

# STORMWATER MANAGEMENT

## Understanding the MS4 Program

### What is the MS4 Program?

Untreated or uncontrolled storm water runoff is the number one cause of impairment in our local waterways. Polluted runoff is often transported through municipal drainage systems until it eventually discharges into streams, lakes, and rivers untreated. An MS4, or Municipal Separate Storm Sewer System, is comprised of drainage systems, including streets, catch basins, curbs, gutters, ditches, man-made channels and storm pipes, owned by a state, county, city, town, township, borough or other public entity. The National Pollutant Discharge Elimination System (NPDES) storm water Phase II regulations require permit coverage for storm water discharges from MS4s, mainly those located in urbanized areas. Therefore, most Townships and Boroughs are required to comply with the MS4 Program.

**MS4 Programs** are intended to improve our Nation's surface waters by reducing the quantities of pollutants that are picked up by runoff and transported into the storm sewer systems during rainfall events. As part of the MS4 Program, municipalities hold a permit to discharge storm water into local waterways. This permit requires the municipalities to implement and maintain a storm water management program that (1) reduces the discharge of pollutants to the maximum extent possible; (2) protects water quality; and (3) satisfies the water quality requirements of the federal Clean Water Act. In Pennsylvania, the MS4 program is administered by the Department of Environmental Protection (DEP).

The MS4 program has six elements termed "minimum control measures" that when implemented should result in significant reduction in pollutants discharged into receiving waters. The six minimum control measures and the actions required include the following:

**1. Public Education and Outreach**

Distribute educational materials and conduct outreach to inform citizens about the impacts that storm water runoff has on water quality.

**2. Public Participation/Involvement**

Provide opportunities for citizens to participate in the storm water management program or other programs which improve water quality.

**3. Illicit Discharge Detection and Elimination**

Develop and implement a plan to detect and eliminate non storm water discharges into the storm water system.

**4. Construction Site Runoff Control**

Develop, implement and enforce an erosion and sediment control program for construction site activities of that disturb one acre or greater.

**5. Post-Construction Runoff Control**

Develop, implement and enforce a program to address discharges of post-construction storm water runoff from new development or redevelopment areas.

## 6. Pollution Prevention/Good Housekeeping

Develop and implement a program that reduces or prevents pollutant runoff from municipal operations

All municipalities should be committed to improving water quality through better management of stormwater runoff. Every resident and business owner can participate in their municipal stormwater program by reducing or preventing pollutant runoff from their own property and by reporting any non storm water discharges into the municipality's drainage system.

### What can we do to help keep stormwater clean?

There are numerous things we can all do on a daily basis to keep pollution out of our waterways. The following are just a few things we can all do to help improve water quality in our streams, rivers and lakes:

1. Never dump anything into storm drains, swales or streams.
2. Pick up litter from the street before it gets into storm drains.
3. Use limited amounts of fertilizer.
4. If you must use pesticides, search for an environment-friendly brand.
5. Recycle motor oil, paint, and other hazardous chemicals. Never dump such materials down the drain or into the storm system.
6. Recycle glass, plastic, and aluminum.
7. Always pick up your pet's waste or harmful bacteria can get into our water!

### What is an illicit Discharge?

An illicit discharge is the discharge of pollutants or non-storm water materials into a storm sewer system via overland flow, direct dumping, or illicit connections. *Figures 1 and 2 below illustrate just two examples of illicit discharges including unknown fluids leaking out of a trash dumpster and paint residue dumped down a storm drain.* Illicit connections are pipes or other direct connections that illegally or unknowingly release pollutants or non-storm water materials into a storm sewer system or directly into a body of water.



Figure 1 – Leaking dumpster



Figure 2 – Paint dumped into gutter

It is up to each municipality to adopt an Ordinance that prohibits illicit discharges into the municipality's storm water system. The Ordinance prohibits any discharge into the municipality's

storm sewer system which is not composed entirely of storm water, except as provided below; and discharges approved under a state or federal permit.

### **What kinds of discharges are allowed?**

Discharges which may be allowed and do not significantly contribute to pollution of surface waters of the Commonwealth, are:

1. Discharges from fire fighting activities
2. Discharges from potable water sources not containing chlorine, including dechlorinated water line and fire hydrant flushing.
3. Irrigation drainage.
4. Discharges from routine external building wash down (which does not use detergents or other compounds).
5. Discharges from air conditioning condensate.
6. Discharges from water from individual residential car washing.
7. Springs.
8. Discharges of uncontaminated water from basement or crawl space sump pumps.
9. Discharges of uncontaminated water from foundation or footing drains.
10. Flows from riparian habitats and wetlands.
11. Discharges from lawn watering.
12. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used.
13. Dechlorinated swimming pool discharges.
14. Discharges from uncontaminated groundwater.
15. Dye testing, but verbal notification must be provided to the Borough Manager prior to the time of the test.

### **What types of connections are prohibited?**

The following connections are strictly prohibited:

1. Any drainage pipe, channel or ditch, whether on the surface or subsurface, which allows non-storm water discharge, including sewage, process wastewater, and wash water, to enter the storm sewer system, and any connections to the storm drain system from indoor drains and sinks. *Figure 3, illustrates an example of an illegal connection which, in this case, involved the discharge of toxic wastewater from a dye factory into a town's drainage system.*
2. Roof Drains
  - a. Roof drains shall not be connected to streets, sanitary or storm sewers or roadside ditches, except as provided below.
  - b. When it is more advantageous to connect directly to streets or storm sewers, connection of roof drains to street or roadside ditches may be permitted on a case by case basis by the municipality.
  - c. Roof drains shall discharge to infiltration areas or vegetative BMPs to the maximum extent practical. This will help to promote groundwater recharge and reduce runoff.



**Figure 3 – Contaminated process wastewater**

3. Waste disposal prohibitions – It is illegal to dispose of or leave any refuse, rubbish, garbage, litter, or other discarded materials in any public or private property, driveway, parking area, street, alley, sidewalk or other component of the municipality’s storm sewer system so that such materials may cause or contribute to pollution. Garbage deposited in streets in proper waste receptacles for the purposes of routine collection is exempted from this prohibition. *Figure 4 illustrates an example of trash accumulating in the street gutter adjacent to a catch basin.*
4. Any drain or pipe connected to the municipality’s storm sewer system from a commercial or industrial land use which has not been documented in plans, maps, or equivalent records, and approved by the municipality.
5. The above prohibitions apply to both existing and future connections.



Figure 4 - Litter found in gutter

In the event that the municipality determines that any of the discharges identified above contribute to pollution of surface waters, or is so notified by the Pennsylvania Department of Environmental Protection (DEP), the municipality will notify the responsible party and order them to cease the discharge within a specified period of time. Any person, business, corporation, or public entity found to have failed to comply with the municipality’s Illicit Discharge Detection and Elimination Ordinance will be subject to fines of not less than \$100, nor more than \$300, for each offense and each day that the violation continues to occur shall be deemed a separate and distinct offense. In addition, any offender of the Ordinance may be required to pay legal fees and other expenses incurred by the municipality in prosecuting the offense. Failure to pay such fines and legal fees could lead to imprisonment for a term not to exceed 90 days.

Please call SESI at 272-7110 and ask for Steve Sherk (x103) should you have any questions regarding the MS4 program or the illicit discharges described above.