



# WNY Stormwater Coalition MS4 Mapping Project

## Background:

Over the past several decades stormwater runoff has affected water quality in the United States. Due to the concerns about water quality, the U.S. Environmental Protection Agency (EPA) implemented a Phase I stormwater program in 1990, followed by a Phase II in 1999 (U.S. EPA 1999). Phase I required medium and large MS4 owners and operators with populations of 100,000 or greater to obtain National Pollutant Discharge Elimination System (NPDES) permits. Phase II broadened the coverage to smaller MS4s with populations under 100,000 within defined U.S. Census defined Urbanized Areas.

The Department of Environmental Conservation requires MS4 owners and operators in New York State to obtain a General Permit for their separate storm systems. Under the General Permit, a stormwater management program must be designed to reduce pollutants and protect water quality. The management program must include six minimum control measures (MCMs):

- Public Education and Outreach on Stormwater Impact;
- Public Involvement / Participation;
- Illicit Discharge Detection and Elimination (IDDE);
- Construction Site Runoff Control;
- Post Construction Stormwater Management;
- Pollution Prevention / Good Housekeeping for Municipal Operations.

Polluted stormwater runoff is commonly transported through Municipal Separate Storm Sewer Systems (MS4s) and discharged untreated into local waterbodies. To prevent harmful pollutants from being washed or dumped into an MS4, operators must obtain a NPDES permit and develop a stormwater management plan.

Major pollutants impacting water quality are priority organic (Polychlorinated biphenyl's and dioxin), silt and sediment, nutrients (phosphorous), DO/oxygen demand, pathogens, common pesticides, and aesthetic aspects such as odors, floatables and sludgebanks.

Among the pollutants considered to be minor impacts on water quality are: metals (nickels, zinc), non-priority (Polycyclic aromatic hydrocarbons) organics, oil and grease and additional pesticides. Both major and minor contaminants are known to originate from a wide range of sources that include: urban runoff, streambank erosion, failing on-site septic systems, municipal discharges, combined sewer overflows, toxic/contaminated sediments and habitat modification.

## MS4 Mapping Project:

The WNY Stormwater Coalition MS4 Mapping Project entails mapping the storm sewer conveyance system of 42 MS4s in the Urbanized Areas of Erie and Niagara County. The objective of this project are to collect and map the surface and sub-surface conveyance; catch basin and manhole locations; inter-municipal connections; and delineation of storm sewersheds. The second objective is to establish a web-based mapping system using Geographic Information System (GIS) that will house collected data. By mapping the storm sewer conveyance systems in GIS, the municipalities have an invaluable tool to quickly track down sources of contamination contributing to substandard water quality in waterways where the local community swim, fish, boat and recreate.

## Partnerships:



Created By: Jennifer O'Neil and Rachel O'Neill

What can **YOU** do to prevent stormwater pollution!



For more information on what you can do to help, check out [www.erie.gov/stormwater](http://www.erie.gov/stormwater)

Last Updated on June 12, 2012