

# MS4 Stormwater Compliance for Municipal Planning Boards

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# Presentation Outline

- Brief Introduction to Stormwater
- Background and History of Phase II Stormwater Regulations
- Regulated MS<sub>4</sub>s and the SPDES Permits
- What is a SWPPP?
- What is an Illicit Discharge?
- Roles of Municipal Officials and Departments

# What is Stormwater?

- *Stormwater* is water from rain or melting snow that does not soak into the ground. It runs off the surface of the “land” into storm sewers and ditches.
- “Land” includes:
  - **Pervious** surfaces (grassed or landscaped areas, woodlands) – some water soaks into soil, some runs off
  - **Impervious** surfaces (roads, parking lots, concrete, rooftops) – almost all water runs off, almost none soaks in

# Why is Stormwater a Problem?

- Rain and snowmelt wash pollutants such as pesticide, motor oil, bacteria, fertilizer, soil and litter into storm sewers and ditches.
  - Ultimately, storm sewers and ditches empty to a lake, river or stream.



Photo courtesy of WNY Stormwater Coalition.



# What is a Stormwater Outfall?



- A *stormwater outfall* is the point where a storm sewer or drainage system discharges to a waterway.

- Often the end of a pipe, but can also be the end of an open ditch or channel.



# Why is Stormwater a Problem?

- Although stormwater runoff is a natural process, increases in impervious surfaces and changes in land use increase the quantity of runoff, leading to:
  - Erosion of soil from the land surface
  - Streambank erosion
  - Flooding and drainage problems
  - Damage to aquatic habitat
  - Damage to infrastructure and property

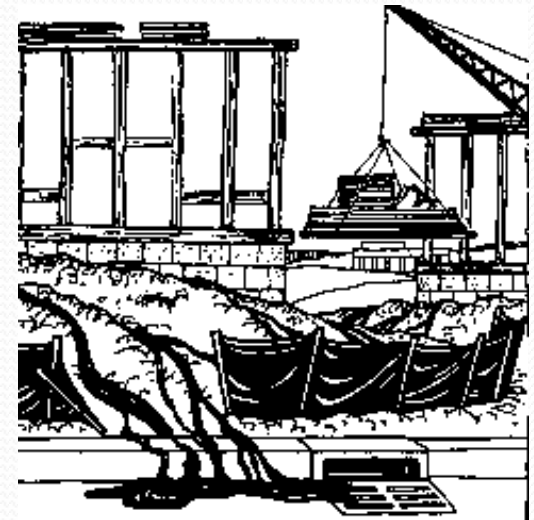


# Background: Phase II Stormwater Regulations

- The Phase II Stormwater Program
  - Federally mandated permit program under Clean Water Act
    - Part of the National Pollutant Discharge Elimination System (NPDES)
  - In New York State, the Department of Environmental Conservation (NYSDEC) is the executive agency that has been delegated responsibility for the Phase II program.
    - State Pollutant Discharge Elimination System (SPDES)

# Brief History of the EPA Stormwater Program

- Phased approach to mitigating high levels of pollution in urban stormflow required by the 1987 Amendments to the Clean Water Act
- Phase I addressed
  - Certain industrial activities
  - Construction activities disturbing 5 acres or more
  - Medium and large municipal MS4s





# What is an MS4?

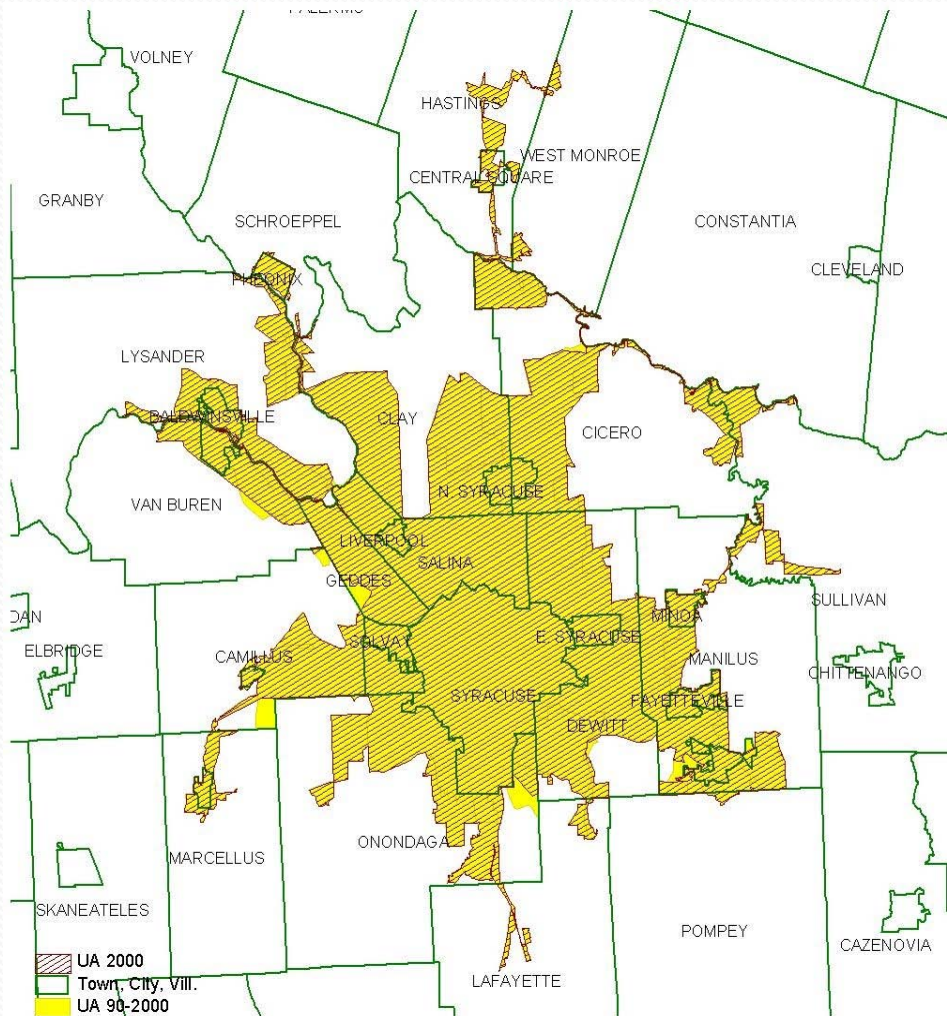


- MS4 = **M**unicipal **S**eparate **S**torm **S**ewer **S**ystem
- Any system of open or closed pipes or ditches that carry runoff from rainwater or snowmelt (*not* sanitary sewer discharge)
- Owned and operated by a government entity (City, Town, Village, State, County, etc.) OR a publicly funded entity (school district, prison, hospital, etc.)

# What is a “Regulated MS4”?

- “*Regulated MS4*” is the term used to describe a government entity that owns and operates an MS4 and is subject to the Phase II Stormwater regulations due to the following:
  - It is part of an **urbanized area** of more than 50,000 total population
  - It has a **population density** of greater than 1000 people per square mile
- Regulated MS4s in New York State must obtain coverage under SPDES General Permit GP-0-08-002.

# Syracuse Urbanized Area: Regulated MS4s



- Baldwinsville Village
- Camillus Town and Village
- Central Square Village
- Cicero Town
- Clay Town
- DeWitt Town
- East Syracuse Village
- Fayetteville Village
- Geddes Town
- Hastings Town
- LaFayette Town
- Liverpool Village
- Lysander Town
- Madison County
- Manlius Town and Village
- Marcellus Town and Village
- Minoa Village
- North Syracuse Village
- Onondaga County and Town
- Phoenix Village
- Pompey Town
- Salina Town
- Solvay Village
- Sullivan Town
- Syracuse City
- Van Buren Town
- West Monroe Town

# MS4 Permit (SPDES GP-0-08-002)

- Requires regulated MS4s to implement a Stormwater Management Program consisting of Six Minimum Control Measures (MCMs):
  1. Public Education and Outreach
  2. Public Involvement and Participation
  3. Illicit Discharge Detection and Elimination
  4. Construction Site Runoff Control
  5. Post-Construction Stormwater Management
  6. Pollution Prevention and Good Housekeeping of Municipal Operations



# Regulated MS4 Program Status



- Under previous permit (GP-02-02), regulated MS4s were required to develop a program consisting of all six minimum control measures by no later than January 2008.
- The new permit (GP-0-08-002), issued May 2008, mandates **full implementation** of the stormwater management program by **January 2010**.



# Stormwater Construction Permit (SPDES GP-0-08-001)

- Developers of projects that disturb greater than one acre of land must obtain coverage from New York State under this permit
- In regulated MS4s, the municipality is given regulatory responsibility for this permit (State has delegated to the local level)
  - Municipality responsible for reviewing SWPPPs at design stage – SWPPP Acceptance Form
  - Municipality also performs inspections and takes enforcement action during construction
  - However, the developer still must obtain permit coverage from NYSDEC

# What is a SWPPP?



- A *Stormwater Pollution Prevention Plan (SWPPP)* is a document that describes the practices (actions and structures) to be implemented on a site to prevent polluted runoff from leaving the site to enter a body of water, wetland, or drainage system.
- Required for all development projects and other land-disturbing activities where **greater than one acre of soil disturbance** occurs



# SWPPP Contents

- Notice of Intent (form used to apply for coverage under General Permit)
- Erosion and Sediment Control Plan (required for all SWPPPs)
  - Non-structural practices (application of mulch, establishment of vegetation, soil treatments to minimize erosion, etc.)
  - Structural practices (e.g. silt fence, stone check dams, stabilized construction entrances, sediment trapping devices, etc.)



# SWPPP Contents (continued)

- Post-Construction Stormwater Management Plan
  - Required for most projects where impervious surface is created
    - Common exceptions :
      - Developments consisting of single family homes disturbing less than 5 acres, in which <25% of finished project is impervious
      - USDA-approved agricultural best management practices
    - Components include:
      - Water Quality Treatment (Water Quality Volume)
      - Water Quantity Control (Attenuation of 1-year storm runoff volume and peak discharge from 10-year and 100-year storms)
    - Accomplished through standard stormwater management practices (ponds, swales, filtration systems, etc.) and site design





# SWPPP Contents (continued)

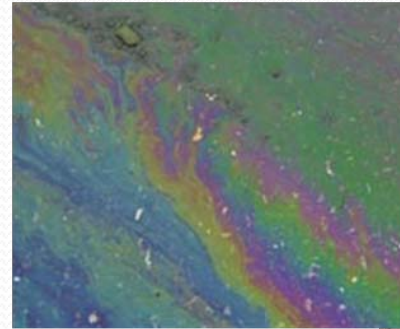
- Construction Site Waste Management Plan
  - Spill prevention and cleanup procedures
  - Storage and handling of materials and debris at the site
- Certification Statements
  - Owner/Operator (i.e. the developer)
  - Contractors and Subcontractors
- Procedures for maintenance of all erosion and sediment control and stormwater management practices
- Forms for documentation of site inspections





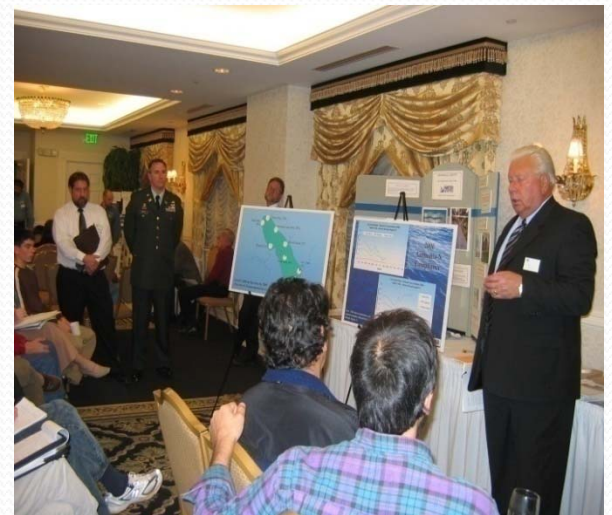
# What is an Illicit Discharge?

- The term “*Illicit Discharge*” encompasses most types of flow entering an MS4 that are **not** comprised solely of stormwater runoff. Examples:
  - Septic system discharges
  - Sanitary sewer cross-connections
  - Floor drains
  - Industrial waste
  - Dumping into catch basins
- The intent of the permit is to **eliminate** these discharges.
- A few exceptions exist for flows that are generally clean water (fire hydrant flushing, foundation drains, etc.)
  - These types of discharges are legal if not contaminated



# Roles of Municipal Officials and Departments

- Planning Boards
  - Construction Site Runoff Control and Post-Construction Stormwater Management (MCM #4 and MCM #5)
    - Review Stormwater Pollution Prevention Plans (SWPPPs) submitted by developers for construction projects
    - Issue approvals for compliant SWPPPs
  - Public Involvement and Participation (MCM #2)
    - Citizens have opportunity to comment on development proposals
    - Planning Boards take public input into account in their review



# Roles of Municipal Officials and Departments (continued)

- Code Enforcement Officers
  - Construction Site Runoff Control and Post-Construction Stormwater Management (MCM #4 and MCM #5)
    - Site inspections during construction
    - Issue violation notices, enforcement actions
  - Illicit Discharge Detection and Elimination (MCM #3)
    - Identify illicit connections to the drainage system and eliminate through voluntary compliance or enforcement action
  - Public Involvement and Participation (MCM #2)
    - Response to complaints regarding polluted runoff or discharges, flooding and drainage concerns

# Roles of Municipal Officials and Departments (continued)

- Highway Departments



Photos courtesy of WNY Stormwater Coalition

- Illicit Discharge Detection and Elimination (MCM #3)
  - Monitor dry-weather flows from stormwater outfalls
- Pollution Prevention and Good Housekeeping (MCM #6)
  - Conduct day-to-day operations so as to minimize pollution
  - Document and quantify activities such as street sweeping, catch basin cleaning, deicer application, fleet maintenance
  - Train all staff in pollution prevention
- Post-Construction Stormwater Management (MCM #5)
  - Maintenance of ponds and other stormwater practices
- Public Involvement and Participation (MCM #2)
  - Response to resident complaints (flooding, drainage, etc.)

# Roles of Municipal Officials and Departments (continued)

- What about MCM #1 (Public Education and Outreach)?
  - Responsibility of departments varies between municipalities (often shared)
  - Distribute information, respond to questions from citizens, develop education and outreach program
- Annual Report and Public Presentation (MCM #2 – Public Involvement Participation)
  - Responsible department or individual may vary
  - Report is prepared and made available for public review



# SWPPP Review by Planning Board

- Planning Board is responsible for “*administrative review*” of the SWPPP (i.e. **are all required components present?**)
  - Can rely on recommendations of Professional Engineer to approve technical aspects
    - SWPPP Completeness Checklist developed by NYSDEC is available from Region 7 Division of Water
  - Developer also applies for coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-o-o8-001)
    - Planning Board must complete the MS4 SWPPP Acceptance Form for the project to receive State coverage under GP-o-o8-001
    - It is the *developer’s responsibility* to submit the MS4 SWPPP Acceptance form to NYSDEC, not the municipality’s!

# Where does the authority come from?

- Passage of regulatory mechanism is required as a condition of the stormwater permit (GP-o-08-002)
  - Illicit Discharge Detection and Elimination Local Law
  - Stormwater Management and Erosion and Sediment Control Local Law
- Local laws designate:
  - Planning Board has SWPPP review powers (usually under Subdivision and/or Site Plan Review Regulations)
  - Stormwater Management Officer (usually Code Enforcement Officer) with inspection and enforcement powers (construction sites and illicit discharges)

# Questions?

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# Questions?

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