

## **North Carolina State University Stormwater Program Development Brief Summary**

North Carolina State University, in an effort to meet requirements under the National Pollutant Discharge Elimination System (NPDES) for stormwater management at 40 CFR 122.26 began building its own stormwater management program in 1995. This effort, combined with discussions with the North Carolina Department of Environment and Natural Resources and the City of Raleigh, resulted in the preparation and submission of North Carolina State University NPDES Municipal Separate Storm Sewer (MS4) Application in January 1999.

Since the MS4 application submittal, the North Carolina Environmental Management Commission (EMC) has developed rules in order to achieve a 30% nitrogen reduction for the Neuse River Water Basin. One of the requirements orders the 15 largest and fastest growing municipalities in the Neuse River Basin, including the City of Raleigh and Wake County, to develop local stormwater programs for nitrogen control based on the “Neuse River Basin Model Stormwater Program for Nitrogen Control.”

The University Stormwater Program is a product of requirements under its MS4 permit application and the “Neuse River Basin: Model Stormwater Program for Nitrogen Control.” The program meets or exceeds the State of North Carolina stormwater requirements at each of its three local campuses.

The general elements of the stormwater program are:

### 1) Mapping and Tracking

- Mapping off all drainage features of the 3 campuses is an ongoing program. It includes mapping historical features and continuing to build the database as new features come on line.
- 100% of Centennial Campus is currently mapped
- 95 % of Main Campus has been mapped
- 100% of College of Veterinary Medicine has been mapped
- EH&S is developing a GIS system to map and track all its campuses inputs to the local watersheds with regard to detention and nitrogen.

### 2) Monitoring

- Monitoring as outlined in the MS4 application has been implemented
- Monitoring for nitrogen requirements is being developed
- Several BMPs are being monitored by NCSU faculty for research and education purposes.
- An inspection and maintenance program for BMPs is being developed.

### 3) New Development Requirements/Approval

- Requirements for detention and TN (total nitrogen) have been developed (see “North Carolina State University Stormwater Guidelines for New Development”).
- Implementation of the University new development requirements began 1/15/02
- All University stormwater plans for new projects are reviewed and approved by NCSU Environmental Health and Safety Stormwater Program (SWP).
- All stormwater plans for new development on ground-leased properties are approved by SWP, and City of Raleigh.
- All stormwater regional master plans and retrofits are approved by SWP and the University Stormwater Committee
- All Soil and Erosion Control Plans (SECP) are approved by North Carolina Department of Land Quality. SECP for ground leases are also reviewed by the City.
- All Neuse River Buffer impacts are approved by North Carolina Department of Water Quality 401 Wetlands Unit.

#### 4) Illicit Discharges

- The University has established a program to identify and remove illicit discharges.

#### 5) Retrofit Locations

- The “Neuse River Basin: Model Stormwater Program for Nitrogen Control” requires only that municipalities only identify retrofit locations. The University has an ongoing program for identification of retrofit locations and has installed several retrofits.

#### 6) Education

- The University conducts many classes, seminars, and workshops through traditional and extension settings that improve the professional and general public awareness of water quality issues, best management practices, and water quality treatment design.
- The members of the Stormwater Committee have received training in Best Management Practices and their uses. The committee is made up of members of the campus community that effect water quality including, Directors of Real Estate, Facilities Planning and Design, Transportation, Facilities Operations, Water Quality Group, the University Architect, and extension faculty members who are experts in the design and use of BMP devices.
- The University is developing a program for the education of Facilities Planning and Design, Facilities Construction Management, Facilities

Operations, and Athletics with regard to water quality in their respective fields.

- The University is developing an education program for the general staff, faculty and student population.