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:	
Big Creek / Gilbert Farms Project	**TRC-TK06-15000-07B**	
2.3. Governmental Unit Name:	2.4. Primary Watershed Name:	2.5. Watershed Code:
Door County Soil and Water Conservation Department	**Upper Door County**	**TK-06**

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	**Gilbert Farms**				
Cost-Share Agreement Number (Agricultural only)	**07-GIL-04**				
12-Digit Hydrologic Unit Code(s) (HUC) Where Work Was Completed	**040301020109**				
Nearest Surface Receiving Water Affected					
Name:	**Lily Bay**				
Waterbody Identification Code(s) (WBIC):	**97100**				
Nearest Impaired Water Affected					
Name:					
Waterbody Identification Code(s) (WBIC):					

Pollutants Reduced	**Sediment, Bacteria, Nitrates and Phosphorus**				
Impairments/Impacts Addressed	**-Clean Water Diversions in a WQMA** **-Direct Runoff to Waters of the State** **-Sedimentation to Surface and Groundwater** **-Elimination of Winter Spreading**				
Project Location(s) (cont.) →	**A.**	**B.**	**C.**	**D.**	**E.**
Project Coordinates:					
Town	**28**				
Range	**26E**				
Section	**35**				
Quarter	**SW**				
Quarter-Quarter	**SW**				
Latitude (degrees, minutes, seconds North of Equator; use the DNR's Surface Water Data Viewer (SWDV))	**44d51m02s**				
Longitude (degrees, minutes, seconds W of Prime Meridian, use the SWDV)	**-87d18m44s**				

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"	**1,157 acres**	**RUSLE2**
Manure Storage Facilities: New Construction/Alterations	Number of facilities	**1 facilities**	**Count**
	Number of animal units	**737 animal units**	**Count**
Manure Storage Facilities: Closure	Number of facilities	**facilities**	
Manure Storage Facilities: Failing/Leaking Facilities	Number of facilities	**facilities**	
	Number of animal units	**animal units**	
Clean Water Diversions in WQMA	Pollutant load reduction	**156 lbs.**	**BARNY**
	Number of farms with diversions	**1 farms**	**Count**
	Number animal units	**737 animal units**	**Count**

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Nutrient Management on Agricultural Land	Acres planned	**1,157 acres**	**Count**
Prohibition: Manure Storage Overflow	Number of farms	**farms**	
	Number of animal units	**animal units**	
Prohibition: Unconfined Manure Pile in WQMA	Number of farms	**farms**	
Prohibition: Direct Runoff From Feedlot/Stored Manure	Pollutant load reduction	**156 lbs.**	**BARNY**
	Number of facilities	**2 facilities**	**Count**
	Number of animal units	**662 animal units**	**Count**
Prohibition: Unlimited Livestock Access	Feet of bank protected	**feet**	
	Number of farms	**farms**	

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: **Elimination of Winter Spreading**	Units (use feet, acres or number as applicable)	**1157**	**Count**
	Pollutant load reduction (if method available)		
Other:	Units (use feet, acres or number as applicable)		
	Pollutant load reduction (if method available)		
Other:	Units (use feet, acres or number as applicable)		
	Pollutant load reduction (if method available)		

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)		

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

	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 planning product:	Existing Developed Urban Areas	New Development	Total Acres
	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:	

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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
Local Regulation	**June 5, 2007**	**Door County SWCD**	**Gilbert Farms**	☒	☐	**June 16, 2010**
				☐	☐	
				☐	☐	
				☐	☐	

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

This farm has historically been a major source of groundwater pollution from inadequate barnyard runoff control and manure management.

Once the manure storage component was in progress, planning with the landowner revealed that the best solution for barnyard runoff issues was to construct a total confinement, no-runoff system.

While the planned barnyard runoff control measures could be installed to meet standards and address many of the immediate concerns with this facility, there were too many variables with shallow soils, existing grade and significant solution features that lead to the most logical solution being confining the animals.

The SWCD planned with the Gilberts throughout the process and it lead to the undeniable conclusion; the Gilberts recognized the challenges that existed with regard to protection of water quality on their site and they agreed to confinement of the animals to create a no-runoff scenario.

The Total Confinement concept was first used in Door County during the Red River/Sturgeon BayPriority Watershed Project on a site adjacent to a creek with limited options for barnyard runoff control. As described in the control plan, the SWCD calculated the cost of the BMPs needed to address the water quality issues and used that amount as the cost-containment for the new facility. In this situation, the SWCD assisted in planning and design and construction supervision but the landowner was able to build a facility with components that are not normally eligible for cost-sharing through traditional BMPs. This resulted in a facility that was suitable for total confinement with no runoff and the SWCD applied funding calculated through the aforementioned process.

This is the same scenario approved for the Gilbert Farm.

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

Bedrock, Groundwater and the proximity to solution features were all issues at this site. Care had to be taken for proper placement of the facilities and their associated components. Once located, the construction of the projects was done carefully to ensure compliance with specifications for BMP installation in sensitive locations. Some bedrock removal was also necessary to accommodate waste transfer.

Weather was also an issue as construction ran late into the year; proper cold-weather concrete techniques were crucial as structures were placed for the Total Confinement Facility.

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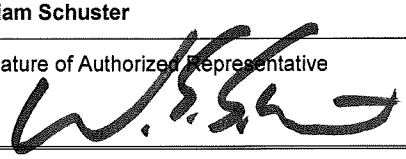
7. Grantee Certification.

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) ↓
William Schuster	**County Conservationist**

Signature of Authorized Representative



Date 6/30/10

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 →

8.D. Signature of Regional NPS Coordinator	8.E. Date

Spring/Wetland Area Down-Gradient from Facilities

Solution Feature Down-Gradient from Facilities

Test Pits Illustrating Both Deep Soil/Groundwater and Shallow Soil to Bedrock


Discharge from Existing Facilities

Existing Earth Feedlot with Exposed Bedrock

Discharge from Existing Transfer System

Existing Manure Storage – Inadequate Capacity

Removal of Bedrock to Accommodate Waste Transfer

Expansion of Existing Reception Tank for Waste Transfer System

Trenching in Existing Facilities to Accommodate Waste Transfer

Waste Transfer Line Prior to Installation

Construction of Long-Term Manure Storage Adjacent to Existing Storage

Construction of Dikes on Long-Term Manure Storage

Placement of Concrete Liner on Long-Term Manure Storage

Completed Long-Term Manure Storage – Spillways from Existing Storage

Placement of Concrete in Total Confinement Facility

Straw Insulation During Cold-Weather Concrete Placement


Total Confinement Facility

Total Confinement Facility – Designed for Future Expansion

Ventilation System for Total Confinement Facility