

NYSDEC MS4 General Permit Updates

Ethan Sullivan & Christina Chiappetta

Outline

- Background
 - EPA Remand Rule
 - SWMP Plan Items
- Interim Progress
- Exercise
- Next Steps



Background



MS4 General Permit

- Authorizes the discharge of stormwater from municipal separate storm sewer systems (MS4) located within designated urbanized area to surface waters of the State
- Automatic Designation
 - Designated area contains a population of at least 50,000 and has an overall population density of at least 1,000 people per square mile based on the latest U.S. Census
 - Construction Site Stormwater Runoff Control and Post Construction Stormwater Management Controls extension



2016 Draft MS4 Permit

- Permit Term 5 years
- Draft Public Comment Began October 30, 2016
- Comment Period Ended February 3, 2017
- Current MS4 Permit Expired April 30, 2017
- Permit SAPA Extended
 - What This Means:
 - Current Permit Requirements Remain in Effect
 - Current Permittees Covered
 - Cannot Cover New Permittees



2016 Draft MS4 Permit Considerations

- Recent EPA MS4 Permits
- EPA Guidance
- Program Experience
- Audit Reports
- Stakeholder Input
- Comments Received
 - 2015 renewal, MS4 Implementation Plans for TMDL waters
- EPA Proposed Remand Rule



EPA Remand Rule



EPA Remand Rule

- Final Rule Effective December 6, 2016
- Permitting Authority Choice
 - Traditional (Comprehensive) Approach
 - Two-Step Approach
- Permitting Authority Selects Option
 - NYSDEC Draft Permit uses the Traditional (Comprehensive) General Permit Approach



EPA Remand Rule Requirements

- General Permit Requirements
 - Reduce Discharge of Pollutants to Maximum Extent Practicable (MEP)
 - Protect Water Quality
 - Satisfy Water Quality Requirements of CWA
 - Clear, Specific, and Measurable Requirements



EPA Remand Rule Requirements:Permit Terms and Conditions

Clear, Specific, and Measurable

Narrative	Adaptive Management Requirements
Numeric	Schedules for Implementation and Maintenance
BMP Design Requirements	Frequency of Actions
Performance Requirements	Other (i.e. Implementation of Specific Tasks or BMPs)

Stormwater Management Program (SWMP) Plan Items

- Mapping
- MCM 1 Public Education and Outreach
- MCM 2 Public Involvement and Participation
- MCM 3 Illicit Discharge Detection and Elimination (IDDE)
- MCM 4 Construction Site Stormwater Runoff Control
- MCM 5 Post-Construction Stormwater Management
- MCM 6 Pollution Prevention and Good Housekeeping for Municipal Operations

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Interim Progress



2016 Draft to Present

- Comments Received
- Stakeholder Workgroup Series
- Edits
- Review
- Potential Changes



Mapping



Mapping IV.C. Updates

2016 Draft

C. Mapping

- The MS4 Operator must develop and maintain a map to facilitate a clear understanding of the MS4 and serve as a planning tool to allow for prioritization of efforts and facilitate management decisions. The map must show the entire small MS4 conveyance system within the regulated area and contain the following components:
 - Location of all outfalls with priority rating identified
 - Urbanized area boundaries
 - additionally designated area boundaries
 - Names and location of all surface waters of the state within the regulated area.
 - Classification
 - Impairment and POC, if applicable
 - TMDL watershed areas
 - Location of all interconnected MS4 outfalls with name and contact of MS4 Operator.
 - Location and type of conveyance closed pipe or open drainage
 - . Drop Inlet, catch basin and manhole locations
 - Number and size of connections to catch basins and manholes
 - Direction of flow.
 - Catch basins (Part VI.6.3 and Part VII.6.3)

Roads

- Land area draining to MS4 (i.e. sewersheds).
- Land Cover areas
- Topography (USGS Quadrangle Map or better)
- Areas of Concern
 - · Areas served by sanitary sewer
 - Areas served by septic system
 - Commercial/industrial areas
- Post Construction Stormwater Management Practices (see Part VI.E.3 and VII.E.2)
- Municipal facilities (see Part VI.F.5 and Part VII.F.4)
- Locations of suspected, confirmed and corrected illicit discharges

- Readily available mapping components:
 - Urbanized area boundaries
 - Additionally designated area boundaries
 - Names and location of all surface waters
 - Roads
 - Topography



Mapping IV.C. Updates (cont.)

2016 Draft

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2019 Draft

 Reorganized into three phases in the 2019 Draft



Mapping IV.C. – 2019 Draft Phased Approach

Phase I (3 years):

- Location of all outfalls, including interconnected MS4 outfalls
- Areas of concern
- Municipally-owned post construction stormwater management practices
- Municipal facilities

Phase II (5 years):

- MS4 infrastructure information, including:
 - Closed pipe and open drainage
 - Structures: drop inlets, catch basins, and manholes
 - Structure description
- Privately-owned post construction stormwater management practices which drain to the MS4

Phase III (8 years):

- Land area draining to the MS4 by overland flow (sewershed)
- Location of interconnections



Public Education and Outreach (MCM 1)



Areas of Concern VI.A.1.a. Updates

2016 Draft

A. MCM1 - Public Education and Outreach

The MS4 Operator shall *develop* and implement an education and outreach program to educate the general public on significant stormwater issues that are relevant to the MS4. The goal of the education and outreach program is to increase knowledge, change pollutant generating behaviors and improve program effectiveness so that pollutants are reduced.

1. Program Development

a. Identify Significant Areas of Concern

The MS4 Operator must identify the areas where pollutant generating activities are occurring to target education and outreach efforts; including the following:

- Areas contributing to impaired waterbodies (See Part VIII and Appendix D)
- TMDL watersheds (See Part IX)
- o Areas prone to erosion
- Areas contributing to waterbodies of significant value (drinking water supply, public bathing beaches, shellfishing, high recreation value)
- Densely populated residential areas
- Hot Spot Areas (remediation sites, clusters of industrial activity, salt storage, etc.)
- o Areas where a high number of construction activities are occurring
- Areas with a high number of illicit discharges

- "High" means something different to every MS4s
 - Areas where construction activities are occurring
 - Residential, commercial, and industrial areas
 - Areas with illicit discharges



Illicit Discharge Detection and Elimination (MCM 3)



IDDE VI.C.4.a./VII.C.4.a. Updates

2016 Draft

- 4. Illicit Discharge Detection Program
 - a. Identification of Priority Areas

The MS4 Operator must:

- Identify areas contributing to the MS4 with a high illicit discharge potential using the screening factors identified in Table 14 of the "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment, Center for Watershed Protection, October 2004" (IDDE Guidance Manual);
- ii. Prioritize outfalls with the following considerations:
 - a) High Priority Outfalls
 - Outfalls serving areas with a high illicit discharge potential;
 - Outfalls discharging to impaired waters;
 - Outfalls discharging to sensitive or high quality waters including but not limited to public beaches, recreational areas, drinking water supplies and shellfishing areas;
 - Major Outfalls (as defined in 40CFR 122.26(b)(5)); and,
 - Citizen complaints on more than three separate occasions in any 12 month period.
 - b) Low Priority Outfalls All other outfalls not described as High Priority

- No longer reference Table 14
- High Priority Outfalls
 - Discharging to impaired waters
 - Discharging to sensitive or high quality waters
 - Complaint driven



IDDE VI.C.4.b./VII.C.4.b. Updates

2016 Draft

b. Outfall Inspection Program

The MS4 Operator must:

- Provide annual training for all individual(s) responsible for outfall inspection and sampling on the MS4 Operator's outfall inspection procedures;
- ii. Inspect all outfalls in the regulated area during dry weather (at least 48⁴ hours after the last runoff-producing event) at the following frequencies:
 - a) Inspect High Priority Outfalls at least once per year
 - b) Inspect Low Priority Outfalls (20% per year)
- Document all outfall inspections using the ORI Field Sheets or use their own form provided it records the same information.

- MS4 Operators need to ensure staff are trained for outfall inspections
- Inspect high priority outfalls twice a permit term
 - Inspect all other outfalls 20% annually



IDDE VI.C.4.b./VII.C.4.b. Updates

2016 Draft

iv. Sample all flowing outfalls with any physical indicator of an illicit discharge (i.e. odor, color, turbidity or floatables) as follows:

Indicator Parameter	Action Level
Ammonia	≥50 mg/l
Chlorine	>0.1 mg/l
Conductivity	≥2000 µS/cm
Color	≥500 units
рН	≤5 or ≥9
Potassium	≥20
Turbidity	≥1000 NTU
Surfactants	≥25 mg/l

Table 3

- Sample flowing outfalls with physical indicators of an illicit discharge
- Table 3 may indicate industrial source
 - If results do not exceed these values, may indicate an nonindustrial discharge



IDDE VI.C.4.b./VII.C.4.b. Updates (cont.)

2016 Draft

- Initiate track down procedures for discharges that exceed any action level within the timeframes specified in Part VI.C.5.d.
- v. Re-inspect, within 30 days of initial inspection, non-flowing outfalls with physical indictors of intermittent or transitory discharges (i.e. outfall damage, outfall deposits or stains, abnormal vegetation growth, poor receiving water quality and biological growth on pipe surfaces) utilizing techniques described in Chapter 12.6 of the IDDE Guidance Manual or equivalent.

- Nomenclature correlates with CWP IDDE Manual ORI Form
 - Initiate track down procedures for outfalls characterized as "suspect"
 - Outfalls with "physical indicators not related to flow" are reinspected within 30 days



Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical In Are Any Physical Indica				kip to Section 5)				
INDICATOR	CHECK if Present		DESCRIPTION			REL	ATIVE SEVERITY INDEX	(1-3)
Odor		☐ Sewage ☐ Sulfide	☐ Rancid/sour ☐ Petroleum/ ☐ Other:	/gas	☐ 1 – Faint		2 – Easily detected	3 – Noticeable from a distance
Color		☐ Clear ☐ Green	☐ Brown ☐ Gray ☐ Orange ☐ Red	☐ Yellow ☐Other:	1 – Faint color sample botti		2 – Clearly visible in sample bottle	3 – Clearly visible in outfall flow
Turbidity			See severity		☐ 1 – Slight clou	idiness	2 - Cloudy	3 – Opaque
Floatables -Does Not Include Trash!!		_	Toilet Paper, etc.) Suds n (oil sheen) Other:		1 – Few/slight	; origin	2 - Some; indications of origin (e.g., possible suds or oil sheen)	3 - Some; origin clear (e.g., obvious oil sheen, suds, or floatin sanitary materials)
Section 5: Physical In Are physical indicator			and Non-Flowing Outfalls present? ☐ Yes ☐ No	(If No, Skip to Sec	tion 6)			
INDICATOR	CHECK if P	resent	D	ESCRIPTION			COMMENT	S
Outfall Damage			Spalling, Cracking or Chipp Corrosion	ping Peeling Pain	t			
Deposits/Stains			Oily Flow Line P	aint Other:				
Abnormal Vegetation			☐ Excessive ☐ Inhibited					
Poor pool quality			Odors Colors Suds Excessive Al	Floatables Oil Sheer	n			
Pipe benthic growth			☐ Brown ☐ Orange	Green Other:				
Section 6: Overall O	utfall Characteri	zation						
Unlikely	Potential (prese	ence of two	or more indicators)	Suspect (one or more in	ndicators with a	severity o	of 3) Dovious	

Post Construction Stormwater Management (MCM 5)



Post Construction Inventory VI.E.3./VII.E.3. Updates

2016 Draft

- Post Construction SMP Inventory & Tracking
 The MS4 Operator must develop and maintain an inventory of post-construction SMPs that include the following information:
 - o Location of practice (street address or coordinates)
 - Type of practice
 - Receiving waterbody
 - Date practice was installed
 - Ownership
 - Responsible party for maintenance, if different from owner.
 - Location of documentation depicting O&M requirements and legal agreements for practice.
 - Frequency for inspection of practice (specified by the Operations & Maintenance plan (O&M plan) in approved SWPPP as described in Part VI.E.4.

- Revised information
 - Type of stormwater management practice
 - Date of installation, if available
- Additional information
 - Reason for the stormwater management practice
 - Location of discharge



Post Construction Inspection VI.E.3./VII.E.3. Updates

2016 Draft

Inspection and maintenance history that tracks the following:

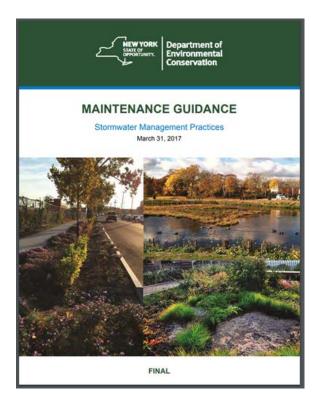
- Date of last inspection
- Inspection results
- Actions taken in accordance with Enforcement Response Plan (ERP) for private SMPs.
- · Dates for corrective actions to be completed
- Status of corrective action
- Projected date of next inspection

The inventory must be kept up to date as new post construction SMPs are approved or discovered.

- Changed what information is tracked based on responsible party
 - MS4 Operator owned
 - Date of inspection
 - Inspection results
 - Corrective actions (and dates)
 - Date of next inspection
 - Privately owned
 - Corrective actions (and dates)



Stormwater Maintenance Chapter – Final





Bioret	ention Stormwa Level 1 Ins			Practice	s
	Level 1 ins	pection C	necklist		
SMP ID #		SMP Owner			Private Public
SMP Location Address; Latitude Longitude)					
1.000	tude		Longitude		
Party Responsible for Maintenance	System Type		Type of Site		
Same as SMP Owner Other	Owner Seasonal Continuous Use		Above Ground Below Ground	Commercial Industrial Residential State	
nspection Date	12	Inspi	ection Time		
nspector					
Date of Last Inspection					
	BR BR	Drainage Area			
is for areas that are uphil for blem (Check if Present)	on the Bioretention cell.	Folio	w-Up Actions		
	☐ Sare so of the gr (title was the dirt)	il, erosion cound shing out	Seed and mulch a vegetation. Fill in erosion area straw to establish of a nill or small cha	s with soil, com regetation. Innel is forming by creating a	pact, and seed and , try to redirect water small berm or adding

Pollution Prevention and Good Housekeeping (MCM 6)



Facility Prioritization VI.F.3.b,f./VII.F.3.b. Updates

2016 Draft

b. High Priority Facilities

The following types of facilities have been identified by the *Department* as high priority facilities based on the typical pollutant sources and activities present and their potential for water quality impacts. Facility specific Stormwater Pollution Prevention Plans (SWPPPs) must be *developed* for these facilities as outlined in Part VII F 4 c:

- Fleet maintenance facilities including bus, taxi, police, fire and other vehicle maintenance.
- o Public works facilities/ DPW garages
- Salt storage facilities
- o Equipment storage yards where equipment maintenance is performed

f. Low Priority Facilities

The following municipally owned facilities have been identified by the Department as low priority facilities based on the typical pollutant sources and activities present and their low risk for water quality impacts.

- Cemeteries
- Vehicle and/or equipment storage facilities where no vehicle and/or equipment maintenance is performed
- Incinerators
- Materials storage yards
- o Pesticide storage facilities
- Prisons or correctional facilities

- Parks
- Parking lots
- Golf courses
- Swimming pools

- Prioritization of facilities
 - Based on activities at the site rather than facility type



Catch basin VI.F.4.a.i./VII.F.4.a.i. Updates 2016 Draft 2019 Draft

- 4. Municipal Infrastructure Operations & Maintenance
 The MS4 Operator must ensure that MS4 infrastructure (i.e. storm sewer
 system components, roadways, bridges and associated rights of way) is
 maintained in a timely manner to reduce the discharge of pollutants from the
 - a. Municipal Storm Sewer System (MS4) Operations & Maintenance

. Catch Basin Inspection & Maintenance Program

The MS4 Operator shall document and implement a plan to optimize catch basin inspection and cleaning so that catch basins are cleaned before exceeding 50% of *sump capacity*.

The MS4 Operator shall deve | pp a prioritized catch basin inventory based on the volume of trash/debris generated in the surrounding land use or captured in the catch basin.

- Catch basins serving areas with a high potential to generate trash/debris shall be considered high priority;
 - Commercial areas;
 - Industrial areas;

MS4

- Areas with concentrated construction activities;
- · History of complaints or flooding;
- Other areas known to generate significant amounts of trash/debris based on institutional knowledge of staff
- As part of the development of a comprehensive map, catch basins shall be inspected to determine the level of trash debris captured:
 - Catch basins found to be >50% sump capacity shall be cleaned and assigned a high priority
 - Catch basins found to be <50% sump capacity shall be assigned a moderate priority;
 - · Catch basins with no debris shall be assigned a low priority.

- Document and implement a plan so catch basins are
 - Cleaned when necessary
 - Information is documented
 - Date of inspection
 - Level of trash debris captured
 - Date of clean-out
 - Sump depth
 - Catch basin type



Catch basin VI.F.4.a.i./VII.F.4.a.i. Updates (cont.)

2016 Draft

Inspect catch basins at the following frequency:

- o High priority catch basins once (1) per year
- o Moderate priority catch basins once every two (2) years year
- Low priority catch basins once every five (5) years

Catch basin inspections and cleaning must be documented in a log that records:

- date of inspection
- level of trash debris captured (no debris, <50% sump capacity, >50% sump capacity)
- date of clean out
- Log must be available for inspection by EPA or DEC.

Annually report the number of catch basins inspected, number cleaned and total mass or volume of debris removed with the annual report.

After 2 inspection/clean out cycles have been completed, evaluate inspection findings for trends or patterns to optimize the catch basin inspection and maintenance program and make adjustments to the overall stormwater program. For example:

Adjust inspection frequency

- No longer a frequency
- Development of a priority assessment for catch basin maintenance
 - Re-inspection
 - Analyze inspection findings for trends to optimize program



Street Sweeping VI.F.4.b/VII.F.4.b Updates

2016 Draft

- b. Roads, Bridges & Right of Ways
 - i. Sweeping
 - The MS4 Operator must *develop* and implement procedures for sweeping and/or cleaning municipal streets, parking lots or other paved areas at municipal facilities:
 - All streets and parking lots (except rural uncurbed roads with no catch basins or high speed limited access highways) shall be swept and/or cleaned a minimum of once per year in the spring (following winter activities such as sanding).
 - Streets in business districts, commercially zoned areas and any other area where catch basin inspections identify high volumes of trash and debris shall be swept monthly.
 - The MS4 Operator shall report in each annual report the number of lane miles cleaned or the volume or mass of material removed.

- Frequency updated
 - Sweeping twice per year, April 1 through October 31



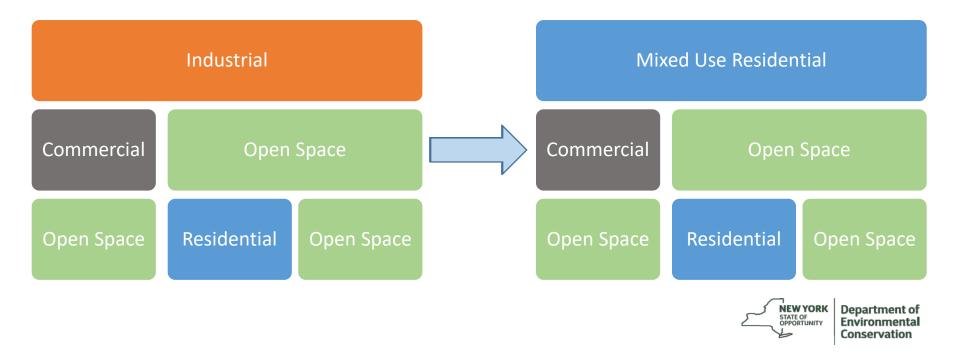
Questions so far



Stormwater Scenarios Exercise



#1: Rezoning



#2: Citizen complaint about sediment washing down the road





#3: Find a suspected illicit discharge at one of your outfalls





#4: New development



#5: Overgrown bioretention



NEW YORK
STATE OF
OPPORTUNITY
Department of
Environmental
Conservation

#6: Flooding in a roadway with municipal infrastructure



Department of Environmental Conservation

With stormwater in mind, think about...

- Why is this happening?
- What is your first step to address the scenario?
- How does this impact your overall stormwater program?



Stormwater Management Program (SWMP) Plan Items

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 NEW YORK Department Environment

STATE OF

Environmental Conservation

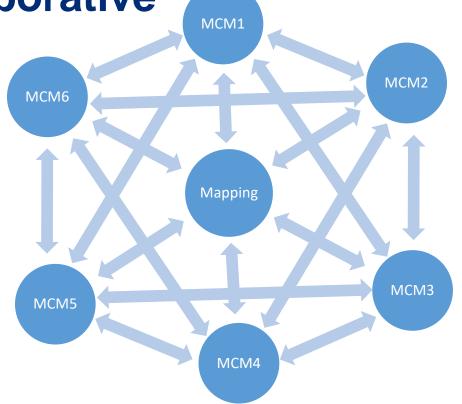
How the permit has been viewed historically: The "To-Do" List

MCM 4

MCM 1

■ Determine areas of concern in my MS4 ☐ Train appropriate staff in SWPPP Review ☐ Figure out target audiences in my MS4 ☐ Create a construction site inspection form MCM 2 MCM 5 ☐ Update SWMPP on website ☐ Inventory post-construction stormwater management practices ☐ Create a flyer for stream clean-up ☐ Assemble all O&M for SMPs **...** MCM 3 MCM 6 ☐ Conduct 20% of outfall inspections this year ■ Inventory and prioritize facilities ☐ Create tracking document for illicit discharges ☐ Create site maps for high priority facilities □ **...** Department of

How the permit actually works: The "Collaborative"





Next Steps



Contact Information

Ethan Sullivan

MS4 Coordinator
Stormwater Permits Section
518-402-8244
ethan.sullivan@dec.ny.gov

Christina Chiappetta

Environmental Program Specialist 1
Stormwater Permits Section
518-402-1224
christina.chiappetta@dec.ny.gov

Robert Wither, P.E.

Section Chief
Stormwater Permits Section 518402-8123

robert.wither@dec.ny.gov

