

**CUMBERLAND TOWNSHIP  
MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)**

**TOWNSHIP STAFF MEETING & TRAINING  
November 18, 2019**

**1. Introductions**

**2. MS4 Recap**

- **Law – Clean Water Act (1972)**
- **NPDES Permit**
  - **April 30, 2018 – March 15, 2023**
  - **Annual Report due September 30 for reporting period July 1 – June 30**
- **Mapping**
  - **Watersheds**
  - **Storm Sewersheds**

**3. Minimum Control Measures (MCM's)**

- **MCM #1: Public Education & Outreach**
  - **Meetings/Workshops**
  - **Distribute Materials**
    - **Website**
    - **Township Building**
- **MCM #2: Public Involvement & Participation**
  - **Meetings/Workshops**
  - **Stream Cleanups**
  - **Stenciling Storm Drains**
- **MCM #3: Illicit Discharge, Detection & Elimination**
  - **Periodic Inspections**
  - **Reporting/Complaint Form**
- **MCM #4: Construction Site Stormwater Runoff Control**
  - **E&S Plans**
  - **Periodic Inspections**
  - **ACCD Inspections**

- **MCM #5: Post-Construction Stormwater Management**
  - **Periodic Inspections**
  - **O&M Procedures/Agreements**
  - **Inspection/Complaint Form**
  
- **MCM #6: Pollution Prevention & Good Housekeeping**
  - **O&M Plan**
  - **Spill Cleanup**
  - **Material Storage**
  - **Street Sweepings**

#### **4. Going Forward**

- **Filing System**
- **Publish/Post Materials**
- **Municipal Operations O&M Plan**
- **Future Training Opportunities**
  - **MCM Review**
  - **BMP O&M**

#### **5. Questions?**

# KPI Technology Sample Website Information

## Cumberland Township Website Information

Cumberland Township is required to obtain a stormwater discharge permit under the National Pollutant Discharge permit under the National Pollutant Discharge Elimination System (NPDES) from the PA Department of Environmental Protection (DEP). The permit requires the Municipality to take certain steps to ensure that the storm water is properly managed and controlled. The permit also requires that the Municipality educates the public about storm water impacts and provide opportunities for the public to get involved and participate in program events.

### What is MS4?

MS4 stand for Municipal Separate Storm Sewer Systems it occurs from rain, snow melt, and storm water that travel over land. Stormwater is carried through municipal separate storm sewer drainage system (MS4) and drains to several watersheds. Watershed is an area that drains into river, streams, ponds, wetlands, and other bodies of water.

### Why is Storm Water Important?

Stormwater becomes a problem when it picks up debris, chemical, dirt, and other pollutant as it flows or when it causes flooding and erosion of stream banks. All of the pollutants storm water carries along the way empties directly into bodies of water because it is not treated. Stormwater threatens our rivers, streams, ponds, and other water bodies. We rely on our rivers, and streams for drinking, recreation and to support wildlife.

### DEP MS4 Permit?

Small MS4s required to obtain permit coverage, applying under the new 2018 NPDES General Permit for Stormwater Discharges from Small MS4s (PAG-13) (3800-PM-BCW0100) that will be effective starting March 16, 2018. Small MS4s that are ineligible for PAG-13 General Permit coverage may apply for an individual permit (3800-PM-BPNPSM0200). Permit coverage is generally for 5-year terms. The applicant must submit a "Notice of Intent" (NOI) to discharge under the statewide General Permit at least 180 days prior to expiration of coverage. The permit is a general outline of how a Township will reduce its stormwater impact.

Permit requirements:

- Notice of Intent (NOI)
- Minimum Control Measures (MCMs)
  - MCM #1 – Public Education and Outreach
  - MCM #2 – Public Involvement and Participation
  - MCM #3 – Illicit Discharge, Detection, and Elimination
  - MCM #4 – Construction Site Stormwater Runoff Control

## KPI Technology Sample Website Information

- MCM #5 – Post Construction Stormwater Management
- MCM #6 – Pollution Prevention and Good Housekeeping
- Pollutant Reduction Plan (PRP)
- Annual Reporting
- Mapping

### How can residents help?

- Remember, only rain goes down the drain. Do not dump anything down storm drains and keep them clear of debris.
- Wash your car over your lawn or gravel.
- Minimize your use of lawn and garden chemicals.
- Minimize the use of salt-melt.
- Install a rain barrel or cistern to capture roof runoff.
- Clean up trash and yard clipping.
- Homeowners Guide: [http://chesapeakestormwater.net/wp-content/uploads/downloads/2013/07/CSN-Homeowner-Guide\\_062713.pdf](http://chesapeakestormwater.net/wp-content/uploads/downloads/2013/07/CSN-Homeowner-Guide_062713.pdf)

**For more MS4 ideas and information, visit DEP's and EPA's websites at**

<http://www.dep.pa.gov/Business/Water/CleanWater/StormwaterMgmt/Stormwater/Pages/default.aspx>

<https://www.epa.gov/npdes/stormwater-discharges-municipal-sources>





## 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):  <input type="checkbox"/> Industrial <input type="checkbox"/> Urban Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Open Space <input type="checkbox"/> Other:	Latitude:                      ____ ° ____ ' ____ "
	Longitude:                      ____ ° ____ ' ____ "
	Dry Weather Inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No
	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?     Yes     No    *(If No, skip to Certification Section)*

Description of Flow Rate:     Trickle     Moderate     Significant     N/A

### DRY WEATHER FLOW EVALUATION

Does the dry weather flow contain color?     Yes     No    If Yes, provide a description below.

Does the dry weather flow contain an odor?     Yes     No    If Yes, provide a description below.

Is there an observed change in the receiving waters as a result of the discharge?     Yes     No  
If Yes, provide a description below.

Does the dry weather flow contain floating solids, scum, sheen or substances that result in deposits?     Yes     No  
If Yes, provide a description below.

Were sample(s) collected of the dry weather flow?  Yes  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?  Yes  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 \_\_\_\_\_





## Illicit Discharge Detection and Elimination Plan Checklist

Enforcement Level	Details	Responsibility
<p style="text-align: center;">Level I – Outreach</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Site Visit to verify complaint.</li> <li><input type="checkbox"/> Provide education materials and discharge specific materials.</li> <li><input type="checkbox"/> Encourage voluntary compliance</li> <li><input type="checkbox"/> Request evidence of compliance</li> <li><input type="checkbox"/> Site visit to verify compliance</li> </ul> <p>Additional Comments:</p>	<p style="text-align: center;">Township Manager</p>
<p style="text-align: center;">Level II – Written Warning</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Send “Letter of Violation” to property owner</li> <li><input type="checkbox"/> Set second compliance date</li> <li><input type="checkbox"/> Encourage additional voluntary compliance</li> <li><input type="checkbox"/> Request evidence of compliance</li> <li><input type="checkbox"/> Site visit to verify compliance</li> </ul> <p>Additional Comments:</p>	<p style="text-align: center;">Township Manager</p>
<p style="text-align: center;">Level III – Action</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Send second “Letter of Violation” to property owner</li> <li><input type="checkbox"/> The Township may correct the problem and bill cost to property owner</li> <li><input type="checkbox"/> Outline future non-compliance considerations with property owner</li> </ul> <p>Additional Comments:</p>	<p style="text-align: center;">Township Manager/ Engineer</p>



## Illicit Discharge Colors Guide

Color	Possible Sources
Brown	<ul style="list-style-type: none"><li>• Construction</li><li>• Meat</li><li>• Printing facilities</li><li>• Concrete, Stone, Clay, and/or Glass cutting</li></ul>
Green	<ul style="list-style-type: none"><li>• Chemical plants, textiles</li><li>• Algae or plankton bloom</li><li>• Antifreeze (fluorescent green)</li><li>• Fertilizer</li></ul>
Gray to White	<ul style="list-style-type: none"><li>• Dairy/Food Processor</li><li>• Sewage</li><li>• Concrete wash-out</li></ul>
Milky White	<ul style="list-style-type: none"><li>• Paint, lime, grease, concrete</li><li>• Swimming pool filter backwash</li><li>• Concrete wash-out</li><li>• Stone cutting</li></ul>
Red	<ul style="list-style-type: none"><li>• Meat packing / Processing</li></ul>
Red, Purple, Blue, Black	<ul style="list-style-type: none"><li>• Fabric dyes</li><li>• Inks from paper and cardboard manufacturing</li></ul>







## Construction Site Reporting Form

Name of Complainant: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Municipality: \_\_\_\_\_ Address of Construction Site: \_\_\_\_\_

Date of Most Recent Rain Event: \_\_\_\_\_ Date/Time of Inspection: \_\_\_\_\_

County Conservation District w/Jurisdiction: \_\_\_\_\_

On-Site Observations		Description	Location
<b>Inadequate BMPs</b>			
Silt Fence			
Construction Entrance			
Straw Bales			
Seeding/Landscaping			
Sediment Traps			
Inlet Protection			
Outlet Protection			
<b>Housekeeping</b>			
Trash/Litter			
Construction Debris			
Spills of hazardous materials			
On-site erosion			
Off-Site Observations		Description	Location
Mud/dirt on roads			
Muddy ditch/stream			
Blowing dust			
Trash/Litter			
Oily sheen in stream			
Construction debris			

*Compliance/Enforcement (to be completed by CCD staff)*

Date of Inspection	Time	Inspector
Description of Inspection Findings		
Enforcement Action	Y/N	Date(s):
		Verbal Notice
		Administrative Action
		Other (describe)
		Notice of Violation
		Civil Penalty

Additional notes to file: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Follow-up with Complainant: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## MCM #6: Good Housekeeping for Municipal Operations

MCM #6 requires MS4s to prepare an inventory of municipal facilities and activities, and to develop a stormwater “Operations & Maintenance Plan” for each facility/activity on the inventory. There is no particular required format for the inventory or the O&M Plan, and the specific content of both will vary depending on the particular facilities/activities in the municipality. MS4s nevertheless requested advice on how the requirement could be satisfied. DEP prepared the attached model O&M Plan in response. Note that the model assumes preparation of both “BMP #1” (the inventory) and “BMP #2” (which provides details as an attachment for each facility/activity listed in the inventory).

MS4s that choose to use the model should list the facilities/activities in their municipality on the inventory, which may be much different than what is on the model. The details on the “attachments” should reflect the stormwater pollution hazards associated with the particular facilities/activities on the inventory, which may also be much different than what is on the model. The model should therefore be considered conceptual, and therefore in need of whatever adjustment is necessary to make it appropriate to the particular MS4. See below.

### BMP #1: Inventory of Facilities/Activities

Facility/Activity	Storm Sewer System impact	Discharge To	O&M Responsibilities (all include "signage")	Attachment
Public works yard	inlets, piping, basin	Spring Creek	oil management, inlets, fueling, vehicle wash water	1
Streets	inlets, swales	Spring and Trout Creek	sweeping, inlets	2
SW conveyances	pipes, swales, ditches	Spring and Trout Creek	cleaning	3
Buildings	inlets, rain gardens	Spring Creek	inlets, rain gardens	4
Parking lots	inlets	Spring and Trout Creek	inlets	5
Parks	inlets	Spring and Trout Creek	inlets	6
Wastewater plant	swale ***N/A outside the Borough: Provide information to Clearview Township***	Spring Creek	chemicals, vehicles, maintenance area, sludge	7
Transfer station				

## BMP#2: O&M Actions (Detail)

### Attachment #1: Public Works Yard

(Contact: John Smith, Yard Manager)

Responsibility	When and How Often?	Actions	Additional Considerations
Signage (for each activity below)	Quarterly	<ul style="list-style-type: none"> <li>○ Make sure they are up and effective.</li> </ul>	Keep a spare of all signs
Fluids Management	Daily	<ul style="list-style-type: none"> <li>○ Store oil to minimize container leaks and allow cleanup of any that occur.</li> <li>○ Work inside.</li> <li>○ Minimize use of solvents.</li> <li>○ Eliminate leaks in vehicles and equipment, use drip pans temporarily.</li> <li>○ Have Spill Prevention Control and Countermeasure (SPCC) Plan up to date. Stockpile of spill cleanup materials in plain sight.</li> <li>○ Recycle used oil. Temporarily store under cover.</li> <li>○ Check oil separator (monthly).</li> <li>○ Haul to landfill.</li> </ul>	Applies to oil, coolant, solvents. Fuel is separate, below.
Clean Catch Basin	Each fall	<ul style="list-style-type: none"> <li>○ Ensure tanks are sound, have overflow protection, are protected from vehicle and forklift damage.</li> <li>○ Label valves.</li> <li>○ Nozzles have auto shutoff. Auto shutoff for severed hoses.</li> <li>○ Secondary containment.</li> <li>○ Concrete fueling pad.</li> <li>○ Overhang roof structure.</li> <li>○ Spot-clean leaks and clean up used absorbent.</li> <li>○ Label drains to indicate where they flow.</li> <li>○ Report leaking vehicles.</li> </ul>	Check after each major storm (> 3")
Fuel	Daily	<ul style="list-style-type: none"> <li>○ Wash on grassy area or take to commercial car wash most of the time. Collect and dispose of vehicle wash water when chemical additives, solvents or degreasers are used. Allow no wash water to enter storm sewer or stream.</li> </ul>	
Wash Water	Daily	<ul style="list-style-type: none"> <li>○ Use grit mix suited to ambient temperature to minimize salt use</li> <li>○ Keep rain off stored salt</li> <li>○ Calibrate spreaders</li> <li>○ Haul and store salt in dry weather</li> <li>○ Sweep up spills around storage/loading area</li> </ul>	
Road Salt and Grit	Daily		



**Attachment #2: Streets**

Contact: Dusty Rhodes, Streets Superintendent

Signage (for each activity below)	Daily		
Street Sweeping	Do twice in spring, mid-summer and fall.  Check signs in spring.	<ul style="list-style-type: none"> <li>o Post no-parking signs for street sweeping</li> </ul>	
Storm Inlets	Inspect after each heavy rain. Clean inlets in fall, additionally if clogged	<ul style="list-style-type: none"> <li>o Haul clean-out materials to landfill</li> <li>o Maintain stencils on inlets.</li> </ul>	Use Boy Scouts for stencils

\* Provide similar details for Attachments #3-8.

\* IDDE and Staff training are additional, separate efforts.

\* Report satisfaction of above in Annual Reports to DEP.

\* Keep record of issues (like spills that were identified, cleaned up and repeats prevented). Don't try to say you never have spills.

Food for thought: A simple list of actions specifically tailored to the municipality, with an identified responsible party, is better than glossy generic materials that do not describe what you actually do and who is responsible for it.

Bureau of Waste Management

### **Disposal/Reuse of Street-Sweeping Debris and Antiskid**

Street sweepings consist of antiskid (cinders, coal (bottom) ash, rock, and sand), salt, leaves, plastic, broken glass, small pieces of metal, litter and debris. Sweepings are removed from streets, parking lots and sidewalks to improve the appearance and safety of public roadways and prevent pollution of local waterways.

Municipalities are able to reuse antiskid provided that it is screened to separate all non-reusable debris, such as silt, trash, litter, leaves, etc., from the reusable antiskid material and visually checked for contaminants, staining or odors. If the visual examination shows no staining, odors or other evidence of contaminants, the antiskid may be managed as clean fill and used in an unrestricted manner, including the following:

- Reuse as antiskid.
- Remixed with new salt mixture for winter application to roads.
- As the sub-grade beneath a paved municipal road or parking lot.
- For filling potholes.
- As shoulder repair material along roads within the municipally or privately owned public right-of-way.
- Other fill.

If the visual examination shows staining, odors or other evidence of contaminants, the antiskid material must be tested to determine if it qualifies as clean fill. Testing must be performed in accordance with Appendix A of the [Management of Fill policy \(Document No. 258-2182-773\)](#). If testing reveals that the antiskid material contains regulated substances at concentrations that exceed the limits in Tables FP-1a and 1b, the material may be managed as regulated fill, provided the person proposing to use the material obtains authorization under Waste Management General Permit WMGR096. Otherwise, the material must be disposed of at a permitted landfill.

All non-reusable debris that has been removed from the antiskid, as well as catch-basin material, must be disposed of at a landfill. For additional information, please contact the Bureau of Waste Management, Division of Municipal and Residual Waste, at 717-787-7381.