

# WHAT IS MS-4?

MS-4 is short for *Municipal Separate Storm Sewer System*

A separate storm sewer system is a collection of structures, including retention basins, ditches, roadside inlets and underground pipes, designed to gather stormwater from built-up areas and discharge it, without treatment, into local streams. It's called a separate system because it is not connected to the sanitary sewer system which drains wastewater from inside a home to a sewage treatment facility or private septic system.

Many rural developments have stormwater management structures, not only communities that the United States Census Bureau classifies as *Urbanized Areas* based on population density, are required to become part of the MS-4 program. Urbanized Areas contain plenty of commercial and residential development which produce large amounts of stormwater runoff. Large institutions, like college campuses and hospital complexes, are also part of the MS-4 program because they also contain the type of dense development that produces concentrated stormwater flows. Finally, PennDOT and the Pennsylvania Turnpike Commission are in the MS-4 program because of the many separate storm sewer systems they maintain along roads and highways.

Pennsylvania's first two MS-4's were Pittsburgh and Philadelphia which have been in the program since the 1990's. The state's remaining MS-4's, around 950 in 2018, started getting enrolled in the early 2000's. The program is managed by the Pennsylvania Department of Environmental Protection (PADEP), which fulfills this role to comply with federal mandates under the Clean Water Act. The Environmental Protection Agency (EPA) has an oversight role because they are the federal agency charged with implementing the Clean Water Act.

The authorization that MS-4 communities get from PADEP to legal discharge stormwater into local streams is called an *NPDES* permit which stands for National Pollution Discharge Elimination system. These particular NPDES permits are also commonly called, *MS-4 Permits*. To meet the terms of the NPDES Permit, the Township needs to develop what is called a *Stormwater Management Program* (SWMP). Communities that discharge into any water that PADEP identifies as *impaired* are also required to develop a *Pollutant Reduction Plan* (PRP).

Because every MS-4 faces unique stormwater challenges each management plan is unique. But every SWMP includes the same six focus areas that the EPA considers essential for success. These areas are called *Minimum Control Measures* (MCM) and include the following:

MCM #1 – Public Education and Outreach

MCM #2 – Public Participation and Involvement

MCM #3 – Illicit Discharge Detection and Elimination

MCM #4 – Construction Site Erosion Control

MCM #5 – Post Construction Stormwater Management

MCM #6 – Pollution Prevention and Good Housekeeping