



# Tighe&Bond

Engineers | Environmental Specialists



# MS4 YEAR 2 OVERVIEW

**Presentation to COST**  
**October 23, 2018**

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# MS4 - WHAT DOES IT STAND FOR?

Not to be  
confused with the  
much cooler MI6



**SECRET  
INTELLIGENCE  
SERVICE** MI6



General Permit for the  
Discharge of Stormwater  
from Small **M**unicipal  
**S**eparate **S**torm **S**ewer  
**S**ystems



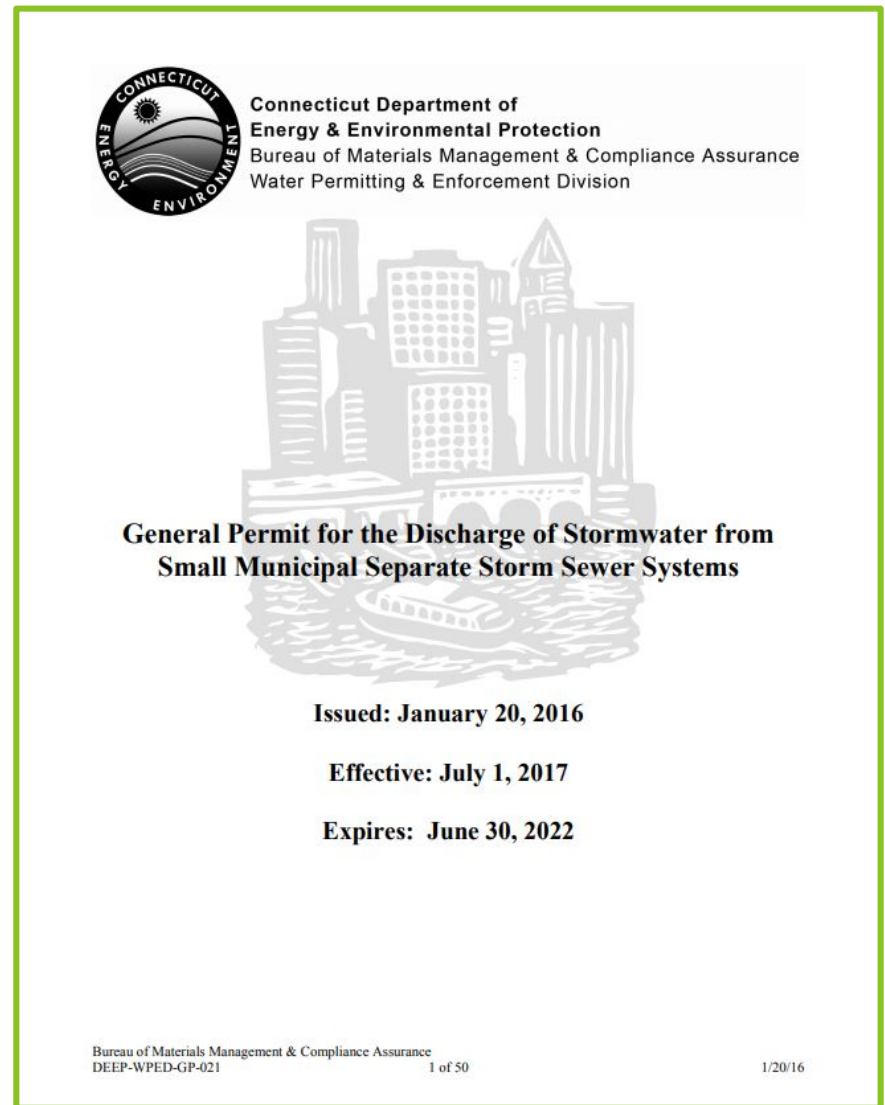
# MS4 BACKGROUND

- **Rooted in 1972 Clean Water Act**
- **1990 ruling required stormwater to be regulated in two phases**
  - Phase 1 (1990)
    - Cities over 100,000
    - Construction over 5 acres
  - Phase 2 (1999)
    - Urbanized Areas
    - Construction 1-5 acres



# MS4 BACKGROUND

- EPA developed initial guidelines
- EPA delegates stormwater authority to most states, including Connecticut
- First CT MS4 permit issued in 2004
- Reissued in 2017



# MS4 BACKGROUND

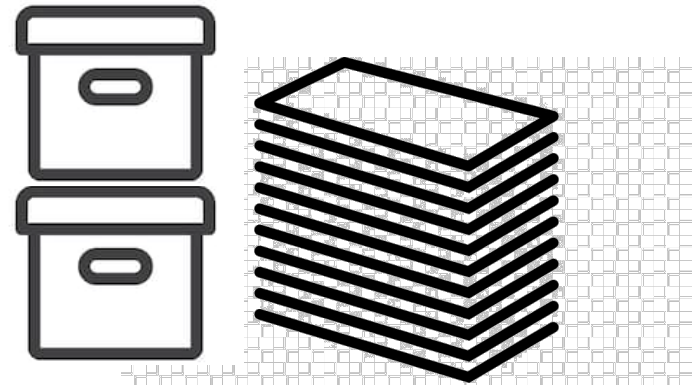
2004 Permit



21

pages

2017 Permit

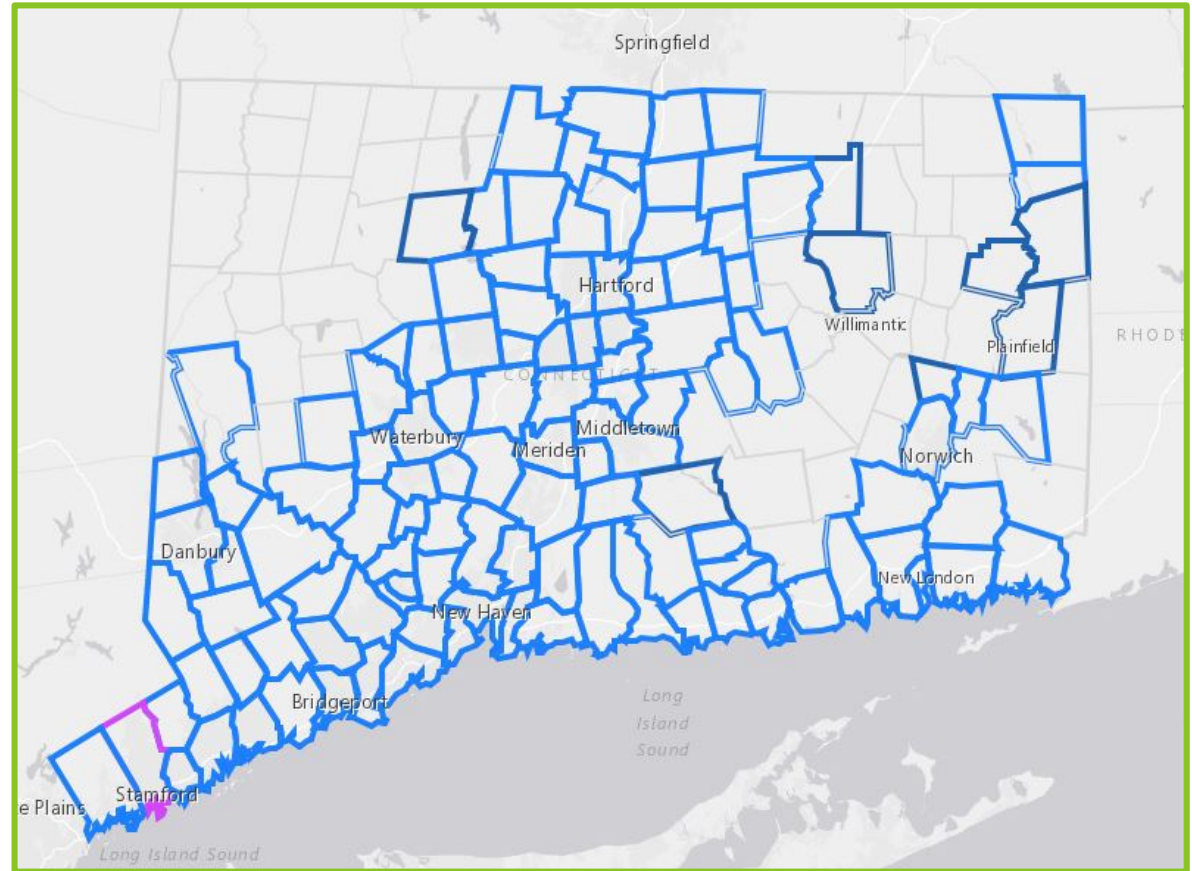


68

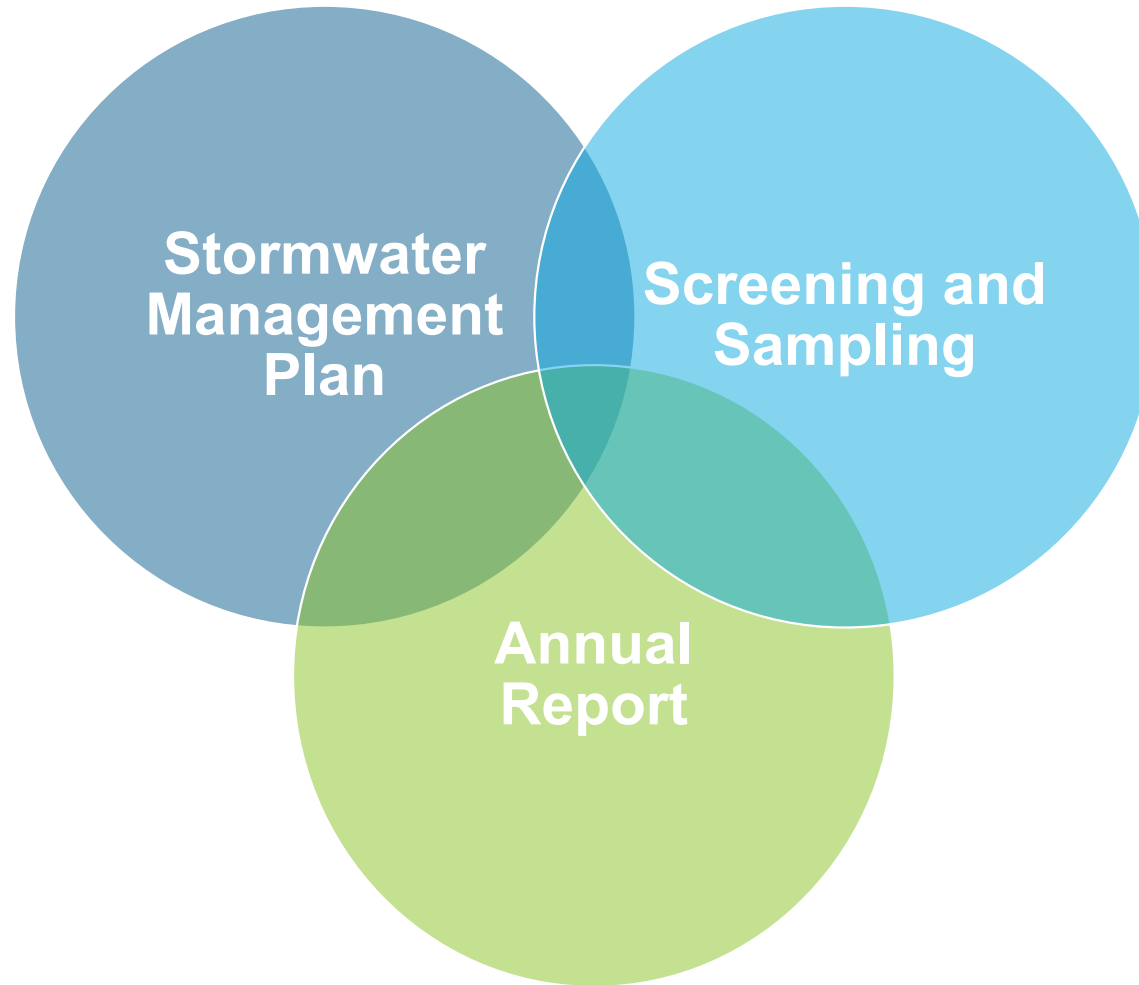
pages

# YOU'RE NOT ALONE

- **2004 Permit**
  - 113 communities
- **2017 Permit**
  - 121 communities



# BASIC REPORTING REQUIREMENTS





# BASIC REPORTING REQUIREMENTS

- **Plan required once at beginning of permit, unless amended**
- **Report required annually**
  - Post electronically, and hardcopy for public review and comment
  - “Reasonable efforts” to inform public
  - Minimum 45 day comment period
  - Due by April 1 of following year.



# WHERE IT APPLIES – “PRIORITY AREAS”



**Urbanized  
Area**



**DCIA > 11%**



**Direct  
Discharge to  
Impaired  
Waters**



# INVALUABLE TOOL

The screenshot shows a web browser window with the URL [www.cteco.uconn.edu/projects/ms4/index.htm](http://www.cteco.uconn.edu/projects/ms4/index.htm) highlighted in a red circle. The website header includes the UConn logo and the text "UNIVERSITY OF CONNECTICUT" and "CONNECTICUT DEPARTMENT of ENERGY and ENVIRONMENTAL PROTECTION". The main content area features the "CT ECO" logo and the text "Connecticut Environmental Conditions Online" and "Maps and Geospatial Data for Everyone". A navigation bar includes links for "Maps", "Data", "Info", and "Featured". The "Connecticut MS4 Supporting Layers" section is highlighted with a yellow arrow. Below this, a paragraph explains the 2017 Municipal Separate Storm Sewer System (MS4) General Permit regulation. A link for "CT MS4 Viewer" is highlighted with a yellow arrow. A table titled "Layer Information" lists various data layers with columns for "Data Guide", "Metadata", "Download", and "Map Services (click on Built Environment)". A small map thumbnail is visible on the right side of the page. The footer includes a disclaimer about coordinate systems.

**UConn** UNIVERSITY OF CONNECTICUT

CONNECTICUT DEPARTMENT of ENERGY and ENVIRONMENTAL PROTECTION

**CT ECO** Connecticut Environmental Conditions Online  
Maps and Geospatial Data for Everyone

**Connecticut MS4 Supporting Layers**

MS4 Home Info/Help Viewer 2012 Impervious Surface MS4 on NEMO

The 2017 Municipal Separate Storm Sewer System (MS4) General Permit regulation includes several mapping requirements. New and existing statewide data layers are compiled here to assist municipalities and institutions in complying with the permit requirements.

**CT MS4 Viewer**

The CT MS4 Viewer includes data layers that are helpful in registering for and complying with the 2017 CT MS4 General Permit.

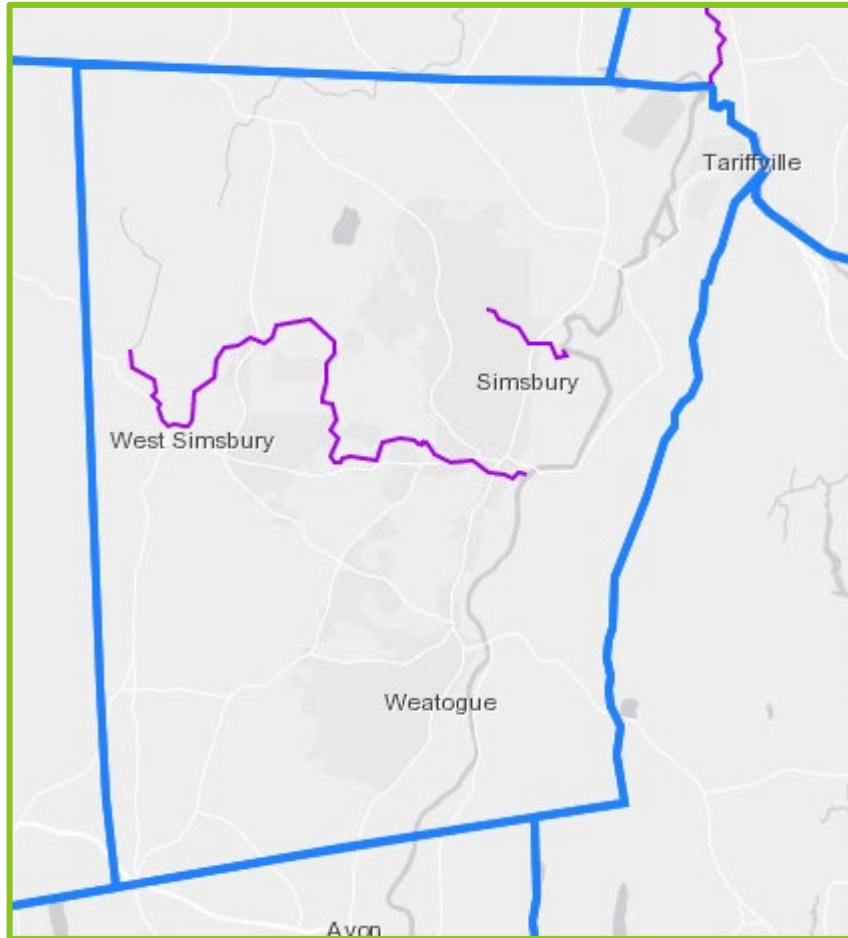
**Layer Information**

	Data Guide	Metadata	Download	Map Services (click on Built Environment)
<b>CT 2012 Impervious Surface</b> (more info)	-			Impervious: Impervious_2012* Impervious: Impervious_2012_StatePlane* Impervious: Impervious_2012_simplified_vector_StatePlane
<b>CT 2016 Stormwater Impaired Waters</b> (Rivers, Lakes, Estuaries)		-		MS4_layers: CT2016_Impaired_Rivers_V2 MS4_layers: CT2016_Impaired_Lakes_V2 MS4_layers: CT2016_Impaired_Estuary_V2
<b>CT DEEP Basins with 2012 Impervious Stats</b>	-			MS4_layers: Impervious Cover by Watershed Basin
<b>CT Towns with 2012 Impervious Stats</b>	-	-	-	MS4_layers: Impervious Cover by Town
<b>CT MS4 Urbanized Area</b>	-	-	-	MS4_layers: Urbanized Area
<b>CT MS4 Towns</b>	-	-	-	MS4_layers: MS4 Towns

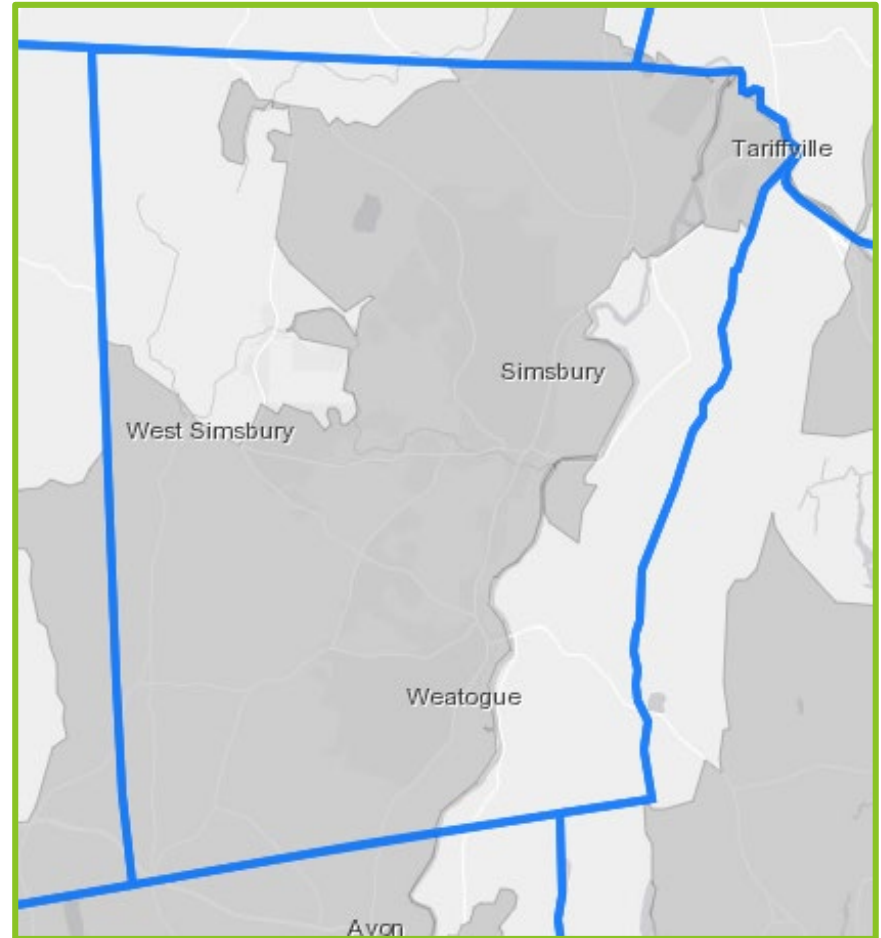
\*Impervious\_2012 is in the Web Mercator Auxiliary Sphere Coordinate system while the Impervious\_2012\_StatePlane service is in Connecticut State Plane NAD83 Feet. See the

[www.cteco.uconn.edu/projects/ms4/index.htm](http://www.cteco.uconn.edu/projects/ms4/index.htm)

# PRIORITY AREAS



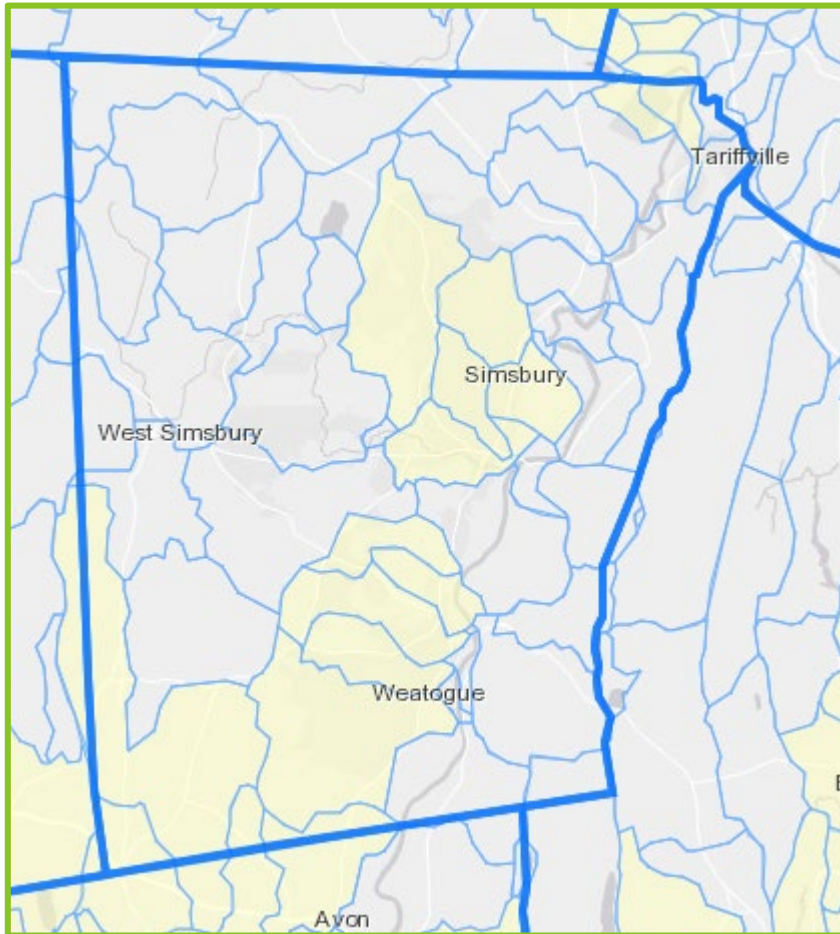
**Impaired Waters**



**Urbanized Areas**



# PRIORITY AREAS



**Watersheds DCIA > 11%**

- **Dry weather screening and wet weather sampling to take place in “Priority Areas”**
- **One or more of the following**
  - Urbanized Area
  - Impaired Waters
  - Watershed DCIA > 11%

# SIX MINIMUM CONTROL MEASURES

**1**

**Public Education and Outreach**

**4**

**Construction Site Stormwater Controls**

**2**

**Public Involvement and Participation**

**5**

**Post-Construction Site Stormwater Controls**

**3**

**Illicit Discharge Detection and Elimination**

**6**

**Municipal Operations**

# ONGOING TASKS



**1**

**Public Education and Outreach**

## 2004 Permittees

- **Implement Public Education Program**
  - Target pollutants of concern

## 2017 Permittees

- **Implement Public Education Program**
  - Target pollutants of concern

# ONGOING TASKS



**2**

**Public Involvement and Participation**

## 2004 Permittees

- **Comply with Public Notice Requirements for Annual Report**

## 2017 Permittees

- **Comply with Public Notice Requirements for Annual Report**



# ONGOING TASKS



**3**

**Illicit Discharge Detection and Elimination**

## 2004 Permittees

- **Track illicit discharges**
- **Maintain citizen reporting program**
- **System mapping**
- **Record IDDE abatement activities**
- **Maintain SSO Inventory**

## 2017 Permittees

- **Maintain citizen reporting program**
- **Record IDDE abatement activities**
- **Maintain SSO Inventory**

# ONGOING TASKS



**4**

**Construction Site Stormwater Controls**

## 2004 Permittees

- Continue following Interdepartmental Coordination Plan
- Conduct site inspections / plan reviews
- Citizen reporting mechanism
- Notify developers of CTDEEP Construction General Permit

## 2017 Permittees

- Continue following Interdepartmental Coordination Plan
- Conduct site inspections / plan reviews
- Citizen reporting mechanism
- Notify developers of CTDEEP Construction General Permit

# ONGOING TASKS



**5**

**Post-Construction Site  
Stormwater Controls**

## **2004 Permittees**

- **Enforce stormwater management requirements**

## **2017 Permittees**

- **Enforce stormwater management requirements**

# ONGOING TASKS



**6**

Municipal  
Operations

## 2004 Permittees

- Annual training
- Municipal property and operations best practices
- DCIA Tracking
- Street sweeping, priority areas
- **Catch basin inspection, cleaning, and schedule**
- Snow / Ice SOP

## 2017 Permittees

- Municipal property and operations best practices
- DCIA Tracking
- Street sweeping, priority areas
- Catch basin inspection and cleaning
- Snow / Ice SOP



# YEAR 1 TASKS



## 2004 Permittees

- **MCM 3**
  - Develop Written IDDE Plan
  - Establish IDDE Legal Authority
- **MCM 6**
  - Establish catch basin inspection and cleaning schedule
  - Develop plan for street sweeping in non-priority areas

## 2017 Permittees

- **MCM 6**
  - Establish catch basin inspection and cleaning schedule
  - Develop plan for street sweeping in non-priority areas

# YEAR 2 TASKS

## 3

### Illicit Discharge Detection and Elimination



## 2004 Permittees

- Map all outfalls and interconnection
- Complete outfall categorization and prioritization
- Follow up on identified illicit discharges



## 2017 Permittees

- Develop written IDDE program
- Establish IDDE legal authority

# YEAR 2 TASKS



## 4

## Construction Site Stormwater Controls

### 2004 Permittees

- Implement and upgrade land use regulations to meet MS4 requirements



### 2017 Permittees



# YEAR 2 TASKS

## 5

### Post-Construction Site Stormwater Controls



## 2004 Permittees

- Implement maintenance plan for stormwater ponds and treatment structures

## 2017 Permittees





# YEAR 2 TASKS

6

Municipal  
Operations



## 2004 Permittees



## 2017 Permittees

- **Develop employee stormwater management training program**



# QUESTIONS?

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