

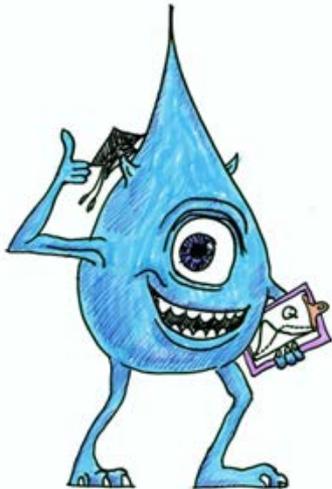
# Storm Water U

## Inspections and Enforcement:

Lessons learned in construction site erosion control plan implementation and enforcement

Alan Barrows  
Waukesha Co.

Waukesha County  
Storm Water Workshop 2014



**Construction Inspections**  
**Enforcement process**  
**Permittee inspection logs**  
**Construction verification**  
**Planting verification**

- The permit holder ensures that qualified professionals are involved in the project including a professional engineer to oversee and verify construction
- The permit holder also provides a financial assurance to ensure compliance with the approved erosion and storm water management plans and other storm water permit requirements

**Storm Water Permit**

Permit # 651251      Permit Expiration Date: 5/1/2014

This permit has been issued pursuant to the Waukesha County Storm Water Management and Erosion Control Ordinance (Chapter 14 Code of Ordinances).

Project Type & Name: STH 83 Gas and Electric

Permit Holders Name: We Energies - Patricia Finn

Project Location:  
Survey Township of Delafield & Genesee, Section       , ¼ Section         
Address (if available): Turn Parking Pccc to Glacier Pass

Issued by (staff name): Alan Barrows *Alan Barrows*      Date Issued: 10/31/13  
Waukesha County Department of Parks and Land Use  
Land Resources Division  
Administration Center  
515 W. Morland Blvd., Room AC 260  
Waukesha, WI 53188  
Phone: 262-896-8300

- Post this permit on premises in clear view from road -

## Roles in Project Implementation

- The project engineer is responsible for achieving compliance with the approved plans including implementation of the approved inspection plan and verification of construction in accordance with permit requirements
- The erosion control inspector conducts weekly and post-rainfall inspections and maintain an inspection log for the site (can be the project engineer)
- Maintenance is required w/in 24 hours of inspection

## Roles in Project Implementation



- If maintenance or additional BMPs are needed, a follow up inspection is completed by the engineer/inspector and documented in the inspection log
- The engineer/inspector makes the inspection log available to regulatory authorities upon request

## Roles in Project Implementation



# Project erosion control inspector's log

- 🌀 Inspector's name
- 🌀 Inspection date & time
- 🌀 Project phase
- 🌀 Findings
- 🌀 Site conditions
- 🌀 Actions needed
- 🌀 Maintenance completed
- 🌀 Details

**Notice:** Use of this specific form is voluntary, but the information contained on this form must be collected and kept by the permittee under s. NR 216.48(4), Wis. Adm. Code, for a construction site covered under the General WPDES Construction Site Storm Water Discharge Permit, Permit No. WI-0067831-2. This form is provided for the convenience of the permittee to meet the requirements of s. NR 216.48(4), Wis. Adm. Code. Multiple copies of this form may be made to compile the inspection report.

Inspections of implemented erosion and sediment control best management practices must be performed weekly and within 24 hours after a precipitation event 0.5 inches or greater which results in runoff.

Weekly written reports of all inspections conducted by or for the permittee must be maintained throughout the period of general permit coverage. The information maintained in accordance with s. NR 216.48 (4) must be submitted to the Department upon request.

<b>Name of Permittee:</b>			
<b>Construction Site Name (Project):</b>		<b>Construction Site ID No.:</b>	
<b>Location:</b>		<b>County:</b>	
<b>Contractor:</b>		<b>Field Office Phone:</b>	
<b>Note:</b> Weekly inspection reports, along with erosion control and stormwater management plans, are required to be maintained on site and made available upon request.			
<b>Date of inspection (mm/dd/yy):</b>		<b>Type of inspection:</b> <input type="checkbox"/> Weekly <input type="checkbox"/> Precipitation Event	
		<input type="checkbox"/> Other (specify) _____	
<b>Time of inspection: Start:</b> _____ a.m./p.m.		<b>Name(s) of individual(s) performing inspection:</b>	
<b>End:</b> _____ a.m./p.m.			
<b>Weather:</b>			
<b>Description of present phase of construction:</b>			
			<b>Comments/Recommendations about the overall effectiveness of the erosion and sediment control measures.</b>
<b>Modifications Required</b>	<b>Yes</b>	<b>No</b>	<b>Not Applicable</b>
			<b>Note:</b> For each item checked "Yes", complete the follow-up information on page 2.
Ditch Checks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Erosion Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Erosion Mat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grading Practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inlet Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Offsite Sediment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permanent Seeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schedule / Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Silt Fence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Silt Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stabilized Outlet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temp. Diversion Channel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temp. Settling Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporary Seeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tracking Pads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity Barrier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Bi-monthly “spot checks” by the regulatory agency
  - Documentation of site conditions and compliance with approved erosion control plan and permit requirements
  - Follow up communication regarding necessary maintenance and additional measures to the permit holder, project engineer and EC inspector
  - Establishes a timeframe for bringing the site into compliance with permit requirements (24 hours)

## Roles in Project Implementation



- LRD construction inspection report

- 🌀 Project name
- 🌀 Location
- 🌀 Inspection date
- 🌀 Permit holder
- 🌀 Inspector
- 🌀 Project phase
- 🌀 Modification needed
- 🌀 Communication
- 🌀 Compliance (yes/no)
- 🌀 Compliance date



Waukesha County Dept. of Parks & Land Use – Land Resources Division  
 515 W. Moreland Blvd., Room AC260  
 Waukesha, WI 53188-3868  
 Phone: 262-896-8300 Fax: 262-896-8298



**Construction Site Inspection Report**

Erosion, Sediment & Storm Water Management BMPs

Project Name: \_\_\_\_\_  
 Project Location: \_\_\_\_\_  
 Inspection Date: \_\_\_\_\_ Inspected By: \_\_\_\_\_  
 Permit Holder: \_\_\_\_\_ Project Phase: \_\_\_\_\_

**Inspection Results:**

<u>Modifications Required:</u>	YES	NO	N/A	<u>Modifications Required:</u>	YES	NO	N/A
Silt Fence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mulch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ditch Checks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Seeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rip Rap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Erosion Mat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inlet Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temp. Settling Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Storm Water Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tracking Pad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Comments/Recommendations:**

Any boxes checked "YES" must have comments and recommendations on the following pages. Provide comments concerning the effectiveness of, and any reasonable corrections needed to maintain or increase the effectiveness of, in-place erosion control and storm water management measures as described below by the individual erosion control item or other general erosion control measures.

**Communication Notes:**

Phone  Fax  Written  E-Mail  Personal Discussion  To Whom: \_\_\_\_\_  
 Comment: \_\_\_\_\_

Phone  Fax  Written  E-Mail  Personal Discussion  To Whom: \_\_\_\_\_  
 Comment: \_\_\_\_\_

**Compliance with Approved Plans, Permit Requirements and Technical Standards:**

Is the site in compliance with the permit conditions? (YES  NO  )

Compliance determination date: \_\_\_\_\_

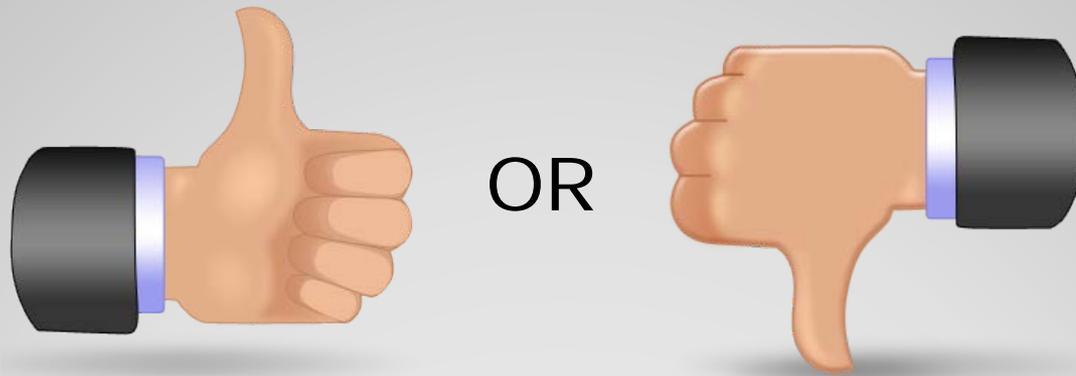
Lead staff contact initials: \_\_\_\_\_

- LRD construction inspection report

- Page 2 of the report will contains photos and descriptions of BMPs that need maintenance, installation or correction

	<p style="text-align: center;">Ditch Checks</p> <ul style="list-style-type: none"> <li>The north ditch of the westbound lane, east of Martin Drive is being used as a stockpile location for broken concrete, soil, rubberized asphalt, etc.</li> <li>This ditch has approximately 3 acres draining through it from the east.</li> <li>This area drains to the box culvert/creek crossing at STA 126+00</li> <li>Ditch checks should be installed to manage the sediment in runoff from the stockpiles before the creek, spaced per DNR technical standard 1062 and the ECIP.</li> </ul>
	<p style="text-align: center;">Silt Fence</p> <ul style="list-style-type: none"> <li>Just west of the stockpiles shown above is a large stockpile of rubberized asphalt in the ditch.</li> <li>The asphalt stockpile essentially blocks the ditch and has crushed the silt fence which serves as the only sediment control BMP between the 3 acre drainage area and the creek.</li> <li>Fix the silt fence.</li> </ul>
	<p style="text-align: center;">Parkland Drive Ditch</p> <ul style="list-style-type: none"> <li>A new section of storm sewer was recently installed in the Parkland Drive ditch.</li> <li>Install a ditch check below the work area.</li> <li>Stabilize the banks.</li> </ul>

- The regulatory agency conducts a follow up inspection to verify that corrections have been made on-site and completes an inspection report to document site conditions and compliance status



**Follow up**

- If the site is in compliance an inspection report indicating so will be provided by the regulator

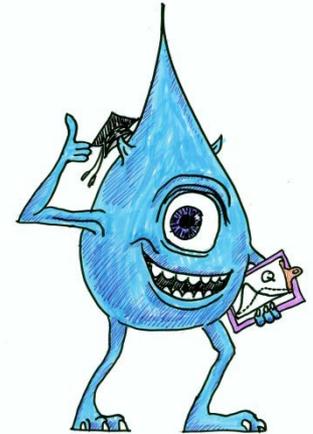


**Compliance with Approved Plans, Permit Requirements and Technical Standards:**

Is the site in compliance with the permit conditions? (YES  NO  )

Compliance determination date: 4/10/13

Lead staff contact initials: AB



**Follow up**

- If the site is still not in compliance an inspection report will be completed, a notice of violation is issued and a deadline for compliance is established by the regulator



**Compliance with Approved Plans, Permit Requirements and Technical Standards:**

Is the site in compliance with the permit conditions? (YES  NO  )

Compliance determination date: 4/10/13

Lead staff contact initials: AB

# Permit Enforcement

- Forfeiture (\$100 - \$1000 / violation / day)
- Stop Work Order
- Permit Revocation
- Injunction (temporary restraining order)
- Emergency Action
- Citation

The goal is to achieve compliance with performance standards and permit requirements



## Permit Enforcement

# Conditions of releasing the financial assurance

- As-built survey of post-construction BMPs;
- **Engineer verification of construction and inspection;**
- Preparation of maintenance agreement addenda;
- **Verification of native/wetland plantings;**
- Removal of temporary BMPs (silt fence, inlet screens)



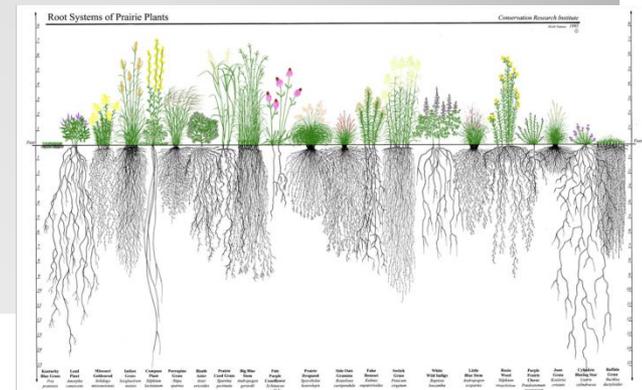
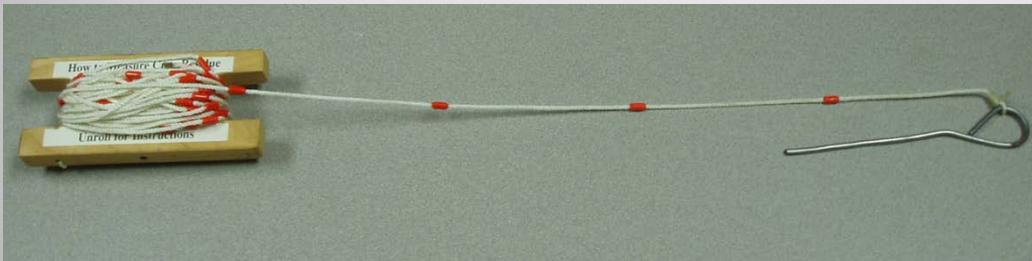
## Project Closure Requirements

- All post-construction storm water BMPs need to be verified by a professional engineer;
- Document that the PE inspections during construction were done;
- BMP is constructed in accordance with technical standards and approved plans;
- Cross-reference to the as-built survey and design summary table;
- Template letter available on website.



## Construction Verification

- Wetland and warm season vegetation in BMPs;
- Landscape Architect or qualified professional to verify 70% coverage with planned plants;
- One Transect Per 5,000 sq. ft. of basin (8/Ac)
- 10 sample points at 1-foot intervals on each side of centerline;
- Use a cord with knots @ 1-foot intervals or a tape measure;
- Marker needs to "hit" a plant to count towards the 70%;



## Planting verification

**Exhibit "F"  
Engineering/Construction Verification**

DATE: \_\_\_\_\_  
TO: Land Resources Division  
Waukesha County Department of Parks and Land Use  
FROM: \_\_\_\_\_ [Project Engineer's Name/Company]  
RE: Engineering/Construction Verification for the following project:  
Project Name: \_\_\_\_\_  
Section \_\_\_\_\_, Town of \_\_\_\_\_  
Storm Water Permit # \_\_\_\_\_  
Storm Water Management Practices: \_\_\_\_\_  
\_\_\_\_\_

For the above-referenced project and storm water management practices, this correspondence shall serve as verification that: 1) all site inspections outlined in approved inspection plans have been successfully completed; and 2) the storm water management practice design data presented in Exhibit D, and the "as-built" construction documentation presented in Exhibit E comply with all applicable state and local technical standards, in accordance with the Waukesha County Storm Water Management and Erosion Control Ordinance.

*[Must include one of the following two statements:]*

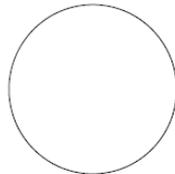
1. Any variations from the originally approved construction plans are noted in Exhibit E. These variations are considered to be within the tolerances of standard construction techniques and do not affect the original design as presented in Exhibit D in any way.

*[Note: The County may request additional documentation to support this statement depending on the extent of deviations from the approved plans.]*

Or

2. Any design or construction changes from the originally approved construction plans are documented in Exhibits D and E and have been approved by Waukesha County.

*[Note: If warm season and wetland planting verification is required, it may be included in this exhibit.]*



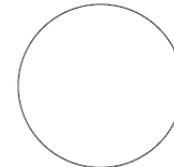
(Signed P.E. stamp must be included)

11-06 sample

**Planting Verification Letter  
(minimum requirements)**

DATE: \_\_\_\_\_  
TO: Land Resources Division  
Waukesha County Department of Parks and Land Use  
FROM: (Landscape Architect or other qualified professional's name and qualification)  
RE: Planting Verification for the following project:  
Project Name: \_\_\_\_\_  
Section \_\_\_\_\_, Town of \_\_\_\_\_  
Permit # \_\_\_\_\_

This correspondence shall serve as verification that I have performed \_\_\_\_ transect surveys of the designated warm season or wetland planting areas described in the approved plans for the storm water facilities for the above-referenced project and that the plantings have a minimum coverage of 70% and match at least 4 of the species descriptions on the plans. Copies of the transect survey results are attached, along with a location map and any observations of potential future maintenance concerns.



(Signed L.A. stamp must be included, if applicable)

3-25-13

# Template verification letters



Questions?