

## 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.

- |   |  |
|---|--|
| <input type="checkbox"/> Targeted Runoff Management Grant – Agricultural                                | <input type="checkbox"/> Targeted Runoff Management Grant – Urban                        |
| <input checked="" type="checkbox"/> Urban Nonpoint Source & Storm Water Management Grant – Construction | <input type="checkbox"/> Urban Nonpoint Source & Storm Water Management Grant – Planning |
| <input type="checkbox"/> Notice of Discharge Grant  |  |

### 2. PROJECT NAME & LOCATION.

2.1. Project Name: <b>Daly Drive Water Quality Pond</b>	2.2. Grant Number: <b>USC-LF01-05106-11B</b>	
2.3. Governmental Unit Name: <b>Bellevue, Village</b>	2.4. Primary Watershed Name: <b>East River</b>	2.5. Watershed Code: <b>LF01</b>

#### 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	<b>Bellevue, Village</b>				
Cost-Share Agreement Number (Agricultural only)					
12-Digit Hydrologic Unit Code(s) (HUC) Where Work Was Completed	<b>040302040302</b>				
Nearest Surface Receiving Water Affected					
Name:	<b>Bower Creek</b>				
Waterbody Identification Code(s) (WBIC):	<b>118700</b>				
Nearest Impaired Water Affected					
Name:	<b>East River</b>				
Waterbody Identification Code(s) (WBIC):	<b>118000</b>				
Pollutants Reduced	<b>TSS</b>				
Impairments/Impacts Addressed	<b>TSS</b>				

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Project Location(s) (cont.) →	A.	B.	C.	D.	E.
Project Coordinates:					
Town	23				
Range	21				
Section	20				
Quarter	NW				
Quarter-Quarter	SE				
Latitude (degrees, minutes, seconds North of Equator; use the DNR's Surface Water Data Viewer (SWDV))	44-27-13N				
Longitude (degrees, minutes, seconds W of Prime Meridian, use the SWDV)	87-58-42W				

### 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"	acres	
Manure Storage Facilities: New Construction/Alterations	Number of facilities	facilities	
	Number of animal units	animal units	
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	lbs.	
	Number of farms with diversions	farms	
	Number animal units	animal units	
Nutrient Management on Agricultural Land	Acres planned	acres	
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	lbs.	
	Number of facilities	facilities	
	Number of animal units	animal units	
Prohibition: Unlimited Livestock Access	Feet of bank protected	feet	
	Number of farms	farms	



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Table A. Agricultural Projects. (continued)			
A.2. Other Management Measures		Units of Measure	Measurement Method Used
Streambank & Shoreline Protection	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)		
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	8040 lbs.	SLAMM
	TSS reduction	78 %	SLAMM
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 <sup>3</sup> /year	
Peak flow discharge for 2 year/24 hour design storm	Change in cubic feet per second for design year	ft <sup>3</sup> /sec	
Protective areas	Bank protected	feet	
Fueling & maintenance areas	Oily sheen presence reduced	<input type="checkbox"/> Yes <input type="checkbox"/> 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

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planning product:	acres	acres	acres
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<b>C.3. Products developed</b> (check all below that apply)	<b>Identify Documents by Name (if applicable)</b>
<input type="checkbox"/> Storm Water Plan	
<input type="checkbox"/> Construction or Erosion Ordinances	
<input type="checkbox"/> Post-construction Storm Water Ordinances	
<input type="checkbox"/> Other Types of Storm Water Quality Ordinances	
<input type="checkbox"/> Financing Methods: identified and evaluated	
<input type="checkbox"/> Financing Methods: developed or implemented	
<input type="checkbox"/> I & E Plan	
<input type="checkbox"/> I & E Implementation Activities	
<input type="checkbox"/> Other:	
<b>C.4. Identify the Storm Water goals addressed</b> (check all that apply)	
<input type="checkbox"/> Reduce TSS	<b>Comments:</b>
<input type="checkbox"/> Maintain infiltration	
<input type="checkbox"/> Control Peak Flow	
<input type="checkbox"/> Protective Areas	
<input type="checkbox"/> Control of Fueling & Maintenance Areas	
<input type="checkbox"/> Remove Illicit Discharges	
<input type="checkbox"/> 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?		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"/>	



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

See attached SLAMM Summary and Design Parameters for the % Removal TSS

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

The vegetation and plantings are a special installation and the typical landscapers that provide these services are not at the level needed to provide an excellent project without the services of an ecological professional. These BMP's also require a 3 year maintenance program in order fully establish the vegetation required. The funding program could look at taking that into account when providing funding for the construction with a higher % reimbursement during construction and allow the municipality to complete the remaining 2 years outside the grant period.

**7. Grantee Certification.**

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

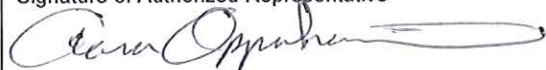
Name of Authorized Representative (type or print) ↓

Aaron Oppenheimer

Title of Authorized Representative (type or print) ↓

Administrator

Signature of Authorized Representative



Date

10/30/12

**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

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

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<b>Client's Name:</b> Village of Bellevue	<b>Site Location:</b> Bellevue	<b>Project No.</b> 10B020
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<b>Photo No.</b> 1	<b>Date:</b> 8-4-10	
<b>Direction Photo Taken:</b> East		
<b>Photo Taken By:</b> TMM		
<b>Description:</b>  Daly Dr – looking east along road		

<b>Photo No.</b> 2	<b>Date:</b> 8-4-10	
<b>Direction Photo Taken:</b> West		
<b>Photo Taken By:</b> TMM		
<b>Description:</b>  Daly Dr – looking west along the road		



<b>Client's Name:</b> Village of Bellevue	<b>Site Location:</b> Bellevue	<b>Project No.</b> 10B020
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<b>Photo No.</b> 3	<b>Date:</b> 8-4-10
<b>Direction Photo Taken:</b> Northeast	
<b>Photo Taken By:</b> TMM	
<b>Description:</b>  Daly Dr – pond to be constructed in open area.	



<b>Photo No.</b> 4	<b>Date:</b> 8-4-10	
<b>Direction Photo Taken:</b> Northwest		
<b>Photo Taken By:</b> TMM		
<b>Description:</b>  Daly Dr - pond to be constructed in open area.		



**Client's Name:**  
Village of Bellevue

**Site Location:**  
Bellevue

**Project No.**  
10B020

**Photo No.**  
5

**Date:**  
8-4-10

**Direction Photo Taken:**  
Northwest

**Photo Taken By:**  
TMM

**Description:**  
Daly Dr – Pond area



**Photo No.**  
6

**Date:**  
8-4-10

**Direction Photo Taken:**  
West

**Photo Taken By:**  
TMM

**Description:**  
Daly Dr – wetlands in front, pond to be constructed in back.







# Photographic Log

Client's Name: Village of Bellevue	Project Name: Daly Dr Stormwater Pond	Project No. USC-LF01-05106-11B
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Photo No. 1	Date: 10/25/12	
Direction Photo Taken Looking East		
Photo Taken By: Thad M		
Description: Pond at Daly Dr		





# Photographic Log

Client's Name: Village of Bellevue		Project Name: Daly Dr Stormwater Pond	Project No. USC-LF01-05106-11B
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Photo No. 2	Date: 10/25/12	
Direction Photo Taken Looking North		
Photo Taken By: Thad M		
Description: Pond at Daly Dr		



Client: Village of Bellevue  
Project: Daly Drive - Wet Pond Design  
Prepared by: MJA  
Checked by: SMT

Project #: 10B020  
Page: 1 of 2  
Date: 07/19/2010  
Date: 08/31/2010

## Daly Drive Pond

Rainfall Data for 24 hour design storm:

1 year = 2.2 in  
2 year = 2.3 in  
10 year = 3.4 in  
100 year = 5.1 in

Total Contributing Area = 36 Acres

Residential = 36.0 Acres

CN = 85

### Design Assumptions:

1. Rainfall data used is from Village of Bellevue Stormwater Ordinance.
2. Pre development curve number = 78. Based on Wet Pond Standards – 1001.
3. Minimum time of concentration = 6 minutes
4. Pond Criteria from DNR Wet Pond Standard 1001.
5. Permanent pool side slope = 2:1
6. Permanent pool depth = 5'
7. Safety shelf = 8 ft wide with 10:1 slope
8. Side slopes above permanent pool = 3:1
9. Pond is sized to reduce the 100 year storm event to less than pre-development conditions.
10. Pond berm is 1' above the flow depth for the 100-yr, 24-hour storm.
11. Maintenance access = 10 ft wide.
12. The principal water quality outlet is designed to control the post development 2-yr, 24-hour discharge from the pond within the primary principal outlet without the use of the emergency spillway.
13. The emergency spillway is designed to safely pass peak flows produced by the 100-year, 24-hour design storm.
14. The forebay should be 5%-15% of the permanent pool surface area with a 5 foot depth.

### Appendix A

Predevelopment Runoff for 1-yr, 2-yr, 10-yr and 100-yr, 24 hour storm events.

Computed with Hydraflow software.

File path: X:\GB\IE\2010\10B020-00\12000 Design Data and Calcs\Pond Volumes.gpw

### Appendix B

Post development Runoff for 1-yr, 2-yr, 10-yr and 100-yr, 24 hour storm events.

Computed with Hydraflow software.

File path: X:\GB\IE\2010\10B020-00\12000 Design Data and Calcs\Pond Volumes.gpw

### Appendix C

Pond Outputs from Hydraflow software. File Path: File path: X:\GB\IE\2010\10B020-00\12000 Design Data and Calcs\Pond Volumes.gpw

Permanent Pool Storage = 74,788 cubic feet

Permanent Pool Area = 24,008 sq. feet

Permanent Pool Elevation = 593.0'

X:\GB\IE\2010\10B020-00\12000 Design Data and Calcs\Daly Design\Daly-summary 8-31-10.doc





Client: Village of Bellevue  
Project: Daly Drive - Wet Pond Design  
Prepared by: MJA  
Checked by: SMT

Project #: 10B020  
Page: 2 of 2  
Date: 07/19/2010  
Date: 08/31/2010

100 Year Storage = 147,980 cubic feet  
100 Year Area = 33,322 sq. feet  
100 Year Elevation = 598'

Outflows:

4 inch pipe at 1.4% = 0.42 cfs, Invert Elevation=593.0'  
24 inch pipe at 1.4%=28.30 cfs, Invert Elevation=593.5  
15' wide broadcrested weir = 38.2 cfs, Invert Elevation=597.0'  
Total outflow = 66.92 cfs

Rip rap sizing:

15' wide weir with 3:1 side slopes. Design discharge of 142 cfs. Type AMR rip rap required.

Dewatering calculations :

Based on DNR Dewatering Code No. 1061. Section V.B.8

Appendix D –

SLAMM Output – 78.4% TSS Removal

# Bellevue W3.38 - Output Summary.txt

SLAMM for Windows Version 9.3.4

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Data file name: X:\GB\IE\2010\10B020-00\12000 Design Data and Calcs\SLAMM\Bellevue W3.38.dat

Data file description: Village of Bellevue MS4 Stormwater Modeling - Existing Conditions Subbasin W3.38

Rain file name: C:\Program Files\WinSLAMM\RainFiles\WisReg - Green Bay Five Year Rainfall.ran

Particulate Solids Concentration file name: C:\Program Files\WinSLAMM\WI\_AVG01.psc

Runoff Coefficient file name: C:\Program Files\WinSLAMM\WI\_SL06 Dec06.rsv

Particulate Residue Delivery file name: C:\Program Files\WinSLAMM\WI\_DLV01.prr

Residential Street Delivery file name: C:\Program Files\WinSLAMM\WI\_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\Program Files\WinSLAMM\WI\_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\Program Files\WinSLAMM\WI\_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\Program Files\WinSLAMM\WI\_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\Program Files\WinSLAMM\WI\_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\Program Files\WinSLAMM\Freeway Dec06.std

Pollutant Relative Concentration file name: C:\Program Files\WinSLAMM\WI\_GEO01.ppd

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Model Run Start Date: 01/01/68 Model Run End Date: 12/30/72

Date of run: 11-10-2010 Time of run: 13:49:49

Total Area Modeled (acres): 36

Years in Model Run: 5.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Source Area Total without Controls:	3.717E+06	0 %	160.6	37268	0 %
Total Before Drainage System:	3.717E+06	0.00%	160.8	37267	0.00%
Total After Drainage System:	3.717E+06	0.00%	160.8	37301	-0.09%
Total After Outfall Controls:	3.717E+06	0.00%	34.65	8040	78.43%
Annualized Total After Outfall Controls:	743766			1609	