



# 2017 MS4 Educational Workshop Series

MS4 PROGRAM OVERVIEW AND MOCK  
INSPECTION – BETHEL PARK

# Thank you Bethel Park for Hosting this Workshop!

- ▶ Extra special thanks to
  - ▶ Susan Dolinar
  - ▶ Shawn Arbaugh
  - ▶ Michael Pomposelli



# My Background

- ▶ Water Resources Designer (Engineer in Training) based out of the Center for Watershed Protection's Pennsylvania office
- ▶ I spent almost four years working for the PA DEP developing and implementing the MS4 program
- ▶ At the PA DEP, I performed numerous trainings, developed written guidance documents, conducted MS4 field and office inspections, and assisted in EPA MS4 audits
- ▶ I have worked "on-the-ground" with municipalities all across the Commonwealth of Pennsylvania to further develop all aspects of their MS4 program
- ▶ I have a M.S. in Water Resource and Environmental Engineering from Villanova University, and five years of experience in stormwater design, erosion and sediment control, and permitting

# The Center for Watershed Protection

- ▶ Founded in 1992, the Center for Watershed Protection, Inc. is an award-winning national 501(c)(3) nonprofit organization that works to protect, restore, and enhance our streams, rivers, lakes, wetlands, and bays
- ▶ Our work includes applied research, direct assistance to communities, training, and access to a network of experienced professionals
- ▶ The Center is a recognized leader in providing technical assistance to local governments with developing cost-effective and realistic strategies to meet TMDL and MS4 goals



# The Center for Watershed Protection – PA Specific Work

- ▶ Multi-municipal TMDL and PRPs for York County, Blair County, and Lebanon County, and the Wyomissing Creek Watershed Coalition
- ▶ Working with CapCOG towards standardization of MS4 materials
- ▶ Working with the William Penn Foundation and NFWF in the Delaware River Watershed Initiative
- ▶ Participated in numerous Chesapeake Bay Expert Panels for the development of BMP calculation techniques that are used for TMDL and PRPs
- ▶ Reviewing TMDL and PRP methodologies to recommend steps forward
- ▶ Numerous online and in-person trainings on developing PRPs, IDDE, and other topics
- ▶ Worked for the PADEP to provide trainings on TMDL compliance
- ▶ Design of stormwater BMP retrofits implemented in Lancaster County, Berks County, and Philadelphia

# Workshop Overview

- ▶ The purpose of these workshops is for everyone to walk away with something tangible towards compliance with the MS4 program
- ▶ For this workshop we would like for everyone to:
  - ▶ Have a grasp of exactly what should be in a written plan for MCM #6 by:
    - ▶ Reviewing what the permit requires
    - ▶ Walking through a Public Works facility to associate site conditions with the permit requirements
  - ▶ Understand the MS4 audit process and what to expect
  - ▶ Talk about the TMDL and PRP requirements



# MS4 Overview – Upcoming Changes

- ▶ Annual Reports due September 30<sup>th</sup> of each year
- ▶ Fee changes
- ▶ Many incentives for multi-municipal collaboration

# MS4 Overview – Upcoming Changes

- ▶ March 15, 2018 the new MS4 General Permit will take effect
  - ▶ PRP Instructions
  - ▶ TMDL Instructions
    - ▶ All discharges to TMDLs with WLAs for nutrients and sediment must apply for individual permit coverage
  - ▶ August 3<sup>rd</sup> deadline for posting plan for public comment



# MCM #6 Good Housekeeping for Municipal Operations BMP#1

Please see the handouts entitled "MCM #6  
Pollution Prevention/Good Housekeeping  
for Municipal Operations"

# MCM #6: Pollution Prevention / Good Housekeeping BMP#1

Identify and document all operations that are owned or operated by the permittee and have the potential for generating pollution in stormwater runoff to the regulated small MS4. This includes activities conducted by contractors for the permittee. Activities may include the following:

- ▶ street sweeping; snow removal/deicing; inlet/outfall cleaning; lawn/grounds care; general storm sewer system inspections and maintenance/repairs; park and open space maintenance; municipal building maintenance; new construction and land disturbances; right-of-way maintenance; vehicle operation, fueling, washing and maintenance; and material transfer operations, including leaf/yard debris pickup and disposal procedures. Facilities can include streets; roads; highways; parking lots and other large paved surfaces; maintenance and storage yards; waste transfer stations; parks; fleet or maintenance shops; wastewater treatment plants; stormwater conveyances (open and closed pipe); riparian buffers; and stormwater storage or treatment units (e.g., basins, infiltration/filtering structures, constructed wetlands, etc.).



# MCM #6: Pollution Prevention / Good Housekeeping BMP#2

Develop, implement and maintain a written O&M program for all operations that could contribute to the discharge of pollutants from the regulated small MS4, as identified under BMP #1. This program shall address stormwater collection or conveyance systems within the regulated MS4. The written O&M program shall stress pollution prevention and good housekeeping measures, contain site-specific information, and include the following:

- ▶ Management practices, policies, and procedures shall be developed and implemented to reduce or prevent the discharge of pollutants to the regulated small MS4s. The permittee shall consider eliminating maintenance area discharges from floor drains and other drains if they have the potential to discharge to storm sewers.
- ▶ Maintenance activities, maintenance schedules, and inspection procedures to reduce the potential for pollutants to reach the regulated small MS4s.
- ▶ Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, salt / sand (anti-skid) storage locations and snow disposal areas. Controls for solid chemical products stored and utilized for the principal purpose of deicing roadways for public safety must be consistent with the BMPs for existing salt storage and distribution sites contained in the PAG-03 NPDES General Permit for Stormwater Discharges Associated with Industrial Activity.
- ▶ Procedures for the proper disposal of waste, including dredge spoil, accumulated sediments, trash, household hazardous waste, used motor oil, street sweepings, and other debris.

# MCM #6: Pollution Prevention / Good Housekeeping 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 operations to the regulated small MS4. The program may be developed and implemented using guidance and training materials that are available from federal, state or local agencies, or other organizations. All relevant employees and contractors shall receive training (i.e., public works staff, building, zoning, and code enforcement staff, engineering staff, police and fire responders, etc.). Training topics shall include operation, inspection, maintenance and repair activities associated with any of the operations identified under BMP #1. Training must cover all relevant parts of the permittee's overall stormwater management program that could affect operations, such as illicit discharge detection and elimination, construction sites, and ordinance requirements.

- ▶ Employee training shall occur at least annually and shall be documented in writing and reported in Annual MS4 Status Reports. Documentation shall include the date(s) of the training, the names of attendees, the topics covered, and the training presenter(s).



# Example Plan

- ▶ Now that we know what is required by the permit, let's take a look at the example plan provided below and see if it contains the appropriate level of information:

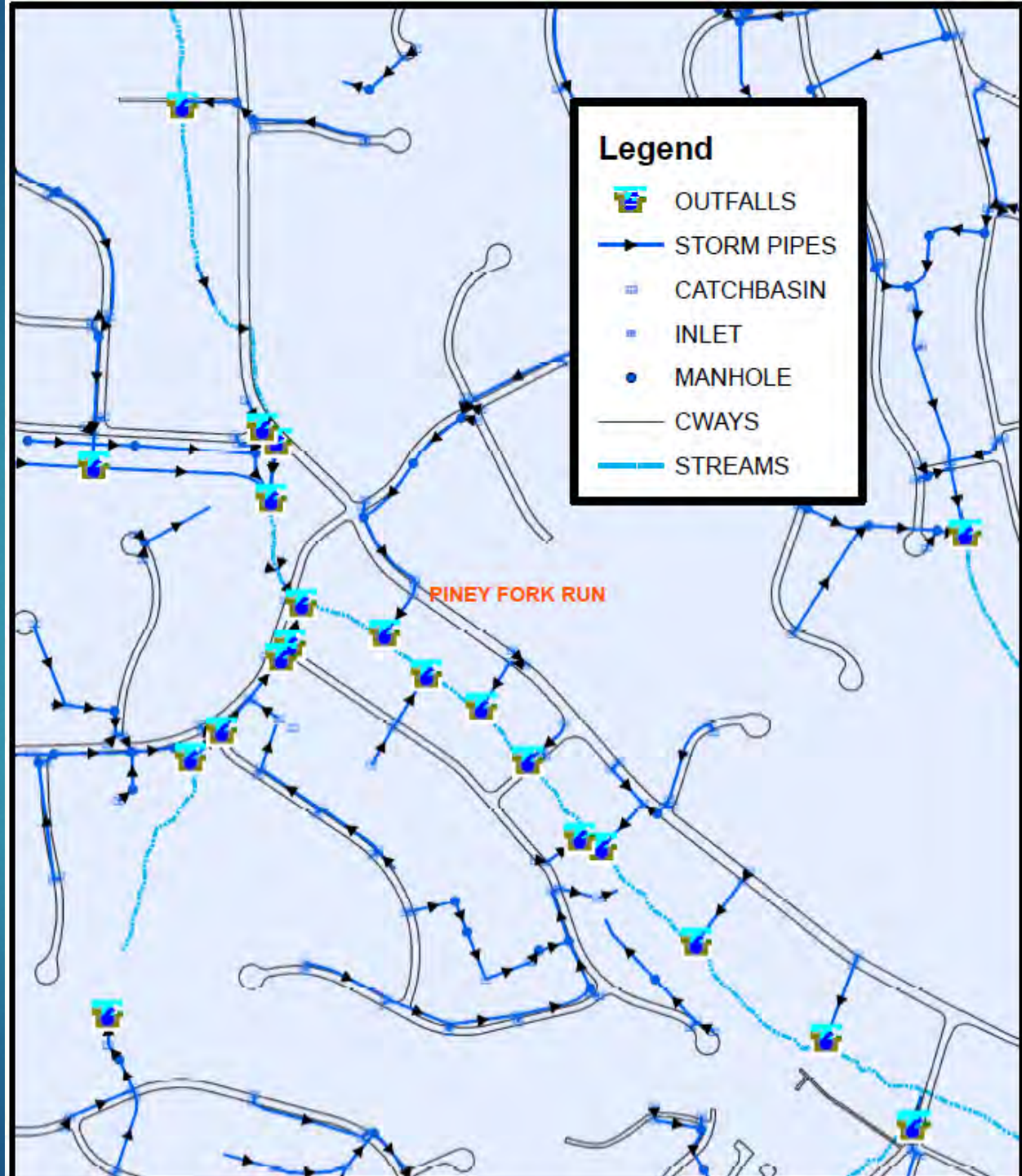
Activity or Facility	Operation and Maintenance Practice
Highway Garage	Drains inside of building are tied to sanitary sewer system. Vehicle washes and maintenance will be done inside the new building. Salt for roadways is stored inside of building or under tarps to prevent materials from entering MS4. Fueling operation is coded to only allow personnel with keys access. Fuel tanks are inspected on a regular basis, and an automatic shutoff is on system. Emergency information is posted near fueling operation.
Fire Station - A	Drains inside of building are tied to sanitary sewer system. Vehicle washes and maintenance are done inside the new building.
Fire Station - B	Drains inside of building are tied to sanitary sewer system. Maintenance activities are done inside the building.
Tri-County EMS Building	Drains inside of building are tied to sanitary sewer system. Maintenance activities are done inside the building.
Fire Station - C	Drains inside of building are tied to sanitary sewer system.
Municipal Building	Landscaping is maintained around building to help reduce stormwater runoff and the overall impervious area of the area.
Street Sweeping	Street sweeping is conducted weekly. The goal of the program is to street sweep all roads four times per year. Materials captured from street sweeping is used as clean fill or properly disposed of.
Deicing	During winter weather, salt is used for deicing on state and Municipal owned roads. Salt use is minimized to the best extent possible to ensure safe roadways. Salt is kept indoors or under tarps to eliminate any potential for discharging to the MS4 from the storage area.
Inlets / Outfalls	Inlets and outfalls are cleaned as needed based upon complaints, hot spots, or observed issues. Material is used as clean fill or properly disposed of. Inlets are repaired and or replaced during the annual road paving program.
Lawn / Grounds Care	Municipal fields and grassy areas are cut throughout the year to allow plant growth. Bare areas are seeded as needed.
Stormwater Collection Systems	Stormwater collection systems are inspected and cleaned as needed based upon complaints or observed issues. Problems are repaired when discovered. Depending on the problem, Municipal staff may repair or the work may be contracted out.



# Example Plan

- ▶ The above plan is not detailed enough for MCM #6 BMP #2 requirements
- ▶ The following spreadsheet utilizes the example of the Highway Garage above but provides detail that works to incorporate aspects of MCM #6 BMPs #2 and #3

# A Note on GIS and MCM #6





# Inspections

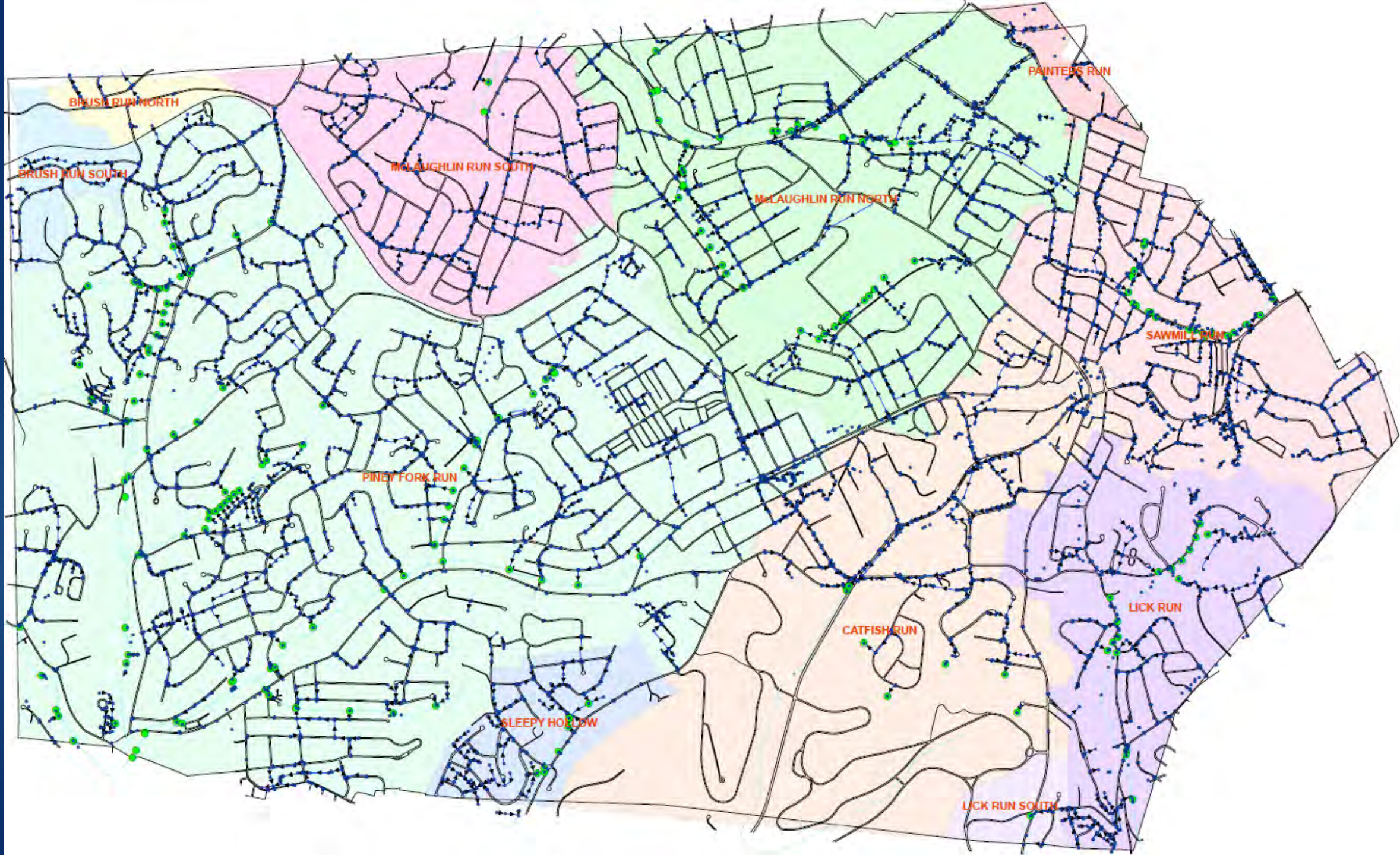
- ▶ Two different levels of inspections
  - ▶ PA DEP
  - ▶ EPA

# TMDLs and PRPs



MS4 Name	NPDES ID	Individual Permit Required?	Reason	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)	Other Cause(s) of Impairment
<b>Allegheny County</b>						
BETHEL PARK BORO	PAG136147	Yes	TMDL Plan	Graesers Run	Appendix E-Nutrients, Siltation (5)	Turbidity (5)
				Catfish Run	Appendix B-Pathogens (5)	Cause Unknown (5)
				Peters Creek	Appendix A-Metals (4a), Appendix B-Pathogens (5), Appendix E-Nutrients (5)	Cause Unknown (5)
				Unnamed Tributaries to Painters Run		Turbidity (5)
				Sawmill Run		Other Habitat Alterations, Water/Flow Variability (4c)
				Sawmill Run AMD and Sediment	Appendix A-Metals, pH (4a)	
				Painters Run	Appendix A-Metals (4a), Appendix C-Chlordane, PCB (4a), Appendix E-Suspended Solids (4a), Appendix E-Siltation (5)	TDS (5)
				Lick Run	Appendix B-Pathogens (5)	Cause Unknown (5)
				Sawmill Run AMD and Sediment	TMDL Plan-Siltation (4a)	
				Sawmill Run Nutrients	TMDL Plan-DO/BOD, Nutrients, Organic Enrichment/Low D.O., Siltation (4a)	
				Chartiers Creek	Appendix A-Metals (4a), Appendix C-PCB (4a), Appendix E-Suspended Solids (4a), Appendix E-Siltation (5)	TDS (5)
				Piney Fork	Appendix A-Metals (4a), Appendix B-Pathogens (5), Appendix E-Nutrients (5)	Cause Unknown (5)
				McLaughlin Run	Appendix E-Nutrients, Siltation (5)	Flow Alterations, Other Habitat Alterations, Water/Flow Variability (4c), Turbidity (5)
				Sleepy Hollow Run	Appendix B-Pathogens (5)	Cause Unknown (5)
Brush Run (Washington)	TMDL Plan-Nutrients, Organic Enrichment/Low D.O., Siltation, Suspended Solids, Turbidity (4a)					







# MS4 Requirements Table Web-Based GIS Application

The application will be down intermittently due to server upgrades starting Sunday, March 5 thru Friday, March 10, 2017. Thanks for your patience.



Tom Wolf, Governor



## MS4 Requirements

Patrick McDonnell, Acting Secretary

### BACKGROUND

Municipalities and other entities such as universities and prisons that meet certain standards must obtain NPDES permit coverage for discharges of stormwater from their municipal separate storm sewer systems (MS4s).

A municipal separate storm sewer is any conveyance or system of conveyances (including but not limited to streets, ditches, and pipes) that is: owned by a municipality or other public body (created under state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater or other wastes; designed or used for collecting or conveying stormwater; not a combined sewer (i.e., not intended for both sewage and stormwater); AND not part of a publicly owned treatment works (POTW).

Additional information regarding permitting requirements can be found at the [Pennsylvania Municipal Stormwater Homepage](#).

Select a County

Select a Municipality

BETHEL PARK BORO, Allegheny County		
	Appendix C-PCB (4a) Appendix E-Suspended Solids (4a) Appendix E-Siltation (5)	
Piney Fork	Appendix A-Metals (4a) Appendix B-Pathogens (5) Appendix E-Nutrients (5)	Cause Unknown (5)
Sawmill Run Nutrients	TMDL Plan-DO/BOD Nutrients Organic Enrichment/Low D.O. Siltation (4a)	
Brush Run (Washington)	TMDL Plan-Nutrients Organic Enrichment/Low D.O. Siltation	

**MS4 Stream**

Piney Fork

**County-Municipality Name:**  
Allegheny-BETHEL PARK BORO

**Impairment Source and Cause:**  
Pathogens, Cause Unknown

[Zoom to](#)



# Questions

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