



# NPDES MS4 Permit for Charlotte, NC (continued)

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**Monitoring Highlights:**

*Stream Problem Rating Scheme.* The City of Charlotte, NC has developed a stream problem rating system which is designed to characterize and prioritize stream segments based on a series of pollutant parameters believed to be reflective of the water quality conditions in a stream segment. Limiting concentration ranges for a number of indicator pollutants have been established which are segregated into three action rating levels; No Action, Watch, and Action. An exceedance frequency was then developed for each pollutant which established the number of times a limiting concentration could be exceeded before a stream segment was classified by a particular action level. Using the database capabilities of a GIS, monitoring data were then sorted in order to establish an action level for each stream segment.

*In-stream Monitoring.* Charlotte is developing a program to employ macroinvertebrate richness sampling in larger streams to assess the impacts of all types of pollution on the benthic community. The City already maintains an extensive in-stream monitoring program which monitors surface water quality at 44 locations. This includes dry and wet-weather biological monitoring.

*Program Specific Monitoring.* The City will implement the following specific monitoring programs: industrial monitoring; landfill monitoring; BMP monitoring; drainage system maintenance monitoring; pesticide and fertilizer monitoring; and roadway pollution monitoring.

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**Storm Water Utility:**

A user fee will be assessed to property owners for the discharge of storm water to the drainage system. The City will grant storm water fee credits to property owners who undertake certain activities to lessen the physical impact of their properties on the drainage system. These include providing on-site control of peak discharges from a 10 year storm; runoff volume from a 2-year storm; and improving water quality through the use of wet ponds and dry detention ponds meeting certain criteria.

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**Watershed Protection Activities:**

Charlotte will investigate design criteria for new development in a number of sensitive areas (watershed protection areas to formulate a new ordinance for planning of storm water quality, and will establish a permanent storm water advisory committee. Coordination with the county will be used to the maximum extent practicable. Specifically, Charlotte will seek to participate in the watershed protection planning process to insure consistency throughout the county.

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**Geographic Information System:**

A GIS system has been developed as part of the City's storm water management program. It currently includes: waters of the State; watershed boundaries; locations of landfills, public lands, NPDES industries, and TSD facilities; identified problem areas; storm water utility data; and City drainage structures. Future enhancements to the GIS will include sampling data, illicit discharge identification, and other data supporting the elements of the City's storm water program.

**For More Information:**

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Contact the North Carolina Department of Environmental Health and Natural Resources at (919)733-5083

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Office of Wastewater Management (OWM)**