

Final Report

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

Form 3400-189 (R 6/08)

dnr.wi.gov

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 City of Racine Stormceptor Design Study	Grant Number USP-SE03-52276-02
Governmental Unit Name City of Racine	Primary Watershed Name and Watershed Code Root River SE03-040
Nearest Water Body Name	Nearest Water Body Identification Code (WBIC) (if applicable)
DNR Water Management Unit (River System) Name Root River	s. 303 (d) Listed Waterbody? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Root River

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

TSS, nitrogen, 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.)		City of Racine	City of Racine	City of Racine	City of Racine	
PLSS	Town	03N	03N	04N	04N	
	Range	22E	23E	22E	23E	
	Section	12-14, 23-25	04-09, 16-21, 29-31	25, 26, 35	28, 31-33	
	Quarter					
	Quarter-Quarter					
Latitude (degrees, minutes, seconds North of Equator; use the DNR's Surface Water Data Viewer, SWDV)		42° 43' 59"	42° 43' 59"	42° 43' 59"	42° 43' 59"	
Longitude (degrees, minutes, seconds W of Prime Meridian, use the SWDV)		87° 48' 52"	87° 48' 52"	87° 48' 52"	87° 48' 52"	
Property Owner(s)	Name	City of Racine	City of Racine	City of Racine	City of Racine	
	Mailing address	730 Washington Avenue	730 Washington Avenue	730 Washington Avenue	730 Washington Avenue	

Site address (Not mailing address)	City-wide	City-wide	City-wide	City-wide	
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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		
Manure Storage Facilities: New Construction/Alterations	Number of facilities		
	Number of animal units		
Manure Storage Facilities: Closure	Number of facilities		
Manure Storage Facilities: Falling/Leaking Facilities	Number of facilities		
	Number of animal units		
Clean Water Diversions in WQMA	Pollutant load reduction		
	Number of farms with diversions		
	Number animal units		
Nutrient Management on Agricultural Land	Acres planned		
Prohibition: Manure Storage Overflow	Number of facilities		
	Number of animal units		
Prohibition: Unconfined Manure Pile in WQMA	Number of farms		
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	1	SWMP
	Acres planned for	10240	SWMP
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	1	SWMP
	Acres planned for	10240	SWMP

Other (specify)			
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B. Project Results Narrative

This project was conducted to evaluate the TSS reduction capability and cost of sub-surface devices. The project focused the analysis on two specific areas then applied the approach on a city-wide basis. The results indicate that the level of TSS reduction appears lower than that claimed by vendors, primarily because they were basing their claims on total sediment that included larger particles than those in the TSS (WDNR NURP or other distribution). Therefore, the cost per ton of TSS was high and in cases where extensive storm sewer was required to separate system flows increased further. These systems work best on smaller, more intense land areas and filter devices will reduce a greater amount of TSS than settling (vortex or other) devices but have a higher install and maintenance cost. While these types of devices are a valid part of the wholistic TSS reduction tools, sole reliance on these devices is cost prohibitive.

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

The major project challenge was the fact that vendor information was not to the same level of detail or based on the same scientific approach/assumptions which made a direct comparison of TSS/sediment reduction of the devices very difficult.

6. Additional information about the Project (optional)

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) City of Racine Space Limited Device Study	Date(s) effective September 2003	Date Submitted to NPS Coordinator (not recorded)
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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.

JOHN C. ROONEY **ASST. COMMISSIONER OF PUBLIC WORKS**

Signature of Authorized Representative 	Date 4-9-09
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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