

Executive Summary

North Carolina's Basinwide Approach to Water Quality Management

Basinwide water quality planning is a nonregulatory watershed-based approach to restoring and protecting the quality of North Carolina's surface waters. Basinwide water quality plans are prepared by the NC Division of Water Quality for each of the seventeen major river basins in the state. Each basinwide plan is revised at five-year intervals. While these plans are prepared by the Division of Water Quality, their implementation and the protection of water quality entails the coordinated efforts of many agencies, local governments and stakeholders in the state. The first basinwide plan for the French Broad River basin was completed in 1995.

Goals of the Basinwide Approach

The primary goals of DWQ's basinwide program are to:

- identify water quality problems and restore full use to impaired waters;
- identify and protect high value resource waters;
- protect unimpaired waters while allowing for reasonable economic growth;
- develop appropriate management strategies to protect and restore water quality;
- assure equitable distribution of waste assimilative capacity for dischargers; and
- improve public awareness and involvement in the management of the state's surface waters.

French Broad River Basin Overview

The French Broad River basin drains to the Gulf of Mexico via the Tennessee, Ohio and Mississippi Rivers. The boundaries of the French Broad River basin within NC contain portions or all of Transylvania, Buncombe, Henderson, Madison, Haywood, Yancey, Mitchell and Avery counties.

The basin is composed of three major drainages: French Broad River, Pigeon River and Nolichucky River. These rivers individually flow northwest into Tennessee. There are seven man-made lakes in the basin monitored by DWQ: Lake Julian, Burnett Reservoir, Beetree Reservoir, Busbee Reservoir, Lake Junaluska, Allen Creek Reservoir and Walters (Waterville) Lake.

About one-half of the land in the basin is forested, with much of the basin within Pisgah National Forest or Pisgah Game Lands. The northwest corner of Haywood County is in the Great Smoky Mountains National Park. Steep slopes limit the land area suitable for development and crop production. Therefore, most agricultural and developed lands are concentrated within the river valleys. Between 1982 and 1992, cultivated and uncultivated croplands decreased by about 67 percent, while urban and developed lands increased by about 42 percent.

The population of the basin, based on 1990 census data, was estimated at 357,932. The overall population density of the basin of 128 persons per square mile is comparable to the statewide average of 139 persons per square mile. The percent population growth over the past ten years (1980 to 1990) was 8.5 % versus a statewide increase of 12.7%. Population density is greatest in and around the cities of Asheville and Hendersonville.

Water quality is generally good throughout the basin, although there are several areas of concern. Trout waters are abundant and many waters are classified as High Quality or Outstanding Resource Waters.

Assessment of Water Quality in the French Broad River Basin

Waters are classified according to their best intended uses. Determining how well a waterbody supports its designated uses is an important method of interpreting water quality data and assessing water quality. This determination results in a use support rating. The use support ratings refer to whether the classified uses of the water (such as water supply, aquatic life protection and swimming) are fully supported, partially supported or not supported. For instance, waters classified for fishing and water contact recreation (Class C) are rated as fully supporting if data used to determine use support (such as chemical/physical data collected at ambient sites or benthic macroinvertebrate bioassessments) did not exceed specific criteria. However, if these criteria were exceeded, then the waters are rated as partially supporting or not supporting, depending on the degree of exceedence. Streams rated as either partially supporting or not supporting are considered *impaired*.

A summary of current use support ratings for the French Broad River basin is presented in Table 1. For further information and definition of monitored and evaluated streams, refer to Appendix A-III.

Table 1 Use Support Summary Information for All Monitored and Evaluated Streams in the French Broad River Basin (1999)

		Monitored and Evaluated Streams*		Monitored Streams Only**	
		Miles	%	Miles	%
Fully Supporting		3190.9	77	812.2	90
Impaired	<i>Partially Supporting</i>	88.5	2	50.1	6
	<i>Not Supporting</i>	50.6	1	37.9	4
		37.9	1		
Not Rated		856.5	21		
Total		4135.9		900.2	

* = Percent based on total of all named and classified streams, both monitored and evaluated.

** = Percent based on total of all monitored streams.

Recommended Management Strategies for Restoring Impaired Waters

The long-range mission of basinwide management is to provide a means of addressing the complex problem of planning for increased development and economic growth while protecting and/or restoring the quality and intended uses of the French Broad River basin's surface waters. In striving towards its mission, DWQ's highest priority near-term goals are to:

- identify and restore impaired waters in the basin;
- identify and protect high value resource waters and biological communities of special importance; and
- protect unimpaired waters while allowing for reasonable economic growth.

Within this basinwide plan, DWQ presents management strategies for those waters considered to be impaired. Table 2 presents impaired waters in the French Broad River basin, the sources of impairment, summaries of the recommended management strategies, and location of further information in the basinwide plan.

These waters are impaired, at least in part, due to nonpoint sources (NPS) of pollution. The tasks of identifying nonpoint sources of pollution and developing management strategies for these impaired waters is very resource intensive. Accomplishing these tasks is overwhelming, given the current limited resources of DWQ, other agencies (e.g., Division of Land Resources, Division of Soil and Water Conservation, Cooperative Extension Service, etc.) and local governments. Therefore, only limited progress towards restoring NPS impaired waters can be expected during this five-year cycle unless substantial resources are put toward solving NPS problems.

DWQ plans to further evaluate the impaired waters in the French Broad River basin in conjunction with other NPS agencies and develop management strategies for a portion of these impaired waters for the next French Broad River Basinwide Water Quality Plan.

Addressing Waters on the State's 303(d) List

For the next several years, addressing water quality impairment in waters that are on the state's 303(d) list will be a DWQ priority. The waters in the French Broad River basin that are on this list are presented in the individual subbasin descriptions in Section B.

Section 303(d) of the federal Clean Water Act requires states to develop a 303(d) list of waters not meeting water quality standards or which have impaired uses. States are also required to develop Total Maximum Daily Loads (TMDLs) or management strategies for 303(d) listed waters to address impairment. EPA issued guidance in August 1997 that called for states to develop schedules for developing TMDLs for all waters on the 303(d) list within 8-13 years.

There are approximately 2,387 stream miles on the 303(d) list in NC. The rigorous and demanding task of developing TMDLs for each of these waters during an 8 to 13-year time frame will require the focus of much of the water quality program's resources. Therefore, it will be a priority for North Carolina's water quality programs over the next several years to develop TMDLs for 303(d) listed waters. This task will be accomplished through the basinwide planning process and schedule.

Table 2 Impaired Waters within the French Broad River Basin (as of 1999) •

Subbasin	Chapter in Section B	Listed Water	Use Support Rating	Potential Sources*	Recommended Management Strategy
04-03-01	1	Peter Weaver Creek	PS	P	DWQ will resample this creek to obtain information for a management strategy. Holders of individual NPDES permits may be required to conduct upstream/downstream sampling or obtain an individual permit.
04-03-01	1	Morgan Mill Creek	PS	P	DWQ will resample this creek to obtain information for a management strategy. Holders of individual NPDES permits may be required to conduct upstream/downstream sampling or obtain an individual permit.
04-03-02	2	Gash Creek	NS	NP	Local actions are needed on NPS inventory.
04-03-02	2	Mill Pond Creek	PS	NP	DWQ will continue to monitor to better identify problem parameters.
04-03-02	2	Mud Creek	NS	NP P	Local restoration initiatives are underway, and DWQ will continue to monitor results.
04-03-02	2	Bat Fork Creek	PS	NP	DWQ will continue to monitor the creek and increase coordination with other agencies to address the various pollution sources.
04-03-02	2	Clear Creek	PS	NP	Local actions are needed to expand buffer and BMP implementation.
04-03-02	2	Hominy Creek	PS	NP	There is a need to increase the funding and implementation of chemical handling facilities.
04-03-02	2	South Hominy Creek	NS	NP	There is a need to increase the funding and implementation of chemical handling facilities.
04-03-02	2	Ross Creek	NS	NP	Local initiatives are underway, and DWQ will continue to monitor results.
04-03-03	3	Mills River	NS	NP	Local initiatives are underway, and DWQ will continue to monitor results.
04-03-03	3	Brandy Branch	PS	NP	Local projects aimed at identifying sources of pollution and necessary actions would be very useful to DWQ and various funding agencies. DWQ will continue to monitor Brandy Branch to better identify problem parameters.
04-03-04	4	Little Ivy Creek	PS	NP	Local restoration initiatives are underway, and DWQ will continue to monitor results.
04-03-05	5	Pigeon River	PS	NP P	DWQ will continue to monitor process improvements made at BRPP and work with the Joint Watershed Advisory Group. Local nonpoint source initiatives are needed.
04-03-05	5	Richland Creek	PS	NP	Local restoration initiatives are underway, and DWQ will continue to monitor results.

Key: NS = Not Supporting PS = Partially Supporting NP = Nonpoint sources P = Point Sources

* = Only limited progress towards developing and implementing NPS strategies for these impaired waters can be expected without additional resources.

• = These waters are also on the 303(d) list, and a TMDL and/or management strategy will be developed to remove the water from the list.