

MS-4 MCM #3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION PRACTICAL SOLUTIONS

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Capital Region Council of Governments
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PARTNERS FOR WHAT'S POSSIBLE

www.pennoni.com

Pennoni Profile

- ◆ Established in 1966 by chairman Chuck Pennoni, PE
 - ◆ Multidiscipline engineering & design firm
 - ◆ More than 1,200 professionals & support staff
 - ◆ Offices throughout the eastern United States
 - ◆ Clients are local, state, and federal governments, private, commercial, industrial, and construction clients, as well as other professional firms
- ❖ Civil/Site
 - ❖ Construction Services
 - ❖ Energy & Sustainability
 - ❖ Environmental
 - ❖ Geotechnical
 - ❖ Landscape Architecture & Planning
 - ❖ MEP
 - ❖ Structural
 - ❖ Survey & Geomatics
 - ❖ Transportation
 - ❖ Water Resources
 - ❖ Water/Wastewater

As an ESOP-owned firm, every Pennoni employee has a vested interest in the success of each project.



What is YOUR MS-4 Role???

- ◆ Elected Officials (Supervisor/Commissioner)
- ◆ MS-4 Coordinator
- ◆ Public Works Director
- ◆ Road Master/Highway Superintendent
- ◆ Road Crew/Highway Department
- ◆ Sewer Authority
- ◆ Zoning/Code Official
- ◆ Administrative Staff
- ◆ Webmaster
- ◆ Treasurer/Accounting Staff
- ◆ Municipal Engineer
- ◆ Appointed Board/Committee Member
- ◆ Material Supplier
- ◆ Regulatory Agency Representative
- ◆ Citizen

What are the REQUIREMENTS???

MCM #3 – IDD&E

- ❖ BMP #1 – Develop & Implement Written Program
- ❖ BMP #2 – Develop & Maintain Outfall Map
- ❖ BMP #3 – Develop & Maintain Collection System Map
- ❖ BMP #4 – Conduct Dry Weather Screenings of Outfalls
- ❖ BMP #5 – Enact Ordinance
- ❖ BMP #6 – Provide Educational Outreach



BMP #1 – IDD&E Written Program

- ◆ **Detect, Eliminate & Prevent Illicit Discharges**
 - ❖ Identify priority areas
 - ❖ Screen outfalls in priority areas
 - ❖ Identify source of illicit discharges detected
 - ❖ Eliminate illicit discharges detected



BMP #1 Continued

- ❖ Assess illicit discharges caused by interaction of sewage disposal systems with storm system
- ❖ Mechanisms for accessing private property for inspections and investigations
- ❖ Program documentation, evaluation & assessment
- ❖ Address information / complaints received from public



BMP's # 2 & #3 - Mapping

- ◆ Develop & maintain map(s) depicting
 - ❖ UA boundaries, outfall & observation locations & receiving surface waters
 - ❖ Storm water collection system including privately-owned components receiving flows from publicly-owned components



BMP #4 – Dry Weather Screening

- ◆ **Conduct dry weather screenings of outfalls**
 - ❖ Sampling & analysis of dry weather discharges exhibiting color, odor, floating solids, scum, sheen & substances resulting in observed deposit
 - ❖ Record observations on DEP Screening form, or equivalent
 - ❖ Describe screening observations & actions in Annual Reports
- ◆ **Identify source(s) & take appropriate action if illicit discharge is detected**
- ◆ **Respond to reports & take enforcement action, if appropriate**
- ◆ **Immediately report to DEP discharges that would endanger downstream users or result in pollution or create a danger of pollution or would damage property**

BMP #5 – Enact Stormwater Management Ordinance

- ◆ Ordinance must be consistent with DEP's 2022 Model Stormwater Management Ordinance
 - ❖ New Permittees must adopt and submit with 4th Annual Status Report
 - ❖ Existing Permittees must adopt & submit with Annual Status Report by September 30, 2022
- ◆ Provide notice to DEP of approval of any waiver that allows an exception to non-stormwater discharge provisions of the ordinance
 - ❖ Provide notice in the Annual Status Report following approval of a waiver

BMP #6 – Educational Outreach

- ◆ **Distribute IDD&E educational information to target audiences annually**
- ◆ **Establish & promote stormwater pollution reporting mechanism by end of 1st year of Permit coverage**
- ◆ **Document all responses, action taken, time required & complaint resolution**



Prohibited Discharges & Connections

3800-PM-BCW0100j 5/2016
Model Ordinance

ARTICLE VII – PROHIBITIONS

Section 701. Prohibited Discharges and Connections

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any non-stormwater discharge including sewage, process wastewater, and wash water to enter a regulated small MS4 or to enter the surface waters of this Commonwealth is prohibited.
- B. No person shall allow, or cause to allow, discharges into a regulated small MS4, or discharges into waters of this Commonwealth, which are not composed entirely of stormwater, except (1) as provided in paragraph C below and (2) discharges authorized under a state or federal permit.
- C. The following discharges are authorized unless they are determined to be significant contributors to pollution a regulated small MS4 or to the waters of this Commonwealth:
 1. Discharges or flows from firefighting activities.
 2. Discharges from potable water sources including water line flushing and fire hydrant flushing, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).
 3. Non-contaminated irrigation water, water from lawn maintenance, landscape drainage and flows from riparian habitats and wetlands.
 4. Diverted stream flows and springs.
 5. Non-contaminated pumped ground water and water from foundation and footing drains and crawl space pumps.
 6. Non-contaminated HVAC condensation and water from geothermal systems.
 7. Residential (i.e., not commercial) vehicle wash water where cleaning agents are not utilized.
 8. Non-contaminated hydrostatic test water discharges, if such discharges do not contain detectable concentrations of TRC.
- D. In the event that the municipality or DEP determines that any of the discharges identified in Subsection C significantly contribute pollutants to a regulated small MS4 or to the waters of this Commonwealth, the municipality or DEP will notify the responsible person(s) to cease the discharge.

Section 702. Roof Drains and Sump Pumps

Roof drains and sump pumps shall discharge to infiltration or vegetative BMPs wherever feasible.

Section 703. Alteration of SWM BMPs

No person shall modify, remove, fill, landscape, or alter any SWM BMPs, facilities, areas, or structures that were installed as a requirement of this Ordinance without the written approval of the Municipality.



All the soap, scum, and oily grit runs along the curb. Then into the storm drain and directly into our lakes, streams and into coastal waters including the Chesapeake Bay. And that causes pollution which is unhealthy for fish. So how do you avoid this whole mess? Easy. Wash your car on grass or gravel instead of the street. Or better yet, take it to a car wash where the water gets treated and recycled.

DEP Outfall Field Screening Report

3800-FM-BCW0521 12/2015
MS4 Outfall Field Screening Report
pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

MS4 OUTFALL FIELD SCREENING REPORT

BACKGROUND INFORMATION				
Permittee Name:		NPDES Permit No.: PA		
Date of Inspection:		Outfall ID No.:		
Land Uses in Outfall Drainage Area (Select All):		Latitude: _____° _____' _____"		
<input type="checkbox"/> Industrial <input type="checkbox"/> Urban Residential		Longitude: _____° _____' _____"		
<input type="checkbox"/> Commercial <input type="checkbox"/> Suburban Residential		Dry Weather Inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Open Space <input type="checkbox"/> Other:		Date of Previous Precipitation:		
		Amount of Previous Precipitation: _____ in		
Inspector Name(s):		Were Photographs Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No		
		Are Photographs Attached? <input type="checkbox"/> Yes <input type="checkbox"/> No		
OUTFALL DESCRIPTION				
TYPE	MATERIAL	SHAPE	DIMENSIONS	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other <input type="checkbox"/> Other	Diameter: _____ in	<input type="checkbox"/> In Water <input type="checkbox"/> With Sediment
<input type="checkbox"/> Open Channel	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Rip-Rap <input type="checkbox"/> Other	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other	Depth: _____ in Top Width: _____ in Bottom Width: _____	
Dry Weather Flow Present at Outfall During Inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No (If No, skip to Certification Section)				
Description of Flow Rate: <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Significant <input type="checkbox"/> N/A				
DRY WEATHER FLOW EVALUATION				
Does the dry weather flow contain color? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide a description below.				
Does the dry weather flow contain an odor? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide a description below.				
Is there an observed change in the receiving waters as a result of the discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide a description below.				
Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide a description below.				

Were sample(s) collected of the dry weather flow? <input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, No. Samples: _____)					
FIELD / LABORATORY ANALYSIS					
PARAMETER	RESULTS	UNITS	PARAMETER	RESULTS	UNITS
Flow Rate		GPM	Fecal Coliform		No./100 mL
pH		S.U.	COD		mg/L
Total Residual Chlorine (TRC)		mg/L	BOD5		mg/L
Conductivity		µmhos/cm	TSS		mg/L
Ammonia-Nitrogen		mg/L	TDS		mg/L
Other: _____			Oil and Grease		mg/L
Other: _____			Other: _____		
Indicate the parameters above that were analyzed by a DEP-certified laboratory:					
ILLICIT DISCHARGES					
Is the dry weather flow an illicit discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No					
If Yes, describe efforts made to determine the source(s) of the illicit discharge.					
Describe corrective actions taken by the permittee in response to the finding of an illicit discharge.					
Inspector Comments:					
RESPONSIBLE OFFICIAL CERTIFICATION					
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).					
Responsible Official Name _____			Signature _____		
Telephone No. _____			Date _____		

IDD&E Citizen Complaint Form

CITIZEN COMPLAINT ILLICIT DISCHARGE REPORTING FORM

Name: _____ Contact Phone Number: _____

Date: _____ Time Discharge Discovered: _____

Date of Last Rain Event: _____ Estimated Quantity of Rain: _____ in.

LOCATION OF DISCHARGE (indicate nearby street intersections, addresses, and/or landmarks for reference): _____

WHERE WAS DISCHARGE FOUND? OPEN DITCH _____ STREAM _____ PIPE OUTFALL _____ OTHER: _____

WAS WATER FLOW OBSERVED? _____ NO _____ YES _____

WAS FLOW SOLID OR PULSING? _____ SOLID _____ PULSING _____

WAS A PHOTO TAKEN? NO _____ YES _____ (Please attach a copy to form)

ODOR: NONE _____ MUSTY _____ SEWAGE _____ ROTTEN EGGS _____ SOUR MILK _____ OTHER: _____

COLOR: CLEAR _____ RED _____ YELLOW _____ BROWN _____ GREEN _____ GREY _____ OTHER: _____

CLARITY: CLEAR _____ CLOUDY _____ OPAQUE _____

WAS THERE AN: OILY SHEEN _____ YES _____ NO _____
GARBAGE/SEWAGE _____ YES _____ NO _____
OTHER: _____

ADDITIONAL INFORMATION TO ASSIST IN THE INVESTIGATION: _____

Follow up Investigation (to be completed by CCD staff)

OUTFALL NO: _____ INSPECTOR NAME _____ PHONE _____

FIELD ANALYSIS:

WATER TEMP: _____ °F / °C CHLORINE (Total): _____ mg/l

pH: _____ COPPER: _____ mg/l

PHENOL: _____ mg/l DETERGENTS: _____ mg/l

WAS A LABORATORY SAMPLE COLLECTED? NO _____ YES _____
(if yes attach copy of chain-of-custody record)

COMMENTS: _____

DATA SHEET FILLED OUT BY: (signature): _____ DATE: _____

Additional notes to file: _____

Follow-up with Complainant: _____



MARK YOUR CALANDERS OCTOBER 24 – IDD&E WORKSHOP

QUESTIONS?

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