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: | |
|---|---|---|
| **Skyview St. Stormwater Ponds** | **USC-LF01-05106-11D** | |
| 2.3. Governmental Unit Name: | 2.4. Primary Watershed Name: | 2.5. Watershed Code: |
| **Bellevue, Village** | **East River** | **LF01** |

**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 | Bellevue, Village | | | | |
| Cost-Share Agreement Number (Agricultural only) | | | | | |
| 12-Digit Hydrologic Unit Code(s) (HUC) Where Work Was Completed | 040302040302 | | | | |
| Nearest Surface Receiving Water Affected | | | | | |
| Name: | Willow Creek | | | | |
| Waterbody Identification Code(s) (WBIC): | 5018099 | | | | |
| Nearest Impaired Water Affected | | | | | |
| Name: | East River | | | | |
| Waterbody Identification Code(s) (WBIC): | 118000 | | | | |
| Pollutants Reduced | TSS | | | | |
| Impairments/Impacts Addressed | TSS | | | | |

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| Project Location(s) (cont.) → | A. | B. | C. | D. | E. |
|---|---|---|---|---|---|
| Project Coordinates: | | | | | |
| **Town** | **23** | | | | |
| **Range** | **21** | | | | |
| **Section** | **17** | | | | |
| **Quarter** | **SW** | | | | |
| **Quarter-Quarter** | **NE** | | | | |
| **Latitude** (degrees, minutes, seconds North of Equator; use the DNR's Surface Water Data Viewer (SWDV)) | **44-28-31N** | | | | |
| **Longitude** (degrees, minutes, seconds W of Prime Meridian, use the SWDV) | **87-58-49W** | | | | |

## 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 | Quantity | 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 | **12107 lbs.** | **SLAMM** |
| | TSS reduction | **70.8 %** | **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 | **$ft^3$/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 |

| 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.)

**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 construciton 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) ↓ | Title of Authorized Representative (type or print) ↓ |
|---|---|
| **Aaron Oppenheimer** | **Administrator** |

| Signature of Authorized Representative | Date |
|---|---|
| Aaron Oppenheimer | 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 |

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| | |
|---|---|
| | |

Foth

# Photographic Log

| Client's Name: | Site Location: | Project No. |
|---|---|---|
| Village of Bellevue | Bellevue | 10B020 |

| Photo No. | Date: |
|---|---|
| 1 | 4-9-10 |

**Direction Photo Taken:**
North

**Photo Taken By:**
Foth

**Description:**

Skyview St

| Photo No. | Date: |
|---|---|
| 2 | 4-9-10 |

**Direction Photo Taken:**
East

**Photo Taken By:**
Foth

**Description:**

Skyview St looking toward Pintail St

Cedar corporation

# Photographic Log

| Client's Name: Village of Bellevue | Project Name: Skyview St Stormwater Pond | Project No. USC-LF01-05106-11D |
|---|---|---|

| Photo No. 1 | Date: 10/25/12 |
|---|---|

**Direction Photo Taken**
Looking East

**Photo Taken By:**

Thad M

**Description:**

Pond at Skyview St

Cedar corporation

# Photographic Log

| Client's Name: Village of Bellevue | Project Name: Skyview St Stormwater Pond | Project No. USC-LF01-05106-11D |
|---|---|---|

| Photo No. 2 | Date: 10/25/12 |
|---|---|

**Direction Photo Taken**
Looking North

**Photo Taken By:**

Thad M

**Description:**

Pond at Skyview St

**Skyview 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 = 43.10 Acres
Residential = 43.10Acres
CN = 82

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 = 55,073 cubic feet
Permanent Pool Area = 17,928 sq. feet
Permanent Pool Elevation = 599.0'

100 Year Storage = 124,346 cubic feet
100 Year Area = 29,210 sq. feet
100 Year Elevation = 604.3'

Outflows:
4 inch pipe at 0.5% = 0.67 cfs, Invert Elevation=599.0'
36 inch pipe at 1%=61.82 cfs, Invert Elevation=599.5'
12' wide broadcrested weir = 38.2 cfs, Invert Elevation=603.3'
Total outflow = 93.69 cfs

Rip rap sizing:
12' wide weir with 3:1 side slopes. Design discharge of 138 cfs. Type AMR rip rap required.

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

Appendix D –
SLAMM Output – 70.79% TSS Removal

Skyview

Bellevue W3.11-rev - Output Summary.txt

SLAMM for Windows Version 9.3.4


Data file name: X:\GB\IE\2010\10B020-00\12000 Design Data and Calcs\SLAMM\Bellevue W3.11-rev.dat
Data file description: Village of Bellevue MS4 Stormwater Modeling - Existing Conditions Subbasin W3.11
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: 13:53:23
Total Area Modeled (acres): 43.1
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: | 4.104E+06 | 0 % | 161.8 | 41450 | 0 % |
| Total Before Drainage System: | 4.104E+06 | 0.00% | 161.9 | 41451 | 0.00% |
| Total After Drainage System: | 4.104E+06 | 0.00% | 161.9 | 41488 | -0.09% |
| Total After Outfall Controls: | 4.104E+06 | 0.00% | 47.26 | 12107 | 70.79% |
| Annualized Total After Outfall Controls: | 821184 | | | 2423 | |