

# Chapter 15

## TMDLs in the Roanoke River Basin

### 15.1 Introduction to TMDLs

A TMDL or Total Maximum Daily Load is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the waterbody can be used for the purposes the state had designated. The calculation must also account for seasonal variation and critical conditions in water quality.

For each water quality limited segment Impaired by a pollutant and identified in the 303(d) list, a TMDL must be developed. A TMDL includes a water quality assessment that provides the scientific foundation for an implementation plan. An implementation plan outlines the steps necessary to reduce pollutant loads in a certain body of water to restore and maintain human uses or aquatic life. For more information on TMDLs and the 303(d) listing process, refer to Appendix VII or visit the TMDL website at <http://h2o.enr.state.nc.us/tmdl/>.

### 15.2 Approved TMDLs in the Roanoke River Basin

The Dan River (subbasin 03-02-03) TMDL for turbidity was completed and approved by EPA on January 11, 2005. A dioxin TMDL for Welch Creek/Roanoke River (subbasin 03-02-09) was approved in 1996. The Roanoke River (subbasin 03-02-08) TMDL for dissolved oxygen consuming wastes was approved in 1996. The Cashie River (subbasin 03-02-10) *draft* TMDL for Mercury completed the public input process and was submitted to USEPA in 2005 for finalization.

### 15.3 Scheduled TMDLs in the Roanoke River Basin

EPA guidance provides a timeline for TMDL development of 8 to 13 years. Thus, the elapsed time between 303(d) listing and TMDL development should not exceed 8 to 13 years. If the pace of TMDL development does not comply with this schedule, EPA may elect to develop TMDLs in order to meet this timeline. Waterbodies that were listed in 1998 should have TMDLs developed by 2006 to 2011.

### 15.4 TMDL Implementation Efforts

Point source (i.e., wastewater) implementation plans are included in TMDLs per EPA guidance. Thus, any point source discharging to an Impaired water will receive an explicit allocation within the TMDL. In some cases, the allocation may be equal to existing permit limits; thus, no action is needed by the wastewater permittee. In other cases, the allocation may be associated with a reduction in loading. Where applicable, the point source allocation may include provisions for bubble permits and point-to-point trading.

Nonpoint source implementation plans are not included in TMDLs, nor are they required by federal law. Nonpoint source implementation plans can be developed by DWQ, other agencies within DENR, COGs or local government offices. The Environmental Management Commission (EMC), the rule-making agency, provides oversight on nonpoint source programs and adopts rules to implement strategies that protect water quality.

EPA has provided guidance regarding TMDLs and NPDES stormwater permits. As a result, selected NPDES stormwater permits may contain additional language when subject to a TMDL. Per EPA, MS4s identified in TMDLs as contributors to impairment may be required to develop a management plan that includes additional monitoring and BMP installation associated with pollutants of concern.

### **15.5 Impaired Waters – 303(d) listing**

Waters identified as Impaired during this assessment period will be updated in the 2008 303(d) list. These waters will be considered Impaired upon EMC approval of this basin plan, scheduled for September 2006. TMDLs will be scheduled as appropriate depending upon the location of the waterbody and the identified problem parameters.