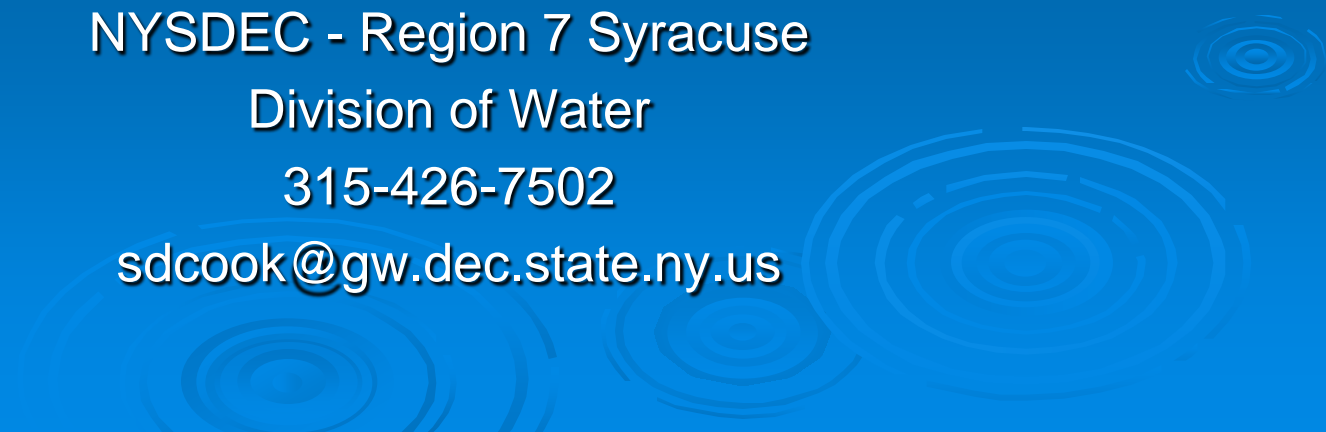


Stormwater Management - Basic Overview for Municipal Employees

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It all starts with Stormwater Runoff

Stormwater flows from rooftops, over paved areas, bare soil and lawns – it picks up litter, sediment, pesticides, fertilizers, chemicals from automobiles, bacteria from animal waste and other pollutants.



Stormwater Impacts from Erosion and Sedimentation

Property Damage

Damage to Roads, Bridges

and Infrastructure

Beach & Shellfishing

Closures



Loss of Aquatic Habitat

Drinking Water Contamination

Streambank Erosion

Benefits of Stormwater Management

- Protect drinking water supplies & recreational waterways
- Reduce impacts to aquatic resources
- Enhance property values
- Improve quality of life
- Infrastructure protection
- Savings from loss prevention



Regulatory History: EPA Stormwater Program

- Mandated by the US Environmental Protection Agency (EPA)
 - Required by the 1987 Amendments to Clean Water Act
- Implemented in NYS by DEC and regulated municipalities
- NYS DEC issued “General Permits” to regulate stormwater discharges from construction sites and municipalities

NY State Pollutant Discharge Elimination System (SPDES) General Stormwater Permits

GP-0-10-001

SPDES General Permit for Stormwater Discharges from Construction Activity

Regulates Construction Activities that disturb 1 acre or more of land

GP-0-10-002

SPDES General Permit for Stormwater Discharges from Municipal Separate Stem Systems (MS4s)

Regulates MS4s located in “urbanized areas”

Construction Permit Exemptions

- Road ditch cleaning and shaping to improve water quantity
- Stone road shoulder replacement
- Resurfacing of roadways and gravel road maintenance
- Road paving and routine maintenance without disturbing stone sub-base (bottom 6" of sub-base must remain undisturbed)
- Sediment removal to restore sheet flow drainage at the edge of highway
- Agricultural Field Activities
- Some Silvicultural Activities



Municipal Separate Storm Sewer System (“MS4”) Stormwater Permit GP-0-10-002

A conveyance or system of conveyances owned by a State, City, Town, Village, or other public entity that discharges to the Waters of the United States and is:

- designed or used to collect or convey stormwater (includes gutters, pipes, ditches)
- not a combined sewer
- not part of a Publicly Owned Treatment Works (i.e. sewage treatment plant)



NYS Regulated MS4s –

- Minimum population of 50,000 and
- Minimum average population density of 1000 persons per square mile (based on the 2000 Census data)

MS4 Program Requirements

MS4 operators must implement a Stormwater Management **Program** (SWMP) that:

- Contains the six Minimum Control Measures (MCM)
- Lists the approved Best Management Practices (BMPs)
- Sets measurable goals for each minimum control measure
- Provides for annual reporting (Annual Report and Municipal Compliance Certification due June 1)
- Covers the area draining to MS4 or “Waters of the United States” (*surface waters*)
- is developed, implemented and enforced to reduce stormwater pollutants to Maximum Extent Practicable (MEP)

Regulated MS4 Stormwater Management Program

6 Minimum Control Measures

1. Public education and outreach
2. Public participation & involvement
3. Illicit discharge detection and elimination
4. Construction site runoff control
5. Post-construction site runoff control
6. *Pollution prevention & good housekeeping of municipal operations*



Measurable Goals

- Each *Minimum Control Measure* must be accompanied by at least one goal that is quantifiable in some way, for example:

- Tons of soil removed from street sweeping
- Reduce number of beach closures
- Miles of stream buffer protected
- Illicit discharges removed
- Training sessions for employees
- Adopt laws, ordinances and regulations
- Review of construction permits and site plans
- Reduce impervious surfaces in new development



Measurable Goals document annual progress toward full implementation of the SWMP

Management Practices under each MCM

- Each MCM has a minimum list of MPs *required* by GP-02-02 and 40 CFR 122.34 (b)
- Required practices for each MCM are indicated by **bold-face type** on the NOI
- Additional practices *may be needed* to meet the MEP requirements for the MS4's SWMP

Note: Each MS4 (municipality) submitted an NOI to the DEC with the specific items identified

Notice of Intent for Coverage Under an SPDES General Permit for Storm Water Discharges From MS4s

Section C. Initial Identification of Management Practices

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Program Requirements

- Prevent discharge of pollutants from municipal operations (required)**
- ☐ **Follow DEC NPS Management Practices Catalog, or equivalent (required)**
- ☐ **Conduct employee pollution prevention training (required)**

Management Practices

- ☐ Street cleaning
- ☐ Catch basin and storm drain system cleaning
- ☐ Alternative discharge options for chlorinated water
- ☐ Vehicle maintenance and washing
- ☐ Hazardous and waste materials management
- ☐ Landscaping and lawn care
- ☐ Integrated Pest Management (IPM)
- ☐ Marina Management
- ☐ Road salt storage
- ☐ Roadway and bridge maintenance
- ☐ Municipally-owned septic system management
- ☐ Spill response and prevention
- ☐ Others:

.....

MS4 Permit GP-0-10-002 Requirements

6. Pollution Prevention/Good Housekeeping For Municipal Operations - SWMP Development / Implementation

At a minimum, all *permittees* must:

a. *Develop and implement a pollution prevention / good housekeeping program for municipal operations and facilities that:*

i. *addresses municipal operations and facilities that contribute or potentially contribute POCs to the small MS4 system.* The operations and facilities may include, but are not limited to: *street and bridge maintenance; winter road maintenance; stormwater system maintenance; vehicle and fleet maintenance; park and open space maintenance; municipal building maintenance; solid waste management; new construction and land disturbances; right-of-way maintenance; marine operations; hydrologic habitat modification; or other;*

ii. at a minimum frequency of *once every three years, perform a self assessment* of all municipal operations addressed by the SWMP to:

- determine the sources of pollutants potentially generated by the *permittee's* operations and facilities; and
- identify the *municipal* operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already;

iii. *determines management practices, policies, procedures, etc. that will be developed and implemented to reduce or prevent the discharge of (potential) pollutants.* Refer to management practices identified in the “NYS Pollution Prevention and Good Housekeeping Assistance Document” and other guidance materials available from the EPA, *State*, or other organizations;

6. Pollution Prevention/Good Housekeeping For Municipal Operations - SWMP Development / Implementation

Continued:

- iv. prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and *permittee's* capabilities;
- v. addresses pollution prevention and good housekeeping priorities;
- vi. includes an employee pollution prevention and good housekeeping training program and ensures that staff receive and utilize training;
- vii. requires third party entities performing contracted services, including but not limited to street sweeping, snow removal, lawn / grounds care, etc., to meet permit requirements as the requirements apply to the activity performed ; and
- viii. requires *municipal* operations and facilities that would otherwise be subject to the NYS Multisector General Permit (MSGP, GP-0-06-002) for industrial stormwater discharges to prepare and *implement* provisions in the SWMP that comply with Parts III. A, C, D, J, K and L of the MSGP. The permittee must also perform monitoring and record keeping in accordance with Part IV. of the MSGP. Discharge monitoring reports must be attached to MS4 annual report. Those operations or facilities are not required to gain coverage under the MSGP. *implementation* of the above noted provisions of the SWMP will ensure that MEP is met for discharges from those facilities;

6. Pollution Prevention/Good Housekeeping For Municipal Operations - SWMP Development / Implementation

Continued:

- b. Consider and incorporate cost effective runoff reduction techniques and green infrastructure in the routine upgrade of the existing stormwater conveyance systems and municipal properties to the MEP. Some examples include replacement of closed drainage with grass swales, replacement of existing islands in parking lots with rain gardens, or curb cuts to route the flow through below grade infiltration areas or other low cost improvements that provide runoff treatment or reduction.
- c. *Develop*, record, periodically assess and modify as needed measurable goals; and
- d. Select appropriate pollution prevention and good housekeeping *BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.
- e. Adopt techniques to **reduce the use of fertilizers, pesticides, and herbicides**, as well as potential impacts to surface water.



Required SWMP Reporting

f. Program **implementation reporting** for continuing covered entities (**MS4s covered** for 3 or more years on the *reporting date*). Covered entities are required to report on all *municipal operations and facilities within their jurisdiction (urbanized area and additionally designated area) that their program is addressing*. The covered entity **shall report at a minimum on the items below**:

i. indicate the *municipal* operations and facilities that the pollution prevention and good housekeeping program assessed;

ii. describe, if not done so already, the management practices, policies and procedures that have been developed, modified, and / or implemented and report, at a minimum, on the items below that the *permittee's* pollution prevention and good housekeeping program addressed during the reporting year:

- acres of parking lot swept;
- miles of street swept;
- number of catch basins inspected and, where necessary, cleaned;
- post-construction control stormwater management practices inspected and, where necessary, cleaned;
- pounds of phosphorus applied in chemical fertilizer
- pounds of nitrogen applied in chemical fertilizer; and
- pounds of pesticides / herbicides applied as pure product.

iii. **staff training events and number of staff trained**; and

iv. report on effectiveness of program, *BMP* and *measurable goal* assessment. If the pollution prevention and good housekeeping program addresses other operations than what is listed above in Part VII.A.6.a(ii), the *permittee* shall report on items that will demonstrate program effectiveness.

What does MCM #6: Pollution Prevention/Good Housekeeping really mean?

- Develop and implement a program to reduce/eliminate pollutant runoff from municipal operations including:
 - Stormwater system maintenance and retrofits
 - Waste transfer facilities
 - Park and open space management
 - Building and fleet maintenance
 - Road construction and maintenance
 - Restoration/protection of stream buffers and wetlands

- Municipal program must consider :
 - Maintenance activities and schedules
 - Procedures for proper disposal of storm drain waste materials
 - Inspection procedures for controls to reduce floatables and other pollutants
 - Training for employees

Additional Areas of Concern ?

- Salt and Sand Storage
- Floor Drains
- Vehicle Washing
- Vehicle Maintenance
- Other DEC Permits
(Art. 15 & 24, PBS)
- Construction
activities that may be
greater than 1 acre



Even if a project doesn't need any permits, it can still cause a water quality violation!

All operators or staff should:

- Take all reasonable steps to prevent unpermitted discharges
- Practice erosion and sediment control and “good housekeeping”



Turbidity Violation:
A “substantial visible contrast to natural conditions”
Subject to Penalties up to \$37,500 per violation per day

MS4 Inspections

- USEPA Region 2 conducts MS4 Inspections in NYS
- NYSDEC Region 7 conducts 6 -10 individual MS4 Audit/Inspections per year
 - Includes Inspection of Municipal facilities to ensure program compliance

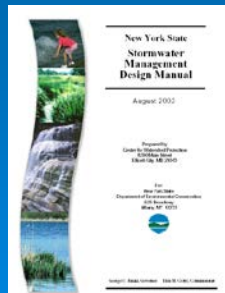
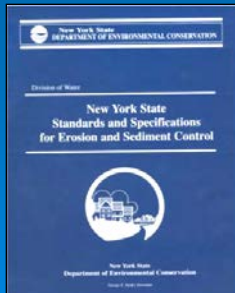
DEC Guidance

Municipal Pollution Prevention And Good Housekeeping Program Assistance May 2006

ftp://ftp.dec.state.ny.us/dow/stormdocuments/ms4/pollution_prevention_and_good_housekeeping/

Additional Guidance

NYS Stormwater Management Design Standards & Specs for E&SC and NYS Stormwater Management Design Manual



Both documents available on DEC website
<http://www.dec.ny.gov/chemical/8694.html>

Municipal Pollution Prevention And Good Housekeeping Program Assistance

May 2006



Denise M. Sheehan, Commissioner
NYS Department of Environmental
Conservation

George Pataki, Governor
State of New York

Technical Assistance

DEC and SWCD staff provide technical assistance on the Construction and MS4 Permits and the development and proper implementation of Stormwater Pollution Prevention Plans

- **DEC Division of Water Stormwater Web Page**
<http://www.dec.ny.gov/chemical/8468.html>
- **County Soil and Water Conservation Districts**
<http://www.nyacd.org/districts.html>
- **EPA Stormwater Homepage**
http://cfpub.epa.gov/npdes/home.cfm?program_id=6

Questions?



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