City of Schenectady Phase II
Storm Water Pollution Prevention Program

Overview

As an extension of The Clean Water Act, the Storm Water Phase II Rule is the next step in United States Environmental Protection Agency's (U.S. EPA) effort to preserve, protect, and improve the nation's water resources from polluted storm water runoff. Phase II is intended to further reduce adverse water quality and aquatic habitat conditions by instituting the use of controls on the unregulated sources of storm water discharges that have the greatest likelihood of causing environmental degradation.

The Phase II Final Rule, published in the Federal Register on December 8, 1999, expanded the storm water permit program to include storm water discharges from certain regulated small MS4s and construction activity that disturbs between 1 and 5 acres of land. On January 8, 2003, the DEC finalized two-new permits for storm water discharges in NYS as required by the Federal EPA; the small MS4 and small construction permits.

What is storm water?

Storm water is water from rain or melting snow that doesn't soak into the ground but runs off into waterways. It flows from rooftops, over paved areas and bare soil, and through sloped lawns while picking up a variety of materials on its way. As it flows, storm water runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants. The quality of runoff is affected by a variety of factors and depends on the season, local meteorology, geography and upon activities which lie in the path of the flow.

What's the problem?

Storm water gathers a variety of pollutants that are mobilized during runoff events. Polluted runoff degrades our lakes, rivers, wetland and other waterways runoff. Transported soil clouds the waterway and interferes with the habitat of fish and plant life.

Nutrients such as phosphorus and nitrogen can promote the overgrowth of algae, deplete oxygen in the waterway and be harmful

to other aquatic life. Toxic chemicals from automobiles, sediment from construction activities and careless application of pesticides, herbicides and fertilizers threaten the health of the receiving waterway and can kill fish and other aquatic life. Bacteria from animal wastes and illicit connections to sewerage systems can make nearby lakes and bays unsafe for wading, swimming and the propagation of edible shellfish. According to an inventory conducted by the United States Environmental Protection Agency (EPA), half of the impaired waterways are affected by urban/suburban and construction sources of storm water runoff.

What's being done?

Significant improvements have been achieved in controlling pollutants that are discharged from sewage and wastewater treatment plants. Across the nation, attention is being shifted to other sources of pollution such as storm water runoff. Storm water management, especially in urban areas, is becoming a necessary step in seeking further reductions in pollution in our waterways and presents new challenges.

Storm water runoff normally is not treated by sewage and wastewater treatment plants. More often than not, end-of-pipe controls are not the best answer for removing pollutants from storm water runoff. Pollutants in runoff enter our waterways in numerous ways and the best way of control is usually at the pollutant's source. Sometimes, significant improvements can be made by employing best management practices, or "BMPs". Proper storage of chemicals, good housekeeping and just plain paying attention to what's happening during runoff events can lead to relatively inexpensive ways of preventing pollutants from getting into the runoff in the first place and then our waterways.

The U.S.EPA and NYSDEC are increasing their attention in several ways. A federal regulation, commonly known as Storm water Phase II, requires permits for storm water discharges from Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas and for construction activities disturbing one or more acres. To implement the law, the New York State Department of Environmental Conservation has issued two general permits, one for MS4s in urbanized areas and one for construction activities. The permits are part of the State Pollutant Discharge Elimination System (SPDES).

MS4 Phase II Program Requirements

The MS4 permit requires regulated municipal MS4s (those with a minimum population density of 1000 people per square mile and are located in urban areas as defined by the U.S. Census Bureau) to develop and fully implement a storm water management program by 2008. Storm water management programs must contain appropriate management practices in each of the following minimum control measure categories:

Minimum Control Measure 1(MCM#1):
Public Education and Outreach

1. Implement a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of storm water discharges on local water bodies and steps that can be taken to reduce pollution.
2. Determine the appropriate best management practices (BMPs) and measurable goals for this control measure.

Minimum Control Measure 2(MCM#2):
Public Involvement/Participation

1. Comply with applicable State and local public notice requirements.
2. Generate opportunities for public involvement to improve the general understanding of the issues.
3. Determine the appropriate best management practices (BMPs) and measurable goals for this control measure.

Minimum Control Measure 3(MCM#3):
Illicit Discharge Detection and Elimination

1. Develop Storm sewer mapping, showing the location of all outfalls along with the names of receiving waters.
2. Implement necessary ordinances, or other regulatory mechanism, prohibiting the discharge of non-storm water discharges.
3. Develop appropriate enforcement procedures and actions.
4. Detect and address non-storm water discharges into MS4.
5. Determine the appropriate best management practices (BMPs) and measurable goals for this control measure.

Minimum Control Measure 4(MCM#4):
Construction Site Runoff Control

1. Adapt legislation requiring the implementation of proper erosion and sediment controls, and controls of other wastes, on construction sites.
2. Develop procedures for site plan review of construction plans that consider potential water quality impacts.
3. Develop sanctions to ensure compliance through legislature, or other regulatory mechanism.
4. Develop procedures for site inspections and enforcement of control measures.
5. Establish a recording and tracking mechanism for complaints registered for construction activities.

6. Determine the appropriate best management practices (BMPs) and measurable goals for this control measure.

Minimum Control Measure 5(MCM#5):
Post-Construction Runoff Control

1. Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs).
2. Adapt legislature requiring the implementation of proper post-construction runoff controls.
3. Develop procedures for site plan review of post-construction BMPs that mitigate water quantity and quality impacts.
4. Ensure adequate long-term operation and maintenance of controls.
5. Develop procedures for site inspections and enforcement of control measures.
6. Develop sanctions to ensure compliance through legislature, or other regulatory mechanism.
7. Establish a recording and tracking mechanism for complaints registered for construction activities.

Minimum Control Measure 6(MCM#6):
Pollution Prevention/Good Housekeeping

1. Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
2. Develop employee training programs on how to incorporate pollution prevention/ good housekeeping techniques into municipal operations.
3. Determine the appropriate best management practices (BMPs) and measurable goals for this control measure.

Links to Storm Water Management Plan Annual Reports

Annual Report for Program Year #1
Annual Report for Program Year #2
Annual Report for Program Year #3
Annual Report for Program Year #4
Annual Report for Program Year #5
Annual Report for Program Year 2009

Storm Water Phase II Resources on Internet

NYS DEC Storm water Homepage (B1.W1)
http://www.dec.state.ny.us/chemical/8468.html

Strategies: Community Responses to Runoff Pollution (B1.W21)
http://www.nrdc.org/water/pollution/storm/stoinx.asp

http://www.cdrpc.org/

Power Point Presentations

Backyard Pollution Prevention (Special thanks to University of NC, Environmental Resource Program)

Stormwater Regulations (Special thanks to Cornell Cooperative Extension)

DOWNLOADABLE FORMS

GP-0-08-001
www.decny.gov/docs/water_pdf/conspermit08.pdf

www.decny.gov/docs/water_pdf/noigpapr08.pdf

www.decny.gov/docs/water_pdf/swpppaccept.pdf

For additional information please contact:

Carl Olsen, Commissioner of General Services, City of Schenectady