APPENDICE X

Section 303(d) of the Clean Water Act

APPENDIX X

List of 303(d) Waters in the Hiwassee River Basin

What is the 303(d) list?

Section 303(d) of the Clean Water Act (CWA) requires states to develop a list of waters not meeting water quality standards or which have impaired uses. Waters may be excluded from the list if existing control strategies for point and nonpoint source pollution will achieve the standards or uses. Waterbodies which are listed must be prioritized, and a management strategy or total maximum daily load (TMDL) must subsequently be developed for all listed waters.

303(d) List Development

The 305(b) report was used as a basis for developing the 303(d) list. Section 305(b) of the CWA requires states to report biennially to the U.S. Environmental Protection Agency (EPA) on the quality of waters in their state. In general, the report describes the quality of the state's surface waters, groundwaters, and wetlands, and existing programs to protect water quality. Information on use support, likely causes (e.g., sediment, nutrients, etc.) and sources (point sources, agriculture, etc.) of impairment are also presented in the report.

Many types of information were used to make use support assessments and to determine causes and sources of use support impairment. Chemical, physical, and biological data were the primary sources of information used to make use support assessments. North Carolina has an extensive ambient and biological monitoring network throughout the state. Benthic macroinvertebrate data which indicate taxa richness of pollution intolerant groups are an important data source. North Carolina also collects fish tissue and fish community structure data and phytoplankton bloom data that are used in the assessments. In addition, fish consumption advisories, information from other agencies, workshops, and reports, predictive modeling results, toxicity data, and self monitoring data is considered when making final use support determinations. Data from all readily available sources are used when the Division's standard operating procedures are followed when collecting and analyzing data. In the Hiwassee River Basin, the Tennessee Valley Authority (TVA) has collected data. Their data collection and analysis methods differ from DWQ's, and therefore their data were not used to determine final use support. However, the results of their sampling are summarized in Section 4.2.8. DWQ will use their data to help determine future sampling sites. For example, if TVA data show impairment, DWQ will try to monitor that waterbody to see if our data also indicate impairment. DWQ will also work with TVA to choose reference sites that both agencies believe have high quality. These sites will then be sampled to determine if similar results are obtained from each agency. Overlap sampling may also occur at other sites throughout the basin.

The list also includes probable problem parameters. Where the list has no problem parameter listed, the use support rating was based on biological data, and available chemical data showed no impairment. It should be noted that where a problem parameter has been identified, the water quality standard for that parameter was exceeded. This parameter is a potential cause of the impairment, but there may be other unidentified causes contributing to the impairment as well.

Only those waterbodies whose use support rating were not supporting (NS) or partially supporting (PS) in the 305(b) report were considered as candidates for the 303(d) list. Of those waterbodies that showed impairment (PS or NS rating) only those waterbodies that had a use support rating based on monitoring data collected in the last five years were

included on the 303(d) list. Since many changes can occur within a watershed in a five year period, conclusive information about a waterbody's use support cannot be made with older data. However, North Carolina will be collecting information on as many of these evaluated waterbodies as staffing and time permit for subsequent updates of the basin plan and 303(d) list. As more conclusive information on streams rated using older data or best professional judgment is obtained, evaluated waterbodies will be added to the list if the data indicate impairment. Finally, those waterbodies which were rated as NS or PS were then examined to determine if there were management strategies in place. If so, the streams were eliminated from the list. Management strategies that were considered included the following:

1. Miscellaneous nonpoint programs - Any waterbodies where DWQ was aware of nonpoint management studies (e.g. 319 or similar program) were eliminated if nonpoint sources were the only problem.

2. Point sources - All waters where point sources were the only problem were eliminated if the facility was under SOC, under schedule for removal, recently upgraded, or some other strategy was in place.

No waterbodies were dropped from the Hiwassee River Basin 303(d) list because management strategies were already in place.

Changes in the Hiwassee River Basin's 303(d) list from earlier lists are based on updated chemical and biological monitoring results. Both Brasstown Creek and Valley River were added to the list based on biological data collected in 1994 that resulted in fair ratings. The streams that were listed on the previous 303(d) list for the Hiwassee River Basin but omitted from this list were included on the old list due to information collected at a workshop in Asheville in the 1980s. No new monitoring data were collected on these waterbodies. If future data indicate impairment, the streams will be added to the list.

This listing process resulted in two waterbodies on the Hiwassee River Basin 303(d) list, and they are shown on Table A - X.1. Any stream included on the list must be prioritized for management strategy or total maximum daily load (TMDL) development. In part, the prioritization must be based on the degree of impairment and the uses of the waterbodies. Both waterbodies are rated as partially supporting; thus they have fairly equivalent degrees of impairment. One water was rated as a water supply, and could therefore impact human health as well as aquatic life, while the other waterbody is classified for aquatic life protection and as a habitat for trout. The waterbody that is in a water supply water was therefore rated as medium while the remaining waterbody was rated as low. No waterbodies were given a high priority due to a lack of conclusive information on the causes and sources of impairment and to other higher priority waters in need of management in other areas of the state where more definitive information on the causes and sources is known.

In addition, monitored streams that are fully supporting their uses but may be threatened were also examined, but none of these waters were added to the list at this time.

Additional Guidance on Using the 303(d) List

The column headings in the 303(d) list refer to the following:

Class - The information in this column indicates the classification assigned to the particular waterbody. Stream classifications are based on the existing and anticipated best usage of the stream as determined through studies and information obtained at public hearings. The

stream classifications are described in 15A NCAC 2B .0300, and a copy of the pertinent pages of these regulations is attached in Appendix II. (Note: The abbreviation Tr refers to trout water).

Wtrbdy - This is the North Carolina subbasin in which the waterbody is located. The NRCS 14 digit hydrologic units nest within the DWQ subbasins.

Problem Parameter - These are the causes of impairment as identified in the 305(b) report. No streams had an identified problem parameter in the Hiwassee River Basin as the ratings were based on benthic data, and available chemical data showed no impairment.

Rating - This column lists the overall use support rating. These values may be NS (not supporting), PS (partially supporting), and ST (supporting but threatened). The 305(b) report describes these use support ratings further.

Major (P,NP) - This column indicates whether point (P) or nonpoint (NP) sources are the major sources of impairment.

Subcategory - This column breaks the point and nonpoint sources down further. A summary of the subcategory codes is provided in the attachment at the end of this appendix.

Priority - This column indicates the priority the waterbody is given for TMDL development.

Table A - X.1 303(d) LIST FOR THE HIWASSEE RIVER BASIN

Name of Stream	Description	Class	Wtrbdy	Problem Parameters	Overall Rating	Basis	Major Sources (P,NP)	Subcategory	Priority
Brasstown Creek	From North Carolina-Georgia State	WS-IV	40501		PS	M			Medium
Valley River	From off US 19, nr Rhodo, to ab landfill	C Tr	40502		PS	M			Low