped to NRCS approved waste storage pit.

Roof gutters and ground gutters installed to eliminate clean water from contact with manure. Clean water discharges away from manure sources at stable outlets.

Landowner (own expense) completed new roof over freestall, eliminating large source of water runoff into freestall and manure pit.

2 gravity flow reception pits installed to transfer manure from freetstalls to waste storage.

Pre-existing manure pit yet to be backfilled with clay. This structure wil be allowed to be used to deal with frozen manure scraped from freestall. Will be completed in 2014.

100% manure containment from animal housing.

Farmer converted to organic and are rotationally grazing. Cropland adjacent to buildings has been converted to pastureland.

Extensive cattle lane, fencing and watering system installed through NRCS EQIP.

Nutrient management plan applied to 300 acres of cropland and 110 acres of pastureland.

neighbors nolonger receiving manure, milkhouse waste or significant sediment runoff.

7. Grantee Certification.

Checking here ☒ certifies that, to the best of your knowledge, the information contained in this report is correct.

Name of Authorized Representative (type or print) ↓	Title of Authorized Representative (type or print) ↓
Paul R. Krahn	**County Conservationist**

Signature of Authorized Representative: Paul R Krahn

Date: 1/30/2014

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	January 26, 2014

8. For Departmental Use Only.

Regional NPS Coordinator – Please complete the following:

8.A. Check here ☒ if you have received the following from the project sponsor:

- one (1) printed, signed, original Final Report + attachments
- one (1) electronic version of Final Report.

Send the printed, signed original Final Report with attachments + electronic version to the Community Financial Assistance Grants Manager. Community Financial Assistance will forward to Runoff Management Section Grants Coordinator.

8.B. Comments about this project:

8.C. Type or print Name of Regional NPS Coordinator →	Cynthia A Koperski
8.D. Signature of Regional NPS Coordinator: Cynthia A Koperski	8.E. Date: 2-5-14

Chris & Christine Leer Farm – 2013 NOD Grant – Final Report

Location: SE1/4 of the NW ¼ of Section 24, T. 12 N - R.4W., South Part of Viroqua Township, Vernon County, Wisconsin.

- September 19, 2012 a Category II Notice of Discharge (NOD) issued by Water Quality Biologist, Cindy Koperski of the DNR's West Central Region.
- NOD grant submitted by Vernon County LWCD August 9, 2012.
- Grant awarded September 20, 2012 by DNR.
- Project completed December 2013.

Site Situation:

Initial run off complaint and site visit made by Vernon LWCD August 6th 2010. Farmer making large herd expansion without planning for waste storage or disposal. Farm located on ridge top. Overflowing manure storage pit. Pit constructed illegally and does not meet NRCS 313 Waste Storage standard, which is a violation of county ordinance. Storage structure very small, designed to contain approximately 1 week of liquid manure (sand bedding). Roof water falls directly on to dairy freestall floor and into waste storage pit. Pit was full most of the time, whenever rain fall occurred manure left the structure. Milking 350 cows equal to 490 animal units. Manure runoff discharged directly to township road culvert to dryrun with exposed bedrock, no filtering of runoff. Runoff stayed concentrated until reaching the headwaters of Harrison creek, a class I trout stream. No known fish kills, but heavy algae growth and polluted water apparent. Feedlot south of barn over stocked with animals causing severe erosion and manure runoff. Potential health concern to neighboring properties.

Runoff Sources:

- Sediment & manure from feedlot
- Milkhouse waste discharged to concentrated flow dry-run.
- Cropland under intense conventional production.
- Roof runoff into manure pit.
- Liquid manure applications year round. Manure runoff from crop fields.
- No nutrient management plan.
- Overflowing manure pit - confined flow to stream headwaters and through neighbors back yard. Children came into contact with contaminated runoff.

Grant Implementation by Vernon County LWCD

Landowner cooperation was very good. The Leer's recognized they had a serious problem, beyond what they could technically and financially deal with. Farm was on the brink of bankrupcy.

Key player was DATCP's Engineering Specialist - Ralph Hemling. Hemling designed the waste storage system saving thousands of dollars of private engineering fees. LWCD staff assisted Hemling by coordinating a site showing, bidding out project, assisting in construction inspection and issuing cost-share payments. Time to design and install all the needed practices and making management changes on the farmer's part was a challenge. This one operation did take a significant amount of LWCD time.

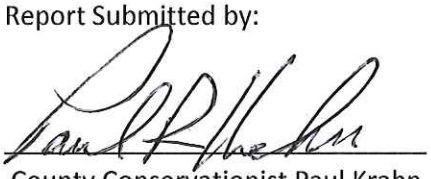
Accomplished:

- Milkhouse waste directly pumped to NRCS approved waste storage pit.
- Roof gutters and ground gutters installed to eliminate clean water from contact with manure. Clean water discharges away from manure sources at stable outlets.

- Landowner (own expense) completed new roof over freestall, eliminating large source of water runoff into freestall and manure pit.
- 2 gravity flow reception pits installed to transfer manure from freetstalls to waste storage.
- Pre-existing manure pit yet to be backfilled with clay. This structure wil be allowed to be used to deal with frozen manure scraped from freestall. Will be completed in 2014.
- 100% manure containment from animal housing.
- Farmer converted to organic and are rotationally grazing. Cropland adjacent to buildings has been converted to pastureland.
- Extensive cattle lane, fencing and watering system installed through NRCS EQIP with LWCD assistance.
- Nutrient management plan applied to 300 acres of cropland and 110 acres of pastureland. Assistance included spreader calibration and manure sample.
- Over 40 acres of additional contour strips marked by LWCD.
- Adopted use of Winter Rye cover crop following most fields of corn silage.
- Feedlot south of barn converted to pasture and managed properly.
- Neighbors no longer receiving manure, milkhouse waste, or significant sediment runoff.
- Positive feedback regarding improvements from neighbors.

Vernon County is thankful to the Wisconsin Department of Natural resources for the Notice of Discharge Grant program. This program provides a crucial source of funding to eliminate sources of nonpoint runoff by installing cost-effective best management practices and allows farmers to remain productive.

Report Submitted by:



County Conservationist Paul Krahn

Assistant County Conservationist Ben Wojahn.

January 30, 2014