

# ***PennDOT MS4/Stormwater Initiatives***

**Mid-Atlantic Quality Assurance Workshop  
February 08, 2017**

# Topics

- MS4 Permit 2016-2021
- Maintenance Policy for Stormwater Control Measures (SCMs)
  - Inventory database
  - Inspection program
  - Maintenance
- Coordination with MS4 Municipalities



***MS4 Permit Renewal  
for 2016-2021***

# MS4 Permit Renewal

- Current permit was to expire July 14, 2016
- Covers storm conveyance systems (pipes, swales, etc.) in urbanized areas
- Highways, rest areas, stockpiles, garages, etc.
- Administratively extended by DEP

INDIVIDUAL STATEWIDE PERMIT FOR DISCHARGES OF STORMWATER  
FROM PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) ROADWAY SYSTEM  
IN URBANIZED AREAS

Issued to: Pennsylvania Department of Transportation  
Keystone Building  
400 North Street  
Harrisburg, PA 17105

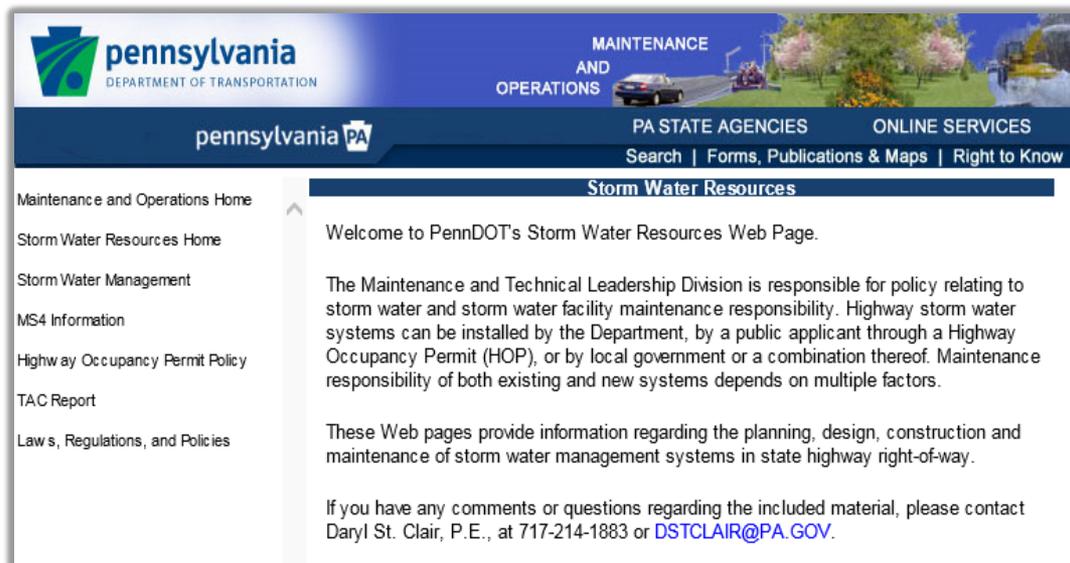
# MS4 Permit Renewal

- Includes 6 minimum control measures (MCMs)
  1. Public education and outreach on stormwater impacts
  - 2. Public involvement/participation**
  - 3. Illicit discharge detection and elimination**
  4. Construction site stormwater runoff control
  5. Post-construction stormwater management
  - 6. Pollution prevention/good housekeeping**  
(at maintenance facilities)

# MS4 Permit Renewal

## MCM#2: Public Involvement / Participation

- Maintain and update an internet site for PennDOT's stormwater policies and MS4 permit.
- Encourage MPOs/RPOs to address stormwater and MS4 problems when programming highway projects.



The screenshot shows the PennDOT website interface. At the top, there is a blue header with the Pennsylvania Department of Transportation logo and the text "MAINTENANCE AND OPERATIONS". Below this is a dark blue navigation bar with "pennsylvania PA" on the left and "PA STATE AGENCIES" and "ONLINE SERVICES" on the right. A search bar and links for "Forms, Publications & Maps" and "Right to Know" are also present. The main content area is titled "Storm Water Resources" and contains the following text:

Welcome to PennDOT's Storm Water Resources Web Page.

The Maintenance and Technical Leadership Division is responsible for policy relating to storm water and storm water facility maintenance responsibility. Highway storm water systems can be installed by the Department, by a public applicant through a Highway Occupancy Permit (HOP), or by local government or a combination thereof. Maintenance responsibility of both existing and new systems depends on multiple factors.

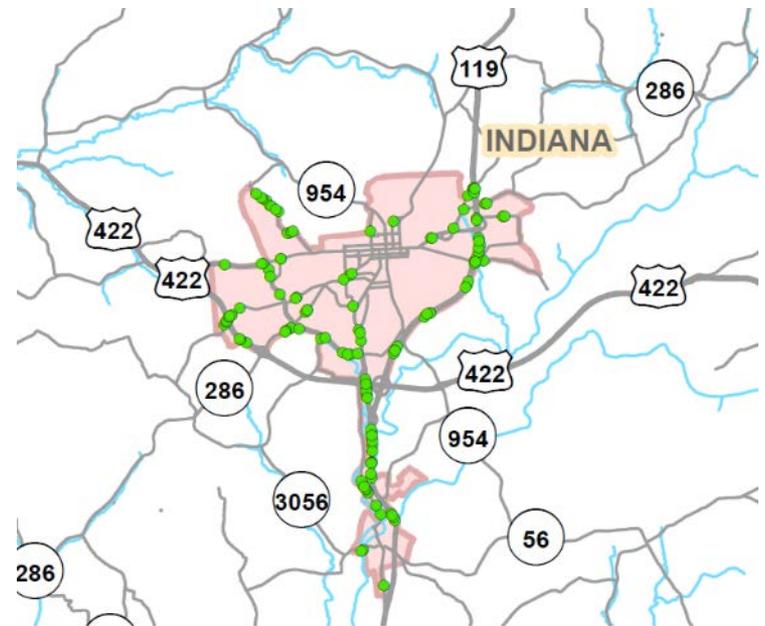
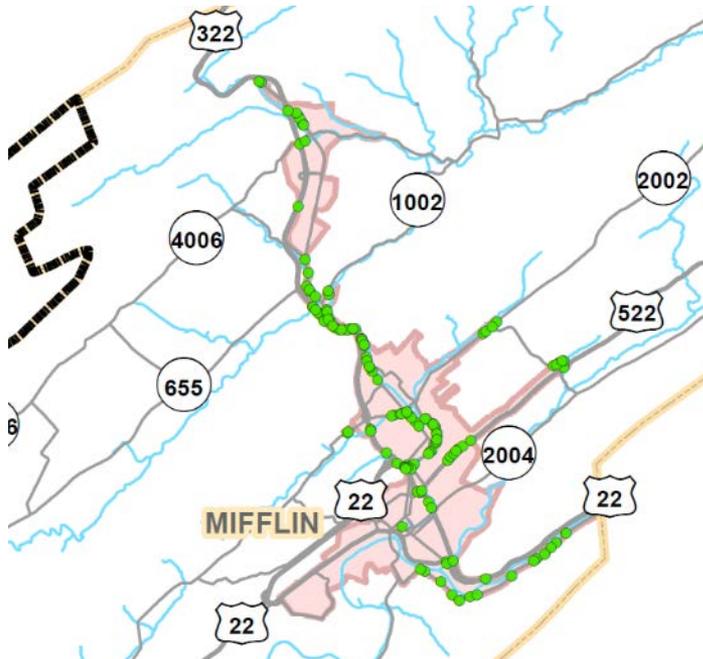
These Web pages provide information regarding the planning, design, construction and maintenance of storm water management systems in state highway right-of-way.

If you have any comments or questions regarding the included material, please contact Daryl St. Clair, P.E., at 717-214-1883 or [DSTCLAIR@PA.GOV](mailto:DSTCLAIR@PA.GOV).

# MS4 Permit Renewal

## MCM#3: Illicit Discharge Detection and Elimination

- Maintain storm water system maps showing locations of outfalls and receiving surface water



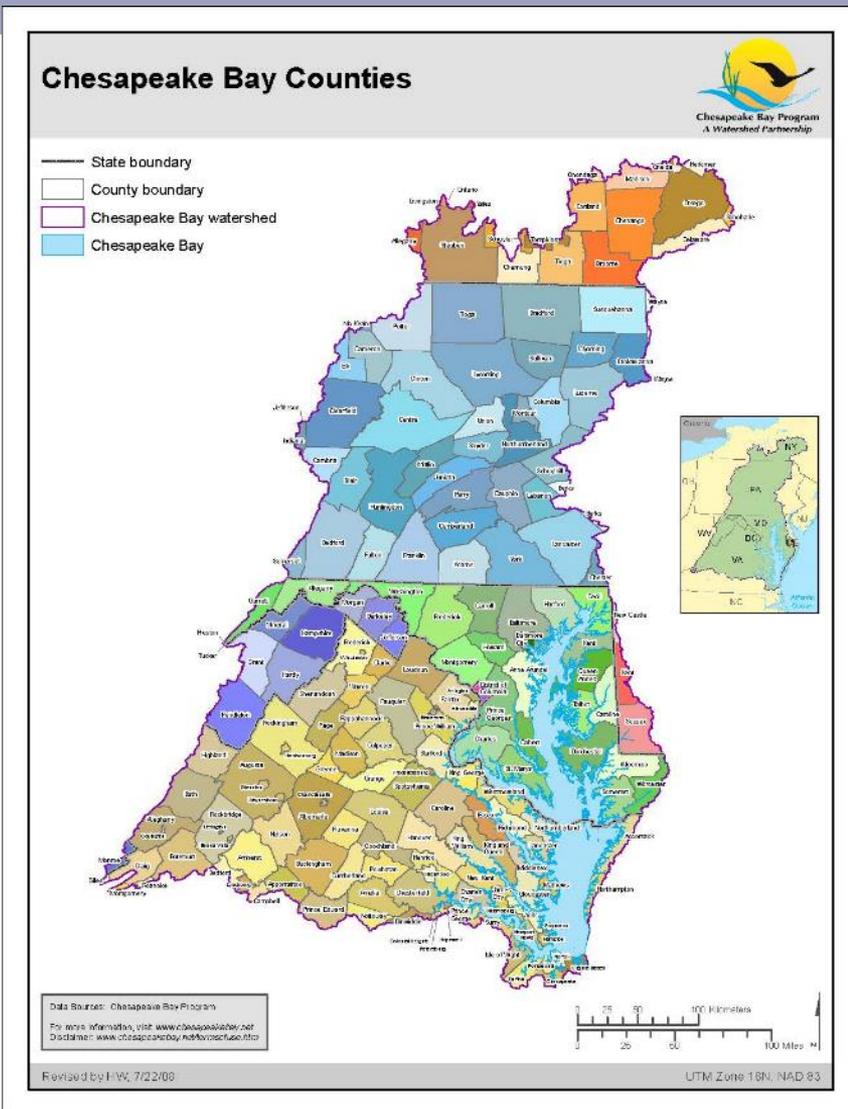
# MS4 Permit Renewal

## MCM#6: Pollution Prevention/Good Housekeeping for Municipal Operations

- BMP #4 – Review, update and implement employee training programs...
  - Goal: Implement EMS based training to replace current ISO 14001 training program.



# MS4 Permit Renewal

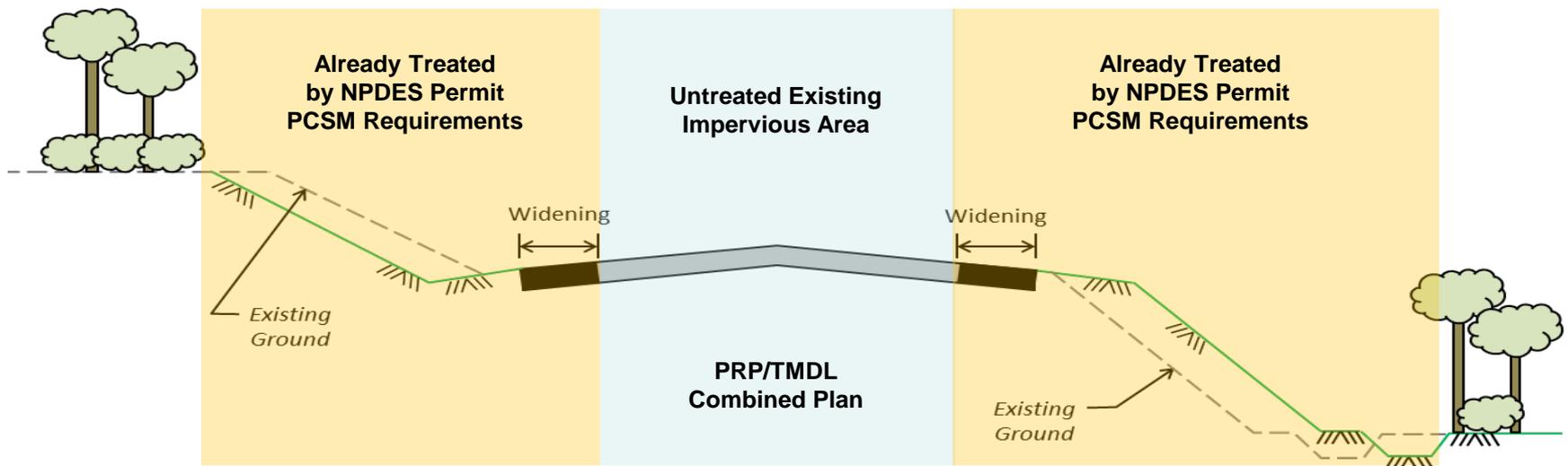


New requirements both for locally impaired watersheds and for the Chesapeake Bay Watershed.

# MS4 Permit Renewal

**PRP/TMDL:** Combined Plan for Impaired Watersheds in Urbanized Areas including Chesapeake Bay

- Chesapeake Bay
  - Reduce untreated impervious surface area in urbanized areas
- Other Impaired Watersheds
  - Reduce untreated impervious surface area in urbanized areas on NPDES projects



# ***Maintenance Policy for Stormwater Control Measures (SCMs)***

# *SCM Maintenance Policy*

- Framework
  - Explains requirements and assigns responsibilities
  - Establishes procedures for SCM inspections and maintenance
  - Provides tools for efficient data collection and documentation
- Policy development began in late 2013
  - 2014 and 2016 interim policies
  - Final policy anticipated by end of 2016

# SCM Maintenance Policy

- Short Term Plan
  - Implement procedures to enable consistent actions and documentation for regulatory compliance
- Long Term Plan
  - Improve efficiency
  - Expand data tracking
  - Analyze data to improve practices



# SCM Inventory

## Inventory

- Major effort to inventory SCMs began in 2015
  - No previous centralized database of SCMs
  - 500+ projects reviewed
  - Data manually extracted from paper plans

**OPERATION AND MAINTENANCE**

**DCSM BMP FUNCTION AND LOCATION**

BMP	BMP FUNCTION	STATION	SHEET NUMBER
BIOTREATMENT BASIN	BIOTREATMENT CONTROL	10+ 000.00 AND	2 AND 3
BIOTREATMENT BASIN	BIOTREATMENT CONTROL	10+ 000.00 TO 10+ 050.00	2 AND 3
BIOTREATMENT BASIN	BIOTREATMENT CONTROL	10+ 050.00 TO 10+ 100.00	2 AND 3

**GENERAL NOTES**

1. THE BMP SHALL BE INSTALLED AND MAINTAINED AS SHOWN ON THESE PLANS.
2. THE BMP SHALL BE INSTALLED AND MAINTAINED AS SHOWN ON THESE PLANS.
3. THE BMP SHALL BE INSTALLED AND MAINTAINED AS SHOWN ON THESE PLANS.

**BMP INSTALLATION SEQUENCE**

1. THE BMP SHALL BE INSTALLED AND MAINTAINED AS SHOWN ON THESE PLANS.
2. THE BMP SHALL BE INSTALLED AND MAINTAINED AS SHOWN ON THESE PLANS.
3. THE BMP SHALL BE INSTALLED AND MAINTAINED AS SHOWN ON THESE PLANS.

**LOCATION MAP**

**PROJECT CONTACTS**

NAME	PHONE	EMAIL
JOHN M. JONES	555-555-5555	JOHN@EXAMPLE.COM
JANE D. SMITH	555-555-5556	JANE@EXAMPLE.COM

**WATERS OF THE COMMONWEALTH**

**POST CONSTRUCTION STORMWATER MANAGEMENT PLAN**



**Storm Water Control Measures**  
Type: Point | Result: 1 of 1

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**SCM\_ID:** 0510 BWD 001

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**SEQUENCE\_NUMBER:** 001

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**SCM\_TYPE\_CODE:** BWD

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**SCM\_TYPE\_CODE\_DESC:** Basin, Wet Detention

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**DISTRICT\_NO:** 05

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**CTY\_CODE:** 06

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**COUNTY\_NAME:** Berks

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**DISTRICT\_CTY\_CODE:** 0510

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**ST\_RT\_NO:** 0222

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**SEG\_NO:** 0233

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**OFFSET:** 31

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**JURIS:** 1

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**SIDE\_IND:** 2

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**ROUTE\_DIRECTION:** S

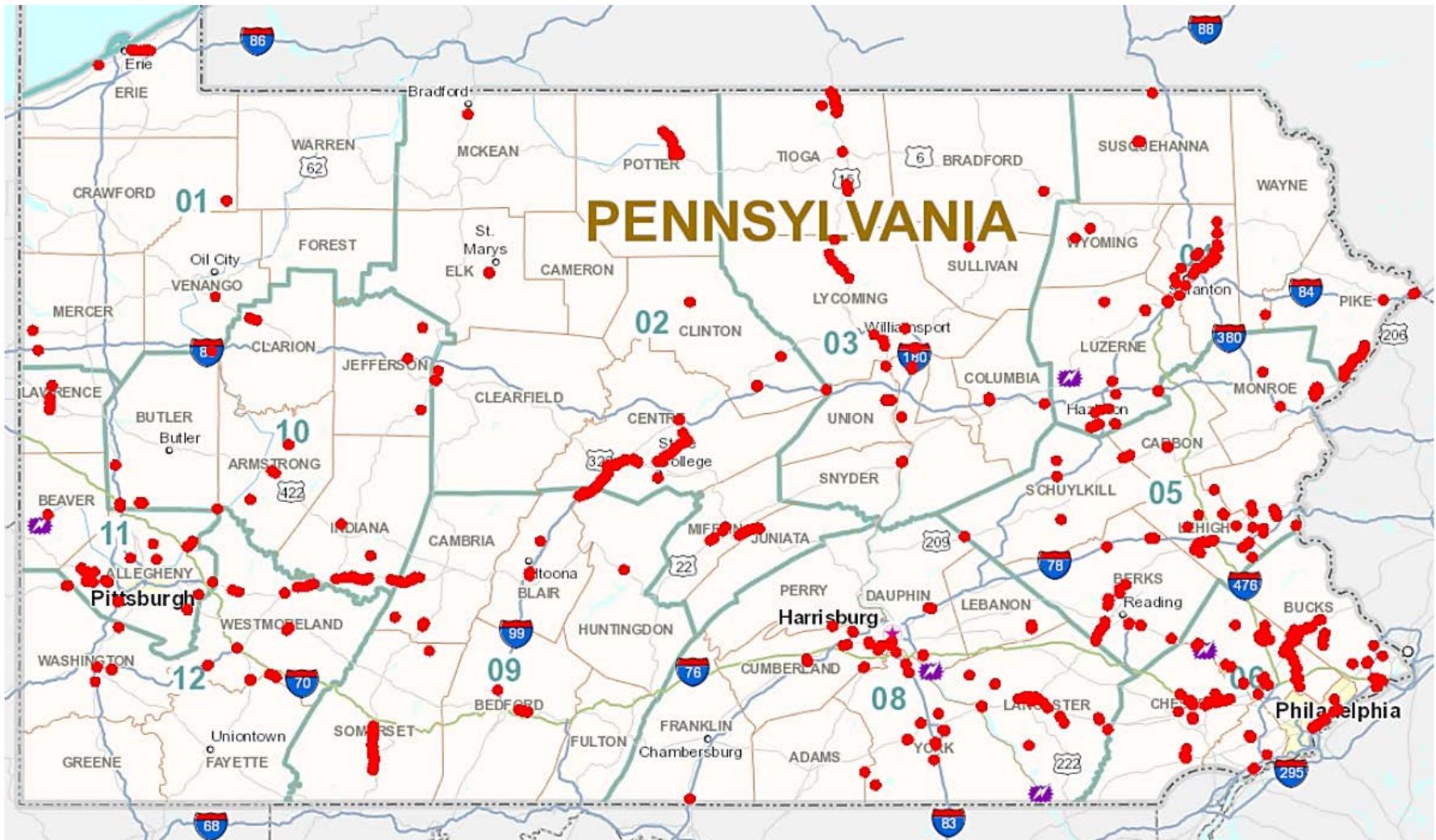
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**CL\_OFFSET:** 91

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**LATITUDE:** 40.36222

# SCM Inventory



# SCM Inventory

- About 1,600 non-swale/strip SCMs in current inventory

Type	#
Basin (wet, dry)	612
Bioretention	181
Device	121
Infiltration (basin, trench, berm)	491
Other	143
Swales/Filter Strips	1,700+

# SCM Inventory

- Non-swale SCMs by PennDOT District

District	SCMs
1-0	24
2-0	157
3-0	117
4-0	196
5-0	150
6-0	542

District	SCMs
8-0	129
9-0	97
10-0	56
11-0	48
12-0	42

# SCM Maintenance Policy

The policy identifies two types of inspections:

- Visual screening
  - Cyclic
  - Detects existing/potential problems to determine if corrective maintenance is needed and/or if further investigation is required
- Condition assessment
  - Initial and as needed
  - Establishes a baseline condition of the SCM and uncovers any issues that may result in reduced effectiveness or failure of the SCM



# SCM Maintenance Policy

SCMs require two basic types of maintenance:

- Routine preventative
  - Needs performed on regular cycles and can be scheduled far in advance of the work.
- Corrective
  - Needs are uncovered through visual screenings, condition assessments, and preventative maintenance activities.



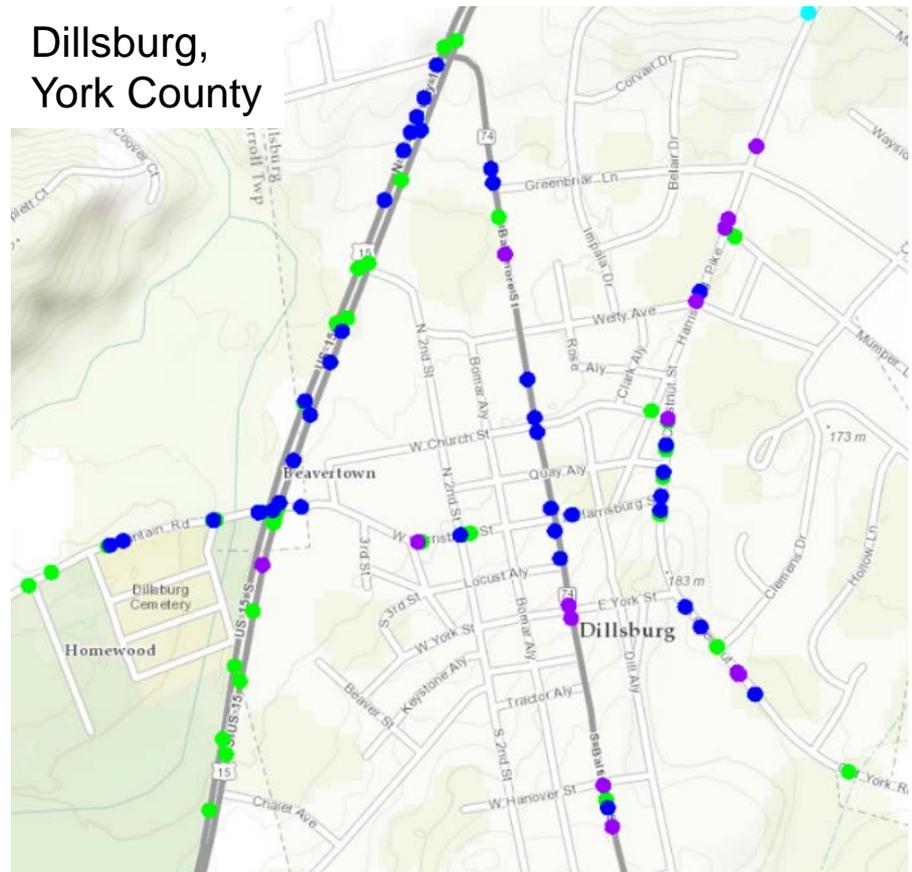
# *Coordination with MS4 Municipalities*

# PAG-13

- New MS4 General Permit
  - Applies to most municipalities in urbanized areas
- Must obtain coverage 9/2017
- Many new requirements compared to current PAG-13
- Must submit map of storm system in their MS4 including all conveyance between the MS4 and the receiving water body, public or private
  - Maps are required to have storm sewersheds (drainage areas to an outfall)

# Mapping

- State and local roads often intertwined
- PennDOT maintains database of pipes; maps outfalls
- Not centrally located:
  - Storm inlets
  - Sewer flow direction
  - Sewersheds



# *Pollution Reduction Plans*

## **Challenges**

- O&M responsibility of storm sewers under state roads varies by jurisdiction/agreements
- PennDOT roadways confined to linear strips of right-of-way
- Little to no “open space” available to implement SCMs outside of the roadway section

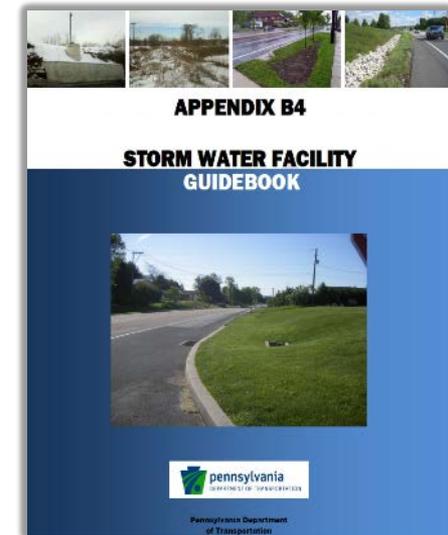
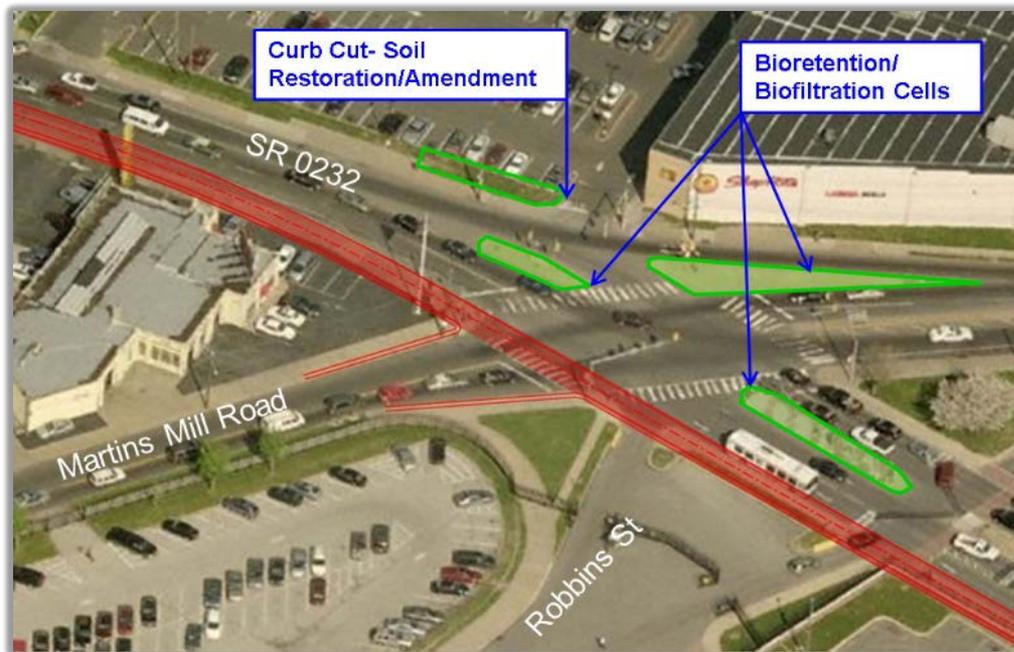
# *Pollution Reduction Plans*

## **Parsing**

- MS4 permit holders may “parse” areas out of their sewershed
  - Private businesses
  - Local roads not dedicated to the township/muni.
  - PennDOT roads
- Parse = PennDOT’s responsibility
- No Parse = shared responsibility

# Pollution Reduction Plans

- Guidebook will inform municipalities of opportunities to support their own pollution reduction goals through future highway projects



# Questions

