MS4 Program

Minimum Control Measure #6

Pollution Prevention & Good Housekeeping

3 Required BMPs:

BMP #1

Identify and document all facilities and activities that are owned or operated by the permittee and have the potential for generating stormwater runoff to the small regulated MS4.

BMP #2

Develop, implement, and maintain a written operation and maintenance (O&M) program for all municipal operations and facilities that could contribute to the discharge of pollutants from the regulated small MS4s, as identified under BMP #1.

BMP #3

Develop and implement an employee training program that addresses appropriate topics to further the goal of preventing or reducing the discharge of pollutants from municipal operations to your regulated small MS4s.

MS4 Program

Minimum Control Measure #6

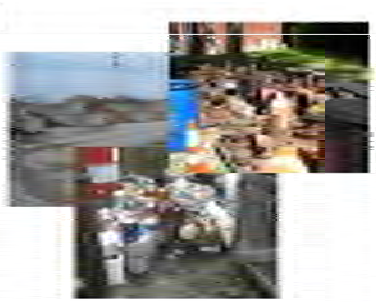
Pollution Prevention & Good Housekeeping

BMP #1

Municipal Facilities may include the following:

- Streets, roads, highways and parking lots
- Maintenance & storage yards
- Waste transfer stations
- Parks
- Fleet or maintenance shops
- Wastewater treatment plants
- Stormwater conveyances (open & closed)
- Riparian buffers
- Stormwater storage or treatment units (e.g., basins, constructed wetlands, etc.)

Municipal Facilities Subject to Inspection



Material Storage Areas

Service Garage

Salt Storage Areas

Storm Water Management Structures

Leaf Collection Yards

Street Sweepings Management Areas

Marina

Composting Yard

Fuel Station

Impound Lots

Waste Management Areas

Wastewater Treatment Plant

Steam Electric Power Plant

Snow Disposal Lots

Road Kill Management Area

Airports

Ohio Environmental Protection Agency

http://www.epa.ohio.gov/Portals/41/storm_workshop/bmp6/for%205%2020%20What%20to%20expect%20during%20an%20MS4%20INSPECTION.pdf

MS4 Program

Minimum Control Measure #6

Pollution Prevention & Good Housekeeping

BMP #1

Municipal Activities may include the following:

- Street sweeping
- Snow removal/deicing
- Inlet/outlet cleaning
- Lawn/grounds care
- Storm system maintenance, inspection & repair
- Park & open space maintenance
- Municipal building maintenance
- New construction & land disturbances
- Right of Way maintenance
- Vehicle maintenance, operation, fueling & washing
- Material transfer operations, including leaf/yard debris pickup & disposal procedures

MS4 Program

Minimum Control Measure #6

Pollution Prevention & Good Housekeeping

This program should address **municipally-owned stormwater collection or conveyance systems**, but could include other areas (as identified in BMP #1). The O&M plan should stress **pollution prevention and good housekeeping measures**, contain site-specific information, and address the following areas:

BMP #2

- Management practices, policies, & procedures to reduce or prevent the discharge of pollutants to your small regulated MS4. **Consider eliminating maintenance-area floor drains.**
- Maintenance activities, schedules, & inspection procedures to **reduce the potential for pollutants** to reach your small regulated MS4.
- **Controls for reducing or eliminating the discharge of pollutants** from streets, roads, highways, municipal parking lots, maintenance & storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, & salts and (anti-skid) storage locations & snow disposal areas.
- Procedures for the **proper disposal of waste removed** from your regulated smalls MS4s & your municipal operations, including dredge spoil, accumulated sediments, trash, household hazardous waste, used motor oil, & other debris.

MS4 Program

Minimum Control Measure #6

Pollution Prevention & Good Housekeeping

Training should cover all relevant parts of the stormwater management program that could affect municipal operations, such as illicit discharge detection and elimination, construction sites, & ordinance requirements.

BMP #3

The program may be developed and implemented using any guidance and training materials that are available from federal, state, or local agencies, or other organizations. Any municipal employee or contractor shall receive training; this may include:

- Public Works Staff
- Building/Zoning/Code Enforcement Staff
- Engineering Staff (On-Site & Contracted)
- Administrative Staff
- Elected Officials
- Police & Fire Responders
- Volunteers
- Contracted Personnel

MS4 Program

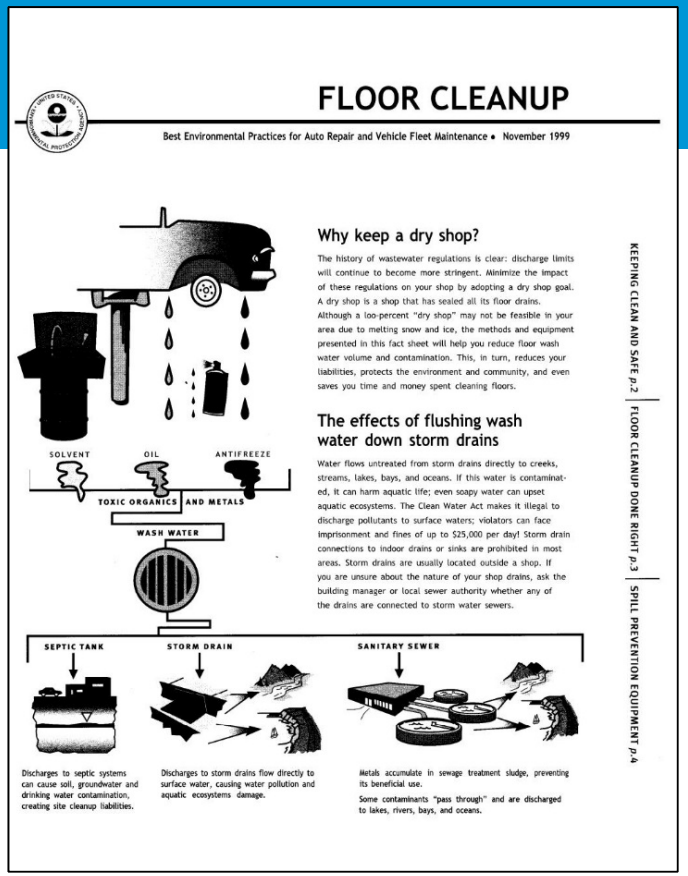
Minimum Control Measure #6

Pollution Prevention & Good Housekeeping

BMP #3

- Training should cover all relevant parts of the stormwater management program that could affect municipal operations, such as illicit discharge detection and elimination, construction sites, & ordinance requirements
- Employees should be trained annually
- Popular training techniques include, but are not limited to:
  - Internal Fact Sheets
  - Informational Videos
  - Newsletters
  - Presentations
- Provide Proof of Training documentation

EPA Training Manual



FLOOR CLEANUP

Best Environmental Practices for Auto Repair and Vehicle Fleet Maintenance • November 1999

Why keep a dry shop?

The history of wastewater regulations is clear: discharge limits will continue to become more stringent. Minimize the impact of these regulations on your shop by adopting a dry shop goal. A dry shop is a shop that has sealed all its floor drains. Although a 100-percent "dry shop" may not be feasible in your area due to melting snow and ice, the methods and equipment presented in this fact sheet will help you reduce floor wash water volume and contamination. This, in turn, reduces your liabilities, protects the environment and community, and even saves you time and money spent cleaning floors.

The effects of flushing wash water down storm drains

Water flows untreated from storm drains directly to creeks, streams, lakes, bays, and oceans. If this water is contaminated, it can harm aquatic life; even soapy water can upset aquatic ecosystems. The Clean Water Act makes it illegal to discharge pollutants to surface waters; violators can face imprisonment and fines of up to $25,000 per day! Storm drain connections to indoor drains or sinks are prohibited in most areas. Storm drains are usually located outside a shop. If you are unsure about the nature of your shop drains, ask the building manager or local sewer authority whether any of the drains are connected to storm water sewers.

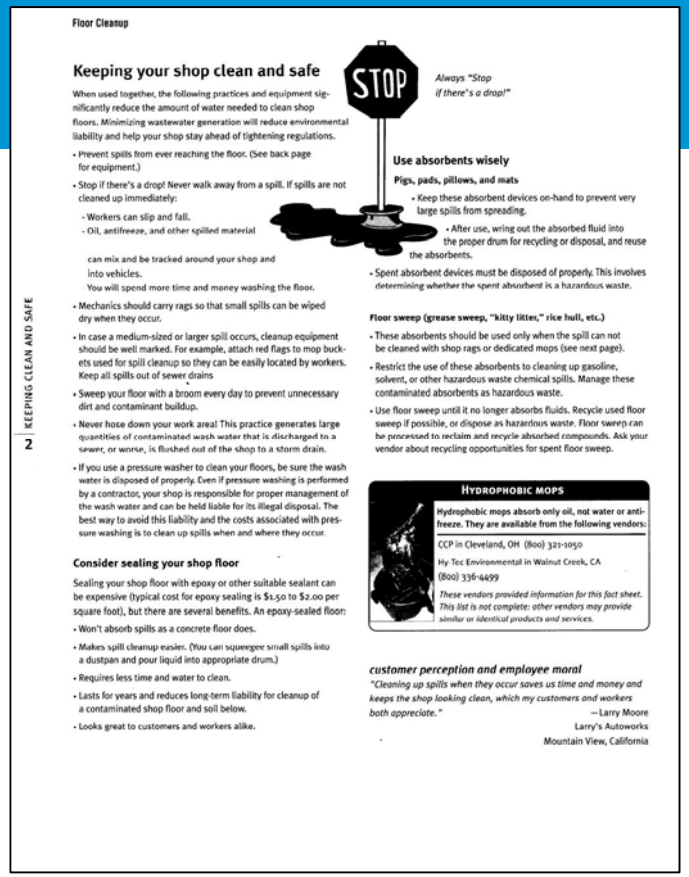
Discharges to septic systems can cause soil, groundwater and drinking water contamination, creating site cleanup liabilities.

Discharges to storm drains flow directly to surface water, causing water pollution and aquatic ecosystems damage.

Metals accumulate in sewage treatment sludge, preventing its beneficial use.

Some contaminants "pass through" and are discharged to lakes, rivers, bays, and oceans.

KEEPING CLEAN AND SAFE p.2 | FLOOR CLEANUP DONE RIGHT p.3 | SPILL PREVENTION EQUIPMENT p.4



Keeping your shop clean and safe

When used together, the following practices and equipment significantly reduce the amount of water needed to clean shop floors. Minimizing wastewater generation will reduce environmental liability and help your shop stay ahead of tightening regulations.

- Prevent spills from ever reaching the floor. (See back page for equipment.)
- Stop if there's a drop! Never walk away from a spill. If spills are not cleaned up immediately:
  - Workers can slip and fall.
  - Oil, antifreeze, and other spilled material can mix and be tracked around your shop and into vehicles.
  - You will spend more time and money washing the floor.
- Mechanics should carry rags so that small spills can be wiped dry when they occur.
- In case a medium-sized or larger spill occurs, cleanup equipment should be well marked. For example, attach red flags to mop buckets used for spill cleanup so they can be easily located by workers. Keep all spills out of sewer drains
- Sweep your floor with a broom every day to prevent unnecessary dirt and contaminant buildup.
- Never hose down your work area! This practice generates large quantities of contaminated wash water that is discharged to a sewer, or worse, is flushed out of the shop to a storm drain.
- If you use a pressure washer to clean your floors, be sure the wash water is disposed of properly. Even if pressure washing is performed by a contractor, your shop is responsible for proper management of the wash water and can be held liable for its illegal disposal. The best way to avoid this liability and the costs associated with pressure washing is to clean up spills when and where they occur.

Consider sealing your shop floor

Sealing your shop floor with epoxy or other suitable sealant can be expensive (typical cost for epoxy sealing is $1.50 to $2.00 per square foot), but there are several benefits. An epoxy-sealed floor:

- Won't absorb spills as a concrete floor does.
- Makes spill cleanup easier. (You can squeegee small spills into a dustpan and pour liquid into appropriate drum.)
- Requires less time and water to clean.
- Lasts for years and reduces long-term liability for cleanup of a contaminated shop floor and soil below.
- Looks great to customers and workers alike.

Always "Stop if there's a drop!"

Use absorbents wisely

Pigs, pads, pillows, and mats

- Keep these absorbent devices on-hand to prevent very large spills from spreading.
- After use, wring out the absorbed fluid into the proper drum for recycling or disposal, and reuse the absorbents.
- Spent absorbent devices must be disposed of properly. This involves determining whether the spent absorbent is a hazardous waste.

Floor sweep (grease sweep, "kitty litter," rice hull, etc.)

- These absorbents should be used only when the spill can not be cleaned with shop rags or dedicated mops (see next page).
- Restrict the use of these absorbents to cleaning up gasoline, solvent, or other hazardous waste chemical spills. Manage these contaminated absorbents as hazardous waste.
- Use floor sweep until it no longer absorbs fluids. Recycle used floor sweep if possible, or dispose as hazardous waste. Floor sweep can be processed to reclaim and recycle absorbed compounds. Ask your vendor about recycling opportunities for spent floor sweep.

HYDROPHOBIC MOPS

Hydrophobic mops absorb only oil, not water or antifreeze. They are available from the following vendors:

CCP in Cleveland, OH (800) 321-1050

Hy-Tec Environmental in Walnut Creek, CA (800) 336-4499

These vendors provided information for this fact sheet. This list is not complete; other vendors may provide similar or identical products and services.

customer perception and employee moral

"Cleaning up spills when they occur saves us time and money and keeps the shop looking clean, which my customers and workers both appreciate."

—Larry Moore
Larry's Autoworks
Mountain View, California

http://www3.epa.gov/region09/waste/p2/autofleet/floor.pdf

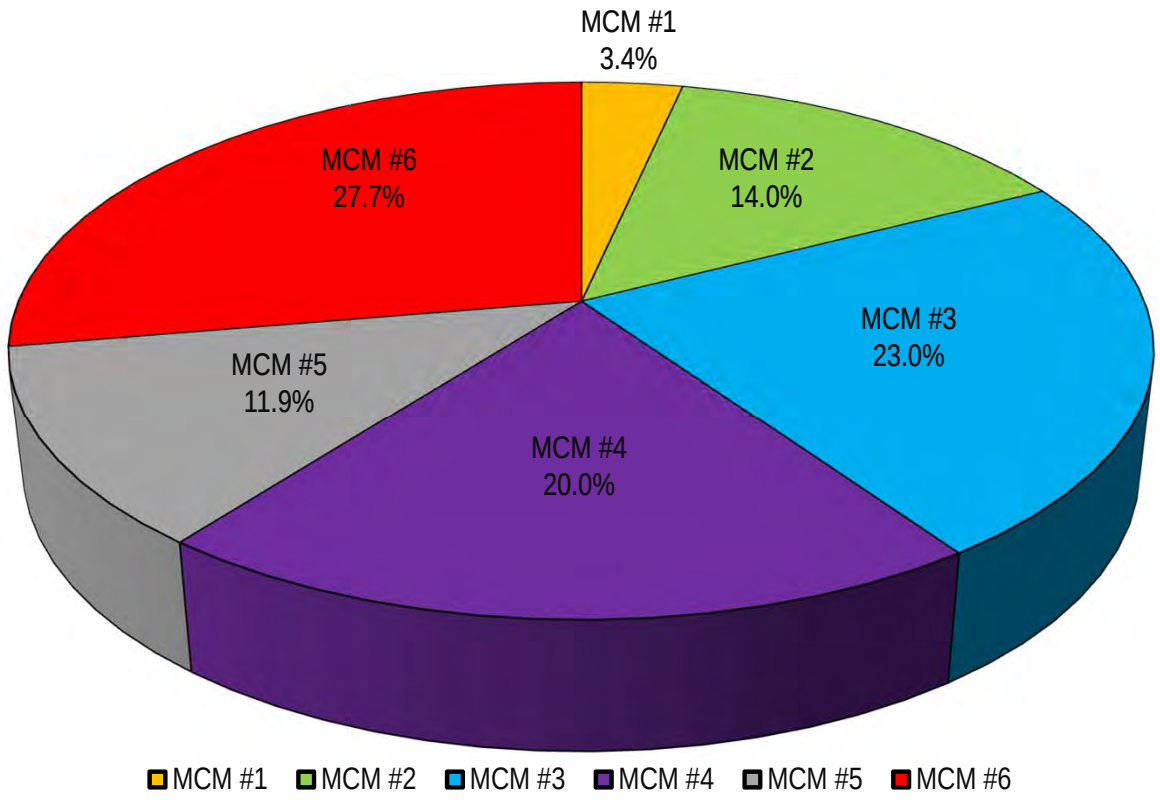
MS4 Violations

MS4 Violations Due to MCM #6 Compliance

- EPA staff (and/or contractors) perform inspections, audits or other information gathering tools to assess compliance.
- When violations are discovered, EPA may use several different enforcement options authorized through the Clean Water Act including orders for compliance, & collecting penalties.
- On March 9, 2003, PADEP issued a General NPDES Permit for Stormwater Discharges from Small MS4s (a.k.a Authorization to Discharge). This is the Permit that is in question in the following case studies.

MS4 Violations

(Based on 235 violations throughout 80 audits in the state of Pennsylvania)



	# of Violations	% of Total
MCM #1	8	3.4%
MCM #2	33	14.0%
MCM #3	54	23.0%
MCM #4	47	20.0%
MCM #5	28	11.9%
MCM #6	65	27.7%
Totals:	235	100%

81.3% of the 80 Audits analyzed showed a violation of MCM #6

MS4 Program

Compliance & Audits

For more information on NPDES permit compliance,

see the MS4 Frequently Asked Questions (PDF) document, email BPNPSM at RA-EPPAMS4@pa.gov or contact BPNPSM's Division of Operations, Monitoring and Data Systems at 717-787-6744.

DEP has also provided links to additional MS4 resources, including documents and sites for maps, modeling and MCM implementation.

DEP's regional offices inspect MS4s to determine whether the MS4 is meeting its permit obligations. The inspections are documented on DEP's MS4 inspection report (PDF) (3800-FM-BPNPSM0489). To facilitate compliance and ensure consistency in the reporting of information in periodic reports, TMDL plans and Chesapeake Bay Pollutant Reduction Plans, DEP has posted the following templates that should be used by permittees:

- MS4 Annual/Progress Report (3800-FM-BPNPSM0491)
- MS4 TMDL Plan/Chesapeake Bay Pollutant Reduction Plan Report (3800-FM-BPNPSM0493)

http://www.depweb.state.pa.us/portal/server.pt/community/municipal_stormwater/21380#permit

MS4 Program

Compliance & Audits

- Audits and Inspections occur to ensure that you are in compliance with your permit. If you are in violation of your permit, you must **resolve the issues as soon as practicable** and prior to obtaining a new or renewed permit.
- If you are aware that you have a deficiency, but have not yet been deemed in violation, you need to take the **steps now to correct this situation** as you may face DEP/EPA enforcement and may be unable to obtain a new or renewed permit.

http://www.depweb.state.pa.us/portal/server.pt/community/municipal_stormwater/21380#permit

MS4 Program

How to Prepare For an Audit

- **Collect MS4 program plan documents** and keep a copy in one central location
  - DEP/EPA will request copies of these documents
- **Provide staff with training** session/review of MS4 program
  - Educate staff on what will be targeted and what they should expect.
- **Consult with your local Solicitor** ahead of time to make sure they participate in audit.
- **Establish a team** that will accompany you during an audit who are very knowledgeable about your program.
  - DEP/EPA may divide up their team to visit different sites
  - Have your own teams available to accompany the audit teams

MS4 Program

Pre-Audit Compliance Assessment

of Maintenance Facilities and Construction Sites

- **Identify weaknesses** in your program and correct them ahead of time. This includes:

Construction Sites;

- Checking E&S documentation for completeness
- Checking maintenance of E&S controls
- Making sure that modifications to E&S control plans have been documented
- Checking to see what follow up/corrective actions occurred when E&S control inspectors reported deficiencies on a construction site.

BMP Sites;

- Checking BMP inspection logs

Maintenance Facilities;

- Checking various potential pollution sources (fueling stations, drop inlets, stage and stockpile areas, etc.)

MS4 Program

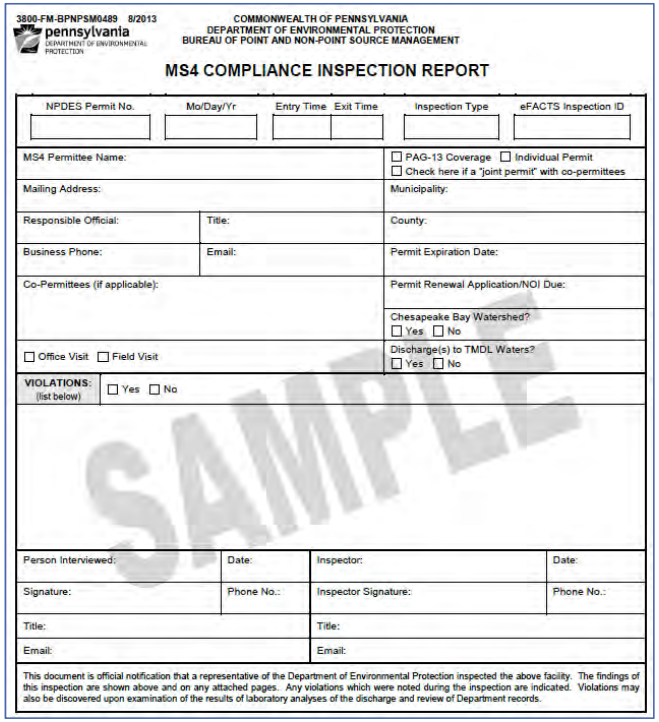
What to do
During an Audit

- Take photos/notes during audit
  - Will need this information to respond to audit findings
- Make sure staff are trained in the basics of your MS4 program
  - Includes all staff levels
  - Sample questions may include: specifics of vehicle washing, recent MS4 training they received, if they have had any major spills or leaks, etc.

MS4 Program

MS4 Compliance Inspection Report

The form at right is the first page of the compliance inspection report used by DEP.



3800-FM-BPNPSM0489 8/2013

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

MS4 COMPLIANCE INSPECTION REPORT

NPDES Permit No.	Mo/Day/Yr	Entry Time	Exit Time	Inspection Type	eFACTS Inspection ID

MS4 Permittee Name:	☐ PAG-13 Coverage ☐ Individual Permit ☐ Check here if a "joint permit" with co-permittees
Mailing Address:	Municipality:
Responsible Official: / Title:	County:
Business Phone: / Email:	Permit Expiration Date:
Co-Permittees (if applicable):	Permit Renewal Application/NOI Due:
	Chesapeake Bay Watershed? ☐ Yes ☐ No
☐ Office Visit ☐ Field Visit	Discharge(s) to TMDL Waters? ☐ Yes ☐ No
VIOLATIONS: (list below) ☐ Yes ☐ No	

SAMPLE

Person Interviewed:	Date:	Inspector:	Date:
Signature:	Phone No.:	Inspector Signature:	Phone No.:
Title:		Title:	
Email:		Email:	

This document is official notification that a representative of the Department of Environmental Protection inspected the above facility. The findings of this inspection are shown above and on any attached pages. Any violations which were noted during the inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses of the discharge and review of Department records.

Can be found on the DEP website in its full form at:

http://www.depweb.state.pa.us/portal/server.pt/community/municipal_stormwater/21380#permit

Case Study #1: City of Lebanon (Small MS4)

- On March 31, 2010, EPA issued an Administrative Order for violations of the previously mentioned NPDES General Permit
- July 20-21, 2010, EPA representatives conducted an inspection of Lebanon's MS4 program.
- Lebanon violated MCMs #3-6
  - Violation of MCM #6 revealed that the City of Lebanon failed to comply with the Permit by **not implementing an operation and maintenance program** that includes a training component that has the **ultimate goal of preventing or reducing pollutant runoff** from municipal operations.
- City of Lebanon given thirty (30) days to come into compliance with requirements after receiving the *Order of Compliance*
- "Violation of the terms and conditions of this Order constitutes an additional violation of the Act, and may result in a civil action for injunctive relief and/or a penalty not to exceed **$37,500 per day** of such violation. In addition, Section 309(c) provides criminal sanctions for knowing or negligent violations of the Act including imprisonment and fines of up to $50,000 per day of violation."

Case Study #2: Borough of Chambersburg (Small MS4)

- On or about August 17-20 and August 24, 2009, EPA personnel conducted a review of files related to the Borough of Chambersburg (including Annual Reports submitted as required by the NPDES Permit).
- Borough of Chambersburg violated MCMs #1-4 & #6
  - Violations of MCM #6 include:
    - Failure to identify a written Operation & Maintenance (O&M) plan
    - A description of how pollution prevention/operation and maintenance program for all municipal vehicle/equipment operation, maintenance, fueling & washing activities was implemented over the past year.
- Borough of Chambersburg was given one hundred & twenty (120) days following the Order & Request to:
  - Complete the requirements of the NPDES Permit & submit a completed Protocol
  - Provide the dates when the Annual Report Form BMPs that have been alleged in violations identified in the Order were first implemented
  - Provide a map of all the outfall locations within MS4's jurisdiction
  - Provide a list of all Post-Construction Storm Water management structures, types & locations