

Chapter 35

TMDLs in the Cape Fear River Basin

35.1 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. TMDLs are not required for waters Impaired by dam operations. 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/>.

35.2 Approved TMDLs in the Cape Fear River Basin

The following TMDLs have been completed and approved by EPA (Table 38). Refer to the subbasin chapters for specific reductions called for in the TMDLs and to determine what local governments may be affected by TMDLs.

Table 38 EPA approved TMDLs in the Cape Fear River Basin

Waterbody (Subbasin)	Pollutant	Approval Date	Chapter
Little Troublesome Creek (03-06-01)	Fecal coliform bacteria	May 17, 2002	1
North Buffalo Creek (03-06-02)	Fecal coliform bacteria	April 28, 2004	2
Town Branch (03-06-02)	Fecal coliform bacteria	September 16, 2002	2
Roberson (Robeson) Creek (03-06-04)	Chlorophyll <i>a</i> (Total phosphorus)	January 13, 2004	4
Northeast Creek (03-06-05)	Fecal coliform bacteria	September 12, 2003	6
East Fork Deep River (03-06-08)	Turbidity, Fecal coliform bacteria	March 4, 2004	8
Richland and Muddy Creeks (03-06-08)	Fecal coliform bacteria	May 17, 2004	8

Several TMDLs are currently in progress at the DWQ. These include a fecal coliform bacteria and turbidity TMDL for the Haw River (Chapter 1), a fecal coliform TMDL for the Deep River (Chapter 8), a turbidity TMDL for Third Fork Creek (Chapter 5), a chlorophyll *a* TMDL for

Jordan Reservoir (Chapter 36), and a dissolved oxygen TMDL for the Cape Fear Estuary (Chapter 37).

Two large TMDL efforts underway in the Cape Fear River Basin include the Jordan Reservoir Chlorophyll *a* TMDL and the Cape Fear Estuary Dissolved Oxygen TMDL. Information regarding water quality data and assessment for Jordan Reservoir is discussed in Chapter 5, while TMDL information is discussed in Chapter 36. Information regarding water quality data and assessment for the Cape Fear Estuary is discussed in Chapter 17, while TMDL information is discussed in Chapter 37.

35.3 Scheduled TMDLs in the Cape 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.

35.4 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. For example, the Piedmont Triad Council of Governments (PTCOG) obtained Section 319 grants to develop implementation plans for Little Troublesome Creek and Town Branch. Each of these TMDLs has only nonpoint source loadings contributing to impairment.

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.

35.5 Impaired Waters Update

Waters identified as Impaired during this assessment period will be updated in the 2006 Integrated Report. These waters will be considered Impaired upon EMC approval of this basin plan. TMDLs will be scheduled as appropriate depending upon the classification of the waterbody and the identified problem parameters.