

## Final Report

### Targeted Runoff Management Grant Program and Urban Nonpoint Source and Storm Water Management Grant Program

Form 3400-189 (R 6/08)

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Notice: This final report is authorized by ss. 281.65 and 281.66, Wis. Stats., and chs. NR 153 and NR 155, Wis. Adm. Code. Personally identifiable information collected will be used for program administration and may be made available to requesters as required under Wisconsin's Open Records Law [ss. 19.31-19.39, Wis. Stats.].

**Instructions:** Your grant agreement requires you to submit a Final Report 60 days after the end date listed in the grant agreement. 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. The DNR prefers that Final Reports be submitted in electronic format. If, however, printed copies of Final Reports are submitted, please submit three (3) complete originals to your regional Nonpoint Coordinator.

#### 1. Grant Type -- Please check one.

☒ 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

#### 2. Grantee & Project Information

Project Name <b>Hibbards Creek/Kiehnau Project</b>	Grant Number <b>TRC-TK06-15000-06A</b>
Governmental Unit Name <b>Door County Soil and Water Conservation Department</b>	Primary Watershed Name and Watershed Code <b>Upper Door County/TK06-100</b>
Nearest Water Body Name	Nearest Water Body Identification Code (WBIC) (if applicable)
DNR Water Management Unit (River System) Name <b>Twin Door-Kewaunee</b>	s. 303 (d) Listed Waterbody? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No.

What pollutant(s) were addressed by the project (e.g., nitrogen, phosphorus, sediment, thermal control, etc.)?

**Bacteria, Nitrates, Phosphorus and Sediment**

For each project site location provide the following: (attach additional sheets if necessary)

Location:		A	B	C	D	E
Minor Civil Division Name (City, Township, Village, etc.)		Town of Egg Harbor	Town of Egg Harbor			
PLSS	Town	30N	30N			
	Range	27E	27E			
	Section	28	32			
	Quarter	SW	NE			
	Quarter-Quarter	SE	NW			
Latitude (degrees, minutes, seconds North of Equator; use the DNR's Surface Water Data Viewer, SWDV)		45°, 2', 27"	45°, 2', 22"			
Longitude (degrees, minutes, seconds W of Prime Meridian, use the SWDV)		87°, 13', 38"	87°, 14', 33"			
Property Owner(s)	Name	Robert Kiehnau	Robert Kiehnau			
	Mailing address	3896 Maple Tree Rd, Egg Harbor WI 54209	3896 Maple Tree Rd, Egg Harbor WI 54209			

Site address (Not mailing address)	4141 Maple Tree Rd, Egg Harbor WI 54209			
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### 3. Summary of Results

#### A. Performance Standards and Prohibitions and Other Water Resources Management Priorities

For grants issued in calendar year 2006 or later, complete Tables A and B (following) consistent with the entries on your grant application.

**TABLE A. PERFORMANCE STANDARDS AND PROHIBITIONS** (per ch. NR 151, Wis. Adm. Code, effective October 1, 2002)

Performance Standard or Prohibition	Units of Measure	Quantity	Measurement Method Used
Sheet, rill and wind erosion	Acres meeting T	336	RUSLE 2
Manure Storage Facilities: New Construction/Alterations	Number of facilities	2	Count
	Number of animal units	131	Count
Manure Storage Facilities: Closure	Number of facilities		
Manure Storage Facilities: Failing/Leaking Facilities	Number of facilities		
	Number of animal units		
Clean Water Diversions in WQMA	Pollutant load reduction	52	BARNY
	Number of farms with diversions	2	Count
	Number animal units	131	Count
Nutrient Management on Agricultural Land	Acres planned	336	Count
Prohibition: Manure Storage Overflow	Number of facilities		
	Number of animal units		
Prohibition: Unconfined Manure Pile in WQMA	Number of farms	1	Count
Prohibition: Direct Runoff From Feedlot/Stored Manure	Pollutant load reduction		
	Number of facilities		
	Number of animal units		
Prohibition: Unlimited Livestock Access	Feet of bank protected		
	Number of farms		
Urban: 20-40% Reduction in Total Suspended Solids (TSS)	Pounds TSS reduced		
	% TSS reduction		

**TABLE B. OTHER WATER RESOURCES MANAGEMENT PRIORITIES**

I. Agricultural Areas	Units of Measure	Quantity	Measurement Method Used
Buffers	Feet of bank protected		
	Number of farms		
Streambank	Tons of bank erosion reduced		
	Feet of bank protected		
Other (specify)			
II. Developed Urban Areas	Units of Measure	Quantity	Measurement Method Used
Urban: 20-40% Reduction in TSS	Pounds TSS reduced		
	% TSS reduction		
Infiltration	% Pre-development stay-on volume		
	Cubic feet stay-on volume		
Peak flow discharge	Change in cubic feet per second		
Protective areas	Feet of bank protected		
Fueling & maintenance areas	Oily sheen presence		
Streambank	Tons of bank erosion reduced		
	Feet of bank protected		
Other (specify)			
III. Planning	Units of Measure	Quantity	Measurement Method Used
Quantify how implementation of the planning project decreased storm water impacts on state waters (i.e., storm water plan, I & E plan, etc.)	Municipalities planned for		
	Acres planned for		
Document/track progress made in implementing the planning product (i.e., ordinance, utility district evaluation/formation, storm water management plan information & education, etc.)	Municipalities planned for		
	Acres planned for		

Other (specify)			
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**B. Project Results Narrative**

BMPs were installed at two locations to address both barnyard runoff and an unconfined manure stack to soils that are shallow to bedrock.

The first site was addressed in 2006 and the project comprised of construction of a two foot wall around the existing barnyard and addition of a picket outlet that meters liquids to an 8'X8'X8' sump with a submersible pump. All liquids are routed to the sump with some on-lot storage calculated. An additional ring was added to the existing Slurry Storage to allow for adequate capacity for the additional liquid being stored. All liquids are pumped from the sump to the storage.

The second site was addressed in 2007 and the project comprised of construction of a Roofed Manure Storage at the heifer facility for the Kiehnaus farm. The building was constructed adjacent to the existing barn and utilizes the existing barn cleaner/stacker. Manure is deposited directly into the storage and the roof allows for handling as a solid to remain consistent with the management of this operation.

As a requirement of the cost-share agreement, Robert was required to assemble and implement a nutrient management plan. The Door County SWCD was able to apply county cost-share funds to his nutrient management costs.

All waste generated at both sites is being collected and stored in long term manure storage (7 months) and is being applied appropriately through an approved nutrient management plan.

**4. Satisfaction of Notice Requirements (if applicable)**

If cost sharing for this project was offered under a formal notice to achieve compliance with performance standards or prohibitions, provide information for each notice in the table below.

Notice Information				Notice Satisfaction Information		
Notice Type	Issue Date	From (Name)	To (Name)	Satisfied?		Date Letter Sent
				Yes	No	
				<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	
				<input type="checkbox"/>	<input type="checkbox"/>	

**5. Summary of Project Challenges**

Bedrock, though expected, was a challenge at both sites. Excavation at the home farm included blasting for the barnyard sump. The heifer site had between 9"-16" of soil to bedrock and the elevation of the slab had to be adjusted accordingly to meet separation required in NRCS Spec 313.

**6. Additional Information about the Project (optional)**

Both sites for this operation were discharging pollutants to groundwater. The Kiehnaus are very conscientious operators and were very willing project participants. The overall result at both sites is success.

**7. Final Product(s) -- All Projects**

**A. Construction Projects**

☐ A.1. Checking here indicates that a printed copy of project plans and specifications was sent to your DNR Regional Nonpoint Source Coordinator.

☒ A.2. Checking here indicates that photo-documentation of the project's construction is attached.

**B. Planning Projects**

☐ B.1. Checking here indicates that a printed copy of the planning product (e.g., plans, ordinances, analyses) was sent to your DNR Regional Nonpoint Source Coordinator.

☐ B.2. Checking here indicates that the Regional Nonpoint Source Coordinator has approved the final Planning Product(s).

☐ B.3. Checking here indicates that your governmental unit has adopted the final Planning Product(s).

Name of Planning Document(s)	Date(s) effective	Date Submitted to NPS Coordinator
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**8. Grantee Certification:**

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

Type or print Name and Title of Authorized Representative certifying here.

William Schuster

Signature of Authorized Representative



Date

12/2/08

**9. FOR DEPARTMENTAL USE ONLY**

REGIONAL NONPOINT COORDINATOR -- Please complete the following:

- ☐ Checking here indicates that you received either planning or construction plans and specifications from the project sponsor, as appropriate. Attach a copy of the approval.
- ☐ Checking here indicates that you approved the final construction. Attach a copy of the final construction approval.
- ☐ Checking here indicates that you have approved the final Planning Product(s).
- ☐ Check here if two (2) signed, original copies of the Final Report and attachments have been sent to Runoff Management Section Grants Coordinator. Note: Regional Nonpoint Source Coordinator may retain one (1) copy of the signed, original Final Report.

Type or print Name of Regional Nonpoint Coordinator

Signature of Regional Nonpoint Coordinator

Date





Kiehnau Heifer Farm – Unconfined Stack on Soils <24" to Bedrock





Kiehnau Heifer Farm – View from South





Kiehnau Heifer Farm – Stacking Area





Kiehnau Heifer Farm – Runoff from Stacking Area





Kiehnau Heifer Farm – Roofed Manure Storage





Kiehnau Heifer Farm – Roof Gutters and Outlet





Kiehnau Home Farm – Runoff from Barnyard to Soils <24" to Bedrock





2006 4 20

Kiehnau Home Farm – Barnyard and Stacking Area with No Containment





Kiehnau Home Farm – Runoff from Barnyard





Kiehnau Home Farm – New Stacking Area





Kiehnau Home Farm – New Barnyard






Kiehnau Home Farm – North Barnyard and Picket





Kiehnau Home Farm – Barnyard Sump in Bedrock





FASmith  
Slurrystore®  
System

Kiehnau Home Farm – Barnyard Pumped to Storage