

**PHASE II MS4 STORM WATER MANAGEMENT PROGRAM PROTOCOLS
MINIMUM CONTROL MEASURE: ILLICIT DISCHARGE DETECTION & ELIMINATION**

FIELD SCREENING GUIDANCE

According to 40 CFR122.6, a program is required of all MS4s to detect and remove illicit discharges and improper disposal in the storm sewer. A dry weather visual inspection is the easiest way to screen for these discharges. Theoretically, if water is found flowing from a storm water outfall during dry weather conditions, it can be assumed that some illicit source of discharge is present in the storm sewer system. If such a dry weather flow is located, action must be taken to determine the source of the discharge so that it can be eliminated. If a dry weather flow is detected grab samples can be taken and analyzed using field testing methods for temperature, pH, phenol, chlorine, and detergents. Laboratory testing may be necessary as well for certain situations or potential pollutant that cannot be detected using a field test kit.

When performing field screening for illicit discharge detection and elimination, one should remember to follow proper QA/QC procedures for collecting, cataloging analyzing visual inspections and grab samples. It is important to note the time, date, and weather conditions when the observation was made or samples are taken. This information will be critical during the investigation and enforcement procedures that may follow the field screening process.

Specific guidance on sample collection and analysis can be found in Appendix 2 of a document created for the Pennsylvania Citizens' Volunteer Monitoring Program entitled "Designing Your Monitoring Program: A Technical Handbook for Community-Based Monitoring In Pennsylvania," by Geoff Dates of the River Network. Appendix 2, titled "Guide to Indicators and Monitoring Methods," is available from DEP on the Phase II MS4 Storm Water Management Program Protocol CD-ROM (open the file entitled **Sampling Guidance B**). You can also obtain Appendix 2 via the Internet at the following URL:

<http://www.dep.state.pa.us/dep/deputate/watermgt/WC/subjects/CVMP/Appendix%202.pdf>

The entire document may be found at the following URL:

http://www.dep.state.pa.us/dep/deputate/watermgt/WC/subjects/CVMP/cvmp_HdBook.htm

In addition, in Pennsylvania it is not unusual for underground springs to be diverted directly to the storm drain, which might create the appearance of a dry weather flow. Where possible, these groundwater drains and connections should be mapped and base flow confirmed during various seasons to best understand when flow can be attributed to this uncontaminated ground water or when it should be investigated further. No sampling normally is required when it can be verified that the flow observed is uncontaminated groundwater. However, visual analysis of the water should be performed regularly to ensure that the flow remains uncontaminated. If visual or odor inspections indicate something unusual (e.g. color, turbidity, sheen, floatables) in the groundwater flow, it should be treated as a potential illicit discharge, grab samples should be taken and the proper analysis performed.