Phase II Stormwater and The MS4 Program
Why Do We Care?
How much of Earth's water is usable by humans?

Water usable by humans

- Ground water
- Fresh-water lakes
- Rivers

All water on Earth

- 0.3% is usable by humans
- 99.7% is unusable by humans
The Clean Water Act

1. Established the basic structure for regulating pollutant discharges in the United States.

2. Gave EPA authority to implement pollution control programs

3. Set Water Quality Standards for all contaminants in surface water

4. Made it unlawful for any person to discharge pollutants from a point source into navigable waters without a permit

5. Began to address critical problems created by non-point source pollution
Clean Water Act

- The 1948 Clean Water Act (CWA) established the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

- The 1972 CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained.

- The 1987 amendments to the CWA required a phased approach to address water quality degradation caused by stormwater.
SPDES Phase II Program

- SPDES General Permit for Construction Activity – GP-0-10-001
- SPDES General Permit for Municipal Separate Storm Sewer Systems (MS4) – GP-0-10-002
- SPDES Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity – GP-0-06-002
The MS4 Program
What is an MS4?

Municipal
Separate
Storm
Sewer
System
Definition of Regulated Small MS4s

“Small” MS4s defined as:
- Any MS4 that is not already designated and regulated as large or medium under Phase I. (i.e. those less than 100,000 in population)

Regulated Small MS4 are:
- located in an “Urbanized Area” population of 50,000 and overall density of 1,000 per square mile, and/or
- “designated” by DEC due to water quality concerns
- Some Urbanized Areas in Region 4 are:
  - City of Albany, City of Schenectady, City of Rensselaer, City of Troy, Town of Colonie, Town of North Greenbush, Village of Cohoes, Village of Castleton, etc....
3 Categories of MS4’s

- **Traditional Land-Use Control**
  - City, Town or Village with land use control authority

- **Traditional Non-Land Use Control**
  - Any County agency without land use control

- **Non-Traditional**
  - DOT, Thruway, County Highway Departments,
  - Other State Agencies, Authorities
  - Airports, State and Community Colleges, School Districts
  - Post offices, VA hospitals, military bases, prisons
  - Water, sewer, and other special districts
I Qualify As An MS4 – Now What?
MS4 Program Requirements

MS4 operators must implement a stormwater management program (SWMP) that:

- Contains the **six minimum control measures**
- Utilizes approved **Best Management Practices (BMPs)**
- Implement program to **Maximum Extent Practicable**
Six Minimum Control Measures

1. Public education and outreach
2. Public participation & involvement
3. Illicit discharge detection and elimination
4. Construction site runoff
5. Post-construction site runoff
6. Pollution prevention & Good housekeeping
MCM 1: Public Education and Outreach

- Identify:
  - Pollutants of Concern (POC);
  - Waterbodies of Concern;
  - Geographic areas of concern and
  - Target Audiences
What are Pollutants of Concern?

- Phosphorus and Nutrients
- Oily Sheen
- Sediment
- Metals
- Floatables - Litter
Water Bodies of Concern AND Geographic Areas of Concern
Who Is Your Target Audience?
MCM 2: Public Participation and Involvement

- Comply with State Open Meetings Law and local public notice requirements
MCM 2

- Identify a Local Stormwater Public Contact
MCM 2

- Develop and implement a public involvement/participation program
MCM 2

- Select and Implement public involvement/participation activities and measurable goals to reduce POC’s.
By June 1st of each year a DRAFT Annual Report must be presented to the public for comments.

Stanislaus County

ANNUAL REPORT
2008/2009

FOR

GENERAL PERMIT FOR THE DISCHARGER OF STORM WATER FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM

FOR

STANISLAUS COUNTY
WDID: 5S0NP00017

Summary

5% of the City’s system consists of Corrugated Metal Pipe (CMP). The average service life of CMP is about 35 years. The City’s system has over 235 miles of metal pipes (66%) older than 35 years. Fifty percent of these components identified for replacement via citizen reports are in need of immediate repair due to dilapidated (rating 1) or poor condition. In order to complete at current funding levels, it would take about 6 years to replace all of the backlog estimated at $25,000,000 and would take about 6 years to replace 25% of the backlog estimated at $100,000,000 while current funding for replacement is $10,000,000. The City is setting new rates at $5.75 per month to prevent the build-up of deferred maintenance.
MCM 3: Illicit Discharge Detection and Elimination

- Develop, implement and enforce a program to detect and eliminate illicit discharges

- An Illicit Discharge is defined as a discharge not entirely composed of stormwater into the MS4 system such as sanitary sewage**, garage drain effluent, waste motor oil, or any other non-permitted discharge which the MS4 or the Department has determined to be a substantial contributor of pollutants to the MS4
MCM 3

- Develop and maintain a map with the location of all outfalls and names and locations of all surface waters of the state that receive discharges from those outfalls.

- Map the preliminary boundaries of the MS4’s storm sewershed utilizing GIS or other tools.
MCM 3

- Field verify outfall locations
- Conduct an outfall reconnaissance inventory, addressing every outfall at least once every five years.
- Map new outfalls as they are constructed or discovered
MCM 3

- Prohibit, though a law, ordinance or other regulatory mechanism, illicit discharges into the MS4 and implement appropriate procedures and actions.
MCM 4: Construction Site Runoff Controls

- Develop, implement and enforce a program that:
  - Provides equivalent protection to the NYS SPDES Permit for Stormwater Discharges from Construction Activities (GP-0-10-001)
  - Addresses stormwater runoff from construction activities that result in a land disturbance of greater than or equal to 1 acre
Larger Common Plan of Development or Sale

- Means...a contiguous area where multiple separate and distinct construction activities are occurring, will occur, under one plan.

- The term “plan” is broadly defined as any announcement or piece of documentation – including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, computer design, zoning request, SEQRA application, etc.
Enactment and implementation of a law, ordinance or other regulatory mechanism to require a SWPPP for each applicable land disturbing activity that includes erosion and sediment control that meet the State’s most current technical standards.
The program must contain requirements for construction site operators to implement erosion and sediment control practices. Allow for sanctions to ensure compliance to the extent allowable by State law.
MCM 4

- Describes procedures for SWPPP review with consideration of potential water quality impacts AND review of SWPPPs to ensure consistency with State and local sediment and erosion control requirements.

- Describes procedures for site inspections and enforcement of erosion and sediment control measures.
MCM 5: Post-Construction Site Runoff Controls

- Develop, implement and enforce a program that:
  - Provides equivalent protection to GP-0-10-001
  - Addresses stormwater runoff from new development and redevelopment projects that result in a land disturbance of greater than or equal to 1 acre, or less if part of a Larger Common Plan of Development or Sale
MCM 5

- Includes a local law, ordinance or other regulatory mechanism requiring post-construction runoff controls from new development and re-development projects to the extent allowable under State law that meet the State’s most current technical standards
MCM 5

- Includes a combination of structural or non-structural management practices – according to the most current version of the NYS Stormwater Management Design Manual, that will reduce the discharge of pollutants to the Maximum Extent Practicable
MCM 5
During development of watershed plans, municipal comprehensive plans, open space preservation programs, local laws, ordinances and land use regulations, MS4’s must consider the principles of Low Impact Development, Better Site Design and other Green Infrastructure to the Maximum Extent Practicable.
MCM 5

- Review SWPPPs and perform Inspections the same as for MCM 4

- Maintain a written inventory of post-construction stormwater management practices (at a minimum, those practices installed since March 2003)
MCM 6: Pollution Prevention and Good Housekeeping

Develop and implement a pollution prevention/good housekeeping program for municipal operations and facilities
The program must address municipal operations and facilities that contribute or potentially contribute pollutants of concern to the MS4 system. These operations may include:

- Street and bridge maintenance
- Vehicle and fleet maintenance
- Municipal facilities – Police and Fire Departments, Public buildings such as DPW, Highway, Municipal offices or libraries, Parking lots, Athletic fields or Parks, POTW, etc.
MCM 6

- At a MINIMUM – every 3 years perform and document a self-assessment of all municipal operations
MCM 6

- Employee pollution prevention and good housekeeping training program

- Select and implement appropriate pollution prevention and good housekeeping BMPs
Development and Implementation of your Stormwater Management Program Plan
Stormwater Management Program Plan

- The SWMPP documents the planned and implemented components of your Stormwater Management Program.
- It contains the six minimum control measures and the goals and achievements under each MCM.
- It describes how pollutants in stormwater runoff will be controlled.
Documents to include:

- Your local laws for Construction and IDDE
- Inter-municipal agreements (if applicable)
- Staffing and their responsibilities under the SWMPP
- Program Budget
- Policies and Procedures
- Materials for each MCM
- Operation and Maintenance Schedules
- Documentation of Public Outreach Efforts
- Construction Site SWPPPs and Review letters/documentation
- Construction Site Inspection Reports
Audits

- Who will audit you?
- What is the audit looking for?
- Failure to adequately implement your program can subject you to sanctions from DEC or EPA and fines of up to $37,500 per violation per day.
Training Opportunities

-Oneida County On-Line Stormwater Training Videos-

Training Video - Stormwater System, Outfall, and Sewershed Mapping for MS4's

Training Video - Municipal Review of Stormwater Pollution Prevention Plans

Training Video - Part I: Basic Stormwater Planning and Permit Concepts

Training Video - Part II: Better Site Design and Green Infrastructure Approaches to Stormwater Management

Training Video - Part III: Project Review Using the New Runoff Reduction Stormwater Design Process
Training Opportunities

2011-2012 Stormwater Management Training Series (multiple courses/dates)

- Sponsors: Cornell University Cooperative Extension, Orange County
  Location: Cornell University Cooperative Extension, Orange County, 18 Seaward Avenue, Suite 300, Middletown, NY 10940
  Contact: Rose Baglia at rsb22@cornell.edu or Tiffany Glavan tg257@cornell.edu, 845-344-1234, http://cce.cornell.edu/orange

- Sponsors: Stormwater Coalition of Monroe County and Monroe County SWCD
  Location: Henrietta Fire Training Center, 60 Erie Station Road, Henrietta, NY 14586
  Contact: Kelly Emerick, 585-473-2120, Ext 3; kelly.emerick@ny.nacdnet.net, www.monroecountyswcd.org

- Sponsors: Saratoga County Cornell Cooperative Extension
  Location: Saratoga County Cornell Cooperative Extension, 50 West High Street, Ballston Spa, NY 12020
  Contact: Blue Neils, 518-885-8995 Ext. 224, www.saratogastormwater.org

- Sponsors: Central New York Regional Planning & Development Board
  Location: CNY RPDB, 126 N. Salina Street, Syracuse NY, 13202
  Contact: Kathleen Bertuch at Bertuch@cnyrpdb.org or 315-422-8276 Ext. 208 www.cnyrpdb.org/stormwater
Training Opportunities

- Check out DEC’s Training Calendar for more training opportunities:

- [http://www.dec.ny.gov/chemical/8699.html](http://www.dec.ny.gov/chemical/8699.html)
Helpful Links

- DEC:  
  http://www.dec.ny.gov/chemical/8468.html

- EPA: Stormwater Outreach Toolbox:
  http://cfpub.epa.gov/npstbx/index.html

- Center for Watershed Protection:
  http://www.cwp.org/
COUNTERTHINK

SO HOW BAD IS THE HEAVY METALS CONTAMINATION IN THESE WATERS?

LET'S JUST SAY WE'VE STARTED FISHING WITH MAGNETS.

I OVER FERTILIZE MY LAWN AND I ENJOY HOSING DOWN MY DRIVEWAY.

THIS GUY'S DANGEROUS!
NYSDEC Regional MS4 Stormwater Contacts
Region 4 - Schenectady

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