

Chapter 7

French Broad River Subbasin 04-03-07

Including the: Little Creek, Bald Mountain Creek, Cane River and Price Creek

7.1 Subbasin Overview

Subbasin 04-03-07 at a Glance

Land and Water Area

Total area:	153 mi ²
Land area:	153 mi ²
Water area:	0 mi ²

Population Statistics

2000 Est. Pop.:	8,964 people
Pop. Density:	57 persons/mi ²

Land Cover (percent)

Forest/Wetland:	87%
Surface Water:	<1%
Urban:	<1%
Cultivated Crop:	<1%
Pasture/ Managed Herbaceous:	12%

Counties

Yancey

Municipalities

Burnsville

The southern portion of this subbasin lies within the Pisgah National Forest, and the Town of Burnsville is the largest municipality. By the year 2020, the overall population of Yancey County is projected to increase by 16.7 percent. Refer to Appendix I for more information regarding population growth and trends.

There is one NPDES wastewater discharge permit holder in this subbasin. It is held by the Town of Burnsville WWTP with a total permitted flow of 0.8 MGD. Refer to Appendix VI for identification and more information on individual NPDES permit holders. There are no registered animal operations listed for this subbasin.

A map including the locations of NPDES discharges and water quality monitoring stations is presented in Figure 11. Table 16 contains a summary of assessment units and lengths, streams monitored, monitoring data types, locations and results, along with use support ratings for waters in this subbasin. Refer to Appendix X for a complete listing of monitored waters and more information about use support ratings.

There were four benthic macroinvertebrate and three fish community samples (Figure 11 and Table 16) collected during this assessment period. Data were also collected from one ambient monitoring station. Refer to the *2003 French Broad River Basinwide Assessment Report* at <http://www.esb.enr.state.nc.us/bar.html> and Appendix IV for more information on monitoring.

Waters in the following sections are identified by assessment unit number (AU#). This number is used to track defined segments in the water quality assessment database, 303(d) Impaired waters list and the various tables in this basin plan. The assessment unit number is a subset of the DWQ index number (classification identification number). A letter attached to the end of the AU# indicates that the assessment is smaller than the DWQ index segment. No letter indicates that the assessment unit and the DWQ index segment are the same.

Use support ratings for all waters in subbasin 04-03-07 are summarized in Section 7.2. Recommendations, current status and future recommendations for previously or newly Impaired waters are discussed in Section 7.3. Waters with noted water quality impacts are discussed in Section 7.4. Water quality issues related to the entire subbasin are discussed in Section 7.5.

Figure 11 French Broad River Subbasin 04-03-07

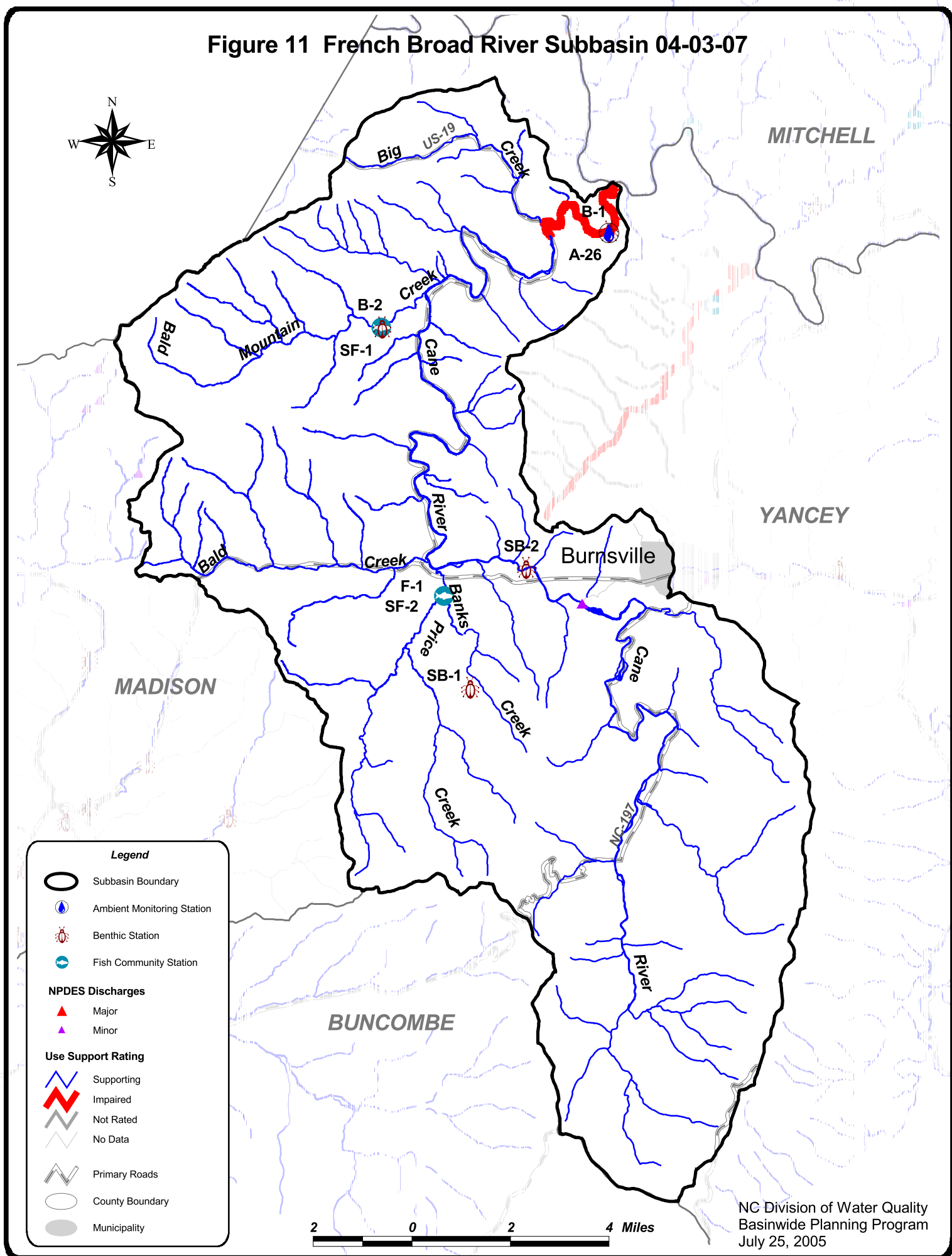


Table 16 DWQ Assessment and Use Support Ratings Summary for Monitored Waters in Subbasin 040307

Assessment Unit #	Name	Length/Area		AL	REC	Benthic Community			Fish Community			Ambient Data	
7-3-(13.7)a	Cane River	21.6	Miles	S	S	SB-2	E	2002					
7-3-(13.7)b	Cane River	3.5	Miles	I	ND	B-1	E	2002				A-26	turbidity 20%
7-3-21	Price Creek	8.0	Miles	S	ND				F-1	G	2002		
	Price Creek	8.0	Miles	S	ND				SF-2	GF	1997		
7-3-21-4	Banks Creek	4.2	Miles	S	ND	SB-1	NI	2002					
7-3-32	Bald Mountain Creek	8.0	Miles	S	ND	B-2	E	2002	SF-1	NR	1997		

Assessment Unit # - Portion of DWQ Classified Index where monitoring is applied to assign a use support rating.

Use Categories:	Monitoring data type:	Bioclassifications:	Use Support Ratings 2004:	Ambient Data
AL - Aquatic Life	F - Fish Community Survey	E - Excellent	S - Supporting	nce - no criteria
REC - Recreation	B - Benthic Community Survey	G - Good	I - Impaired	ce - criteria exce
	SF - Special Fish Community Study	GF - Good-Fair	NR - Not Rated	
	SB - Special Benthic Community Study	F - Fair	ND - No Data	
	A - Ambient Monitoring Site	P - Poor		
		NI - Not Impaired		

Table 17 Summary of Use Support Ratings by Use Category in Subbasin 04-03-07

Use Support Rating	Aquatic Life	Fish Consumption	Recreation	Water Supply
Monitored Waters				
Supporting	41.7 mi	0.0	21.6 mi	0.0
Impaired	3.5 mi	0.0	0.0	0.0
Not Rated	0.0	0.0	0.0	0.0
Total	45.2 mi 0.0 ac	0.0	21.6 mi 0.0 ac	0.0
Unmonitored Waters				
Supporting	168.7 mi	0.0	0.0	55.9 mi
Impaired	0.0	0.0	0.0	0.0
Not Rated	0.0	0.0	0.0	0.0
No Data	3.7 mi	217.6 mi	196.0 mi	0.0
Total	172.4 mi 0.0 ac	217.6 mi	196.0 mi	55.9 mi
Totals				
All Waters*	217.6 mi 0.0 ac	217.6 mi 0.0 ac	217.6 mi 0.0 ac	55.9 mi 0.0 ac

* Total Monitored + Total Unmonitored = Total All Waters.

Refer to Appendix X for a complete list of monitored waters and more information on use support ratings.

7.2 Use Support Assessment Summary

Use support ratings were assigned for waters in subbasin 04-03-07 in the aquatic life, recreation, fish consumption and water supply categories. There are no fish consumption advisories in this subbasin; therefore, all waters are No Data in the fish consumption category. In the water supply category, all waters are Supporting on an evaluated basis based on reports from DEH regional water treatment plant consultants.

There were 45.2 stream miles (20.8 percent) monitored during this assessment period in the aquatic life category. Of these, 3.5 stream miles (<2 percent) are Impaired. Refer to Table 17 for a summary of use support ratings for waters in subbasin 04-03-07.

7.3 Status and Recommendations of Previously and Newly Impaired Waters

The following waters were either identified as Impaired in the previous basin plan (2000) or are newly Impaired based on recent data. If previously identified as Impaired, the water will either remain on the state's 303(d) list or will be delisted based on recent data showing water quality improvements. If the water is newly Impaired, it will likely be placed on the 2006 303(d) list. The current status and recommendations for addressing these waters are presented below, and each is identified by an assessment unit number (AU#). Information regarding 303(d) listing and reporting methodology is presented in Appendix VII.

7.3.1 Little Creek (AU# 7-3-33)

2000 Recommendations

Little Creek was listed on the 2000 (not yet approved) 303(d). Use support methodology has been improved, and only monitored data are now used in use support determinations (see Appendix X). However, this stream was required to remain on the 303(d) list until sampling was conducted to assess current water quality conditions. Refer to Appendix VII for more information on the state's 303(d) methodology and listing requirements.

Current Status and 2005 Recommendations

Little Creek was delisted from the state's 2000 303(d) Impaired waters list. Refer to Appendix VII for more information on the state's 303(d) methodology and listing requirements. Little Creek was previously rated for sediment based on erroneously evaluated information. Using updated use support methodology, Little Creek was removed from the 303(d) list and is no longer considered Impaired.

7.3.2 Cane River [AU#7-3-(13.7)b]

Current Status and 2005 Recommendations

Although the benthic macroinvertebrate data from Cane River near Sioux received an Excellent bioclassification at site B-1, the ambient station at site A-26 found high turbidity levels. Therefore, this section of Cane River, from Big Creek to the North Toe River (3.5 miles), is Impaired due to exceeded turbidity criteria. Cane River is classified as a trout stream and has a turbidity standard of 10 NTU. No more than 10 percent of the monthly samples collected during this assessment period should exceed the standard. At site A-26, 20.4 percent of the samples exceeded the turbidity standard.

DWQ will continue to monitor Cane River and work with local agencies to identify the source(s) of turbidity. During land-disturbing/construction activities, water quality should be considered, and BMPs should be installed to minimize or prevent future impacts to water quality in the Cane River watershed. A TMDL management strategy should be developed in the future for the turbidity violation. The NC Wildlife Resources Commission (WRC) has identified Cane River as an area that supports listed and otherwise rare and sensitive aquatic species. Care should be taken to protect these species and their aquatic habitat.

7.4 Status and Recommendations for Waters with Noted Impacts

The surface waters discussed in this section are not Impaired. However, notable water quality problems and concerns were documented for these waters during this assessment. Attention and resources should be focused on these waters to prevent additional degradation and facilitate water quality improvements. DWQ will notify local agencies of these water quality concerns and work with them to conduct further assessments and to locate sources of water quality protection funding. Additionally, education on local water quality issues and voluntary actions are useful tools to prevent water quality problems and to promote restoration efforts. Nonpoint source program agency contacts are listed in Appendix VIII.

7.4.1 Price Creek (AU# 7-3-21)

Current Status and 2005 Recommendations

Price Creek, from source to Cane River (8.0 miles), is Supporting based on a Good bioclassification at site F-1. Compared to the samples collected in 1997 (SF-2), the fish community was more diverse, but ten species were represented by only one or two individuals, reducing the percentage of species with multiple age classes to the second lowest site in the basin. DWQ will continue to monitor water quality in the Price Creek watershed and work with local agencies to maintain the fish population.

Water Quality Initiatives

Because of the potential water quality problem noted above, Price Creek has been identified by the NC Ecosystem Enhancement Program (NCEEP) as one of 28 local watersheds in the basin with the greatest need and opportunity for stream and wetland restoration efforts. This watershed will be given higher priority than nontargeted watersheds for implementation of NCEEP restoration projects.

7.4.2 Bald Mountain Creek (AU# 7-3-32)

Current Status and 2005 Recommendations

Bald Mountain Creek, from source to Cane River (8.0 miles), is Supporting due to an Excellent bioclassification at site B-2 and a Not Rated bioclassification at site SF-1. Bald Mountain Creek has been sampled three times for benthic macroinvertebrates and has continually improved from Good-Fair (1992) to Good (1997) to the most recent Excellent (2002) bioclassification. Water quality and habitat conditions are likely influenced by nonpoint source runoff from agriculture, forest and rural residential properties. The stream is also receiving runoff from SR 1408, which parallels the creek for most of its length. DWQ will continue to monitor water quality in Bald Mountain Creek.

7.5 Additional Water Quality Issues within Subbasin 04-03-07

The following section discusses issues that may threaten water quality in the subbasin that are not specific to particular streams, lakes or reservoirs. The issues discussed may be related to waters near certain land use activities or within proximity to different pollution sources.

This section also identifies those surface waters given an Excellent bioclassification, and therefore, may be eligible for reclassification to a High Quality Water (HQW) or an Outstanding Resource Water (ORW). It should be noted that these are streams that were sampled by DWQ during this basinwide cycle. There may be other tributaries eligible for reclassification in addition to the ones listed below. For more information regarding water quality standards and classifications, refer to Chapter 8.

7.5.1 Bald Creek (AU#7-3-22)

The NC Department of Transportation (NCDOT) plans to widen US 19/19E to a multilane highway from future I-26 (existing US 19/23) in Madison County to SR 1186 west of Micaville in Yancey County. The total project length is 21 miles. In order to assess existing water quality concerns, Equinox Environmental Consultation and Design, Inc. (Equinox) completed a preliminary watershed characterization assessment for NCEEP during the winter of 2004. The characterization assessment identified inadequate wastewater treatment, habitat degradation, and poor riparian and stream habitats as the primary water quality concerns in this watershed (NCDENR-NCEEP, February 2004b).

Bald Creek is a small rural watershed (approximately 18 square miles) in an area of steep ridges and valleys. Many of the stream valleys have been cleared for homes, gardens and small farms. Streams in the watershed often have very little woody riparian vegetation and course through fields or a landowner's yard. Almost all of the streams in this watershed are designated trout waters. Fish monitoring by Equinox revealed very limited trout populations in many of these streams, and noted that instream habitats have been degraded by channelization, removal of riparian vegetation, and sedimentation. For a copy of the preliminary watershed characterization assessment, visit www.nceep.net/services/lwps/Bald_Creek/bald_creek_phase_I_doc_final.pdf. A more detailed assessment is scheduled for completion in late 2005.

In 1999, the NC Department of Environmental Health (NCDEH) Wastewater Discharge Elimination (WaDE) Program surveyed household waste systems in the Bald Creek watershed. Thirty-two (32) percent of households had waste systems that were inadequate because the systems were associated with straight piped waste, failing septic systems, and/or unpermitted pit privys. Eighteen (18) percent of households had blackwater straight pipes. Often, noncompliant systems had grey water and blackwater pipes, but NCDEH only recorded what was seen as the worst problems on site. To date, 15 repairs have been completed and were funded through grants from the Clean Water Management Trust Fund (CWMTF). Repairs have also been made in many of the subwatersheds, but there are still many more that need to be fixed (NCDENR-NCEEP, February 2004b). It is recommended that additional funds be made available to improve wastewater treatment in this watershed. For more information on this survey and the impacts of straight piping on water quality, see Section 7.5.2.

New residential development is occurring in this watershed and will likely continue with the completion of the new highway project. Sedimentation could pose a significant water quality problem. It is recommended that construction activities follow any existing sedimentation and erosion control programs, and developers adequately design their sites to minimize stormwater runoff (NCDENR-NCEEP, February 2004b). Many of the tributaries to Bald Creek (including Possumtrot and Elk Wallow Creek) are designated Trout (Tr) waters by DWQ. Under the NC Sedimentation and Pollution Control Act (SPCA), development along trout waters must maintain

either an undisturbed zone of 25 feet or of sufficient width to confine visible siltation within 25 percent of the buffer zone nearest the development/construction activities. Refer to Section 8.1.2 for more information. It is also recommended that education efforts be undertaken to make sure that local governments and citizens are aware of this regulation and follow it during construction activities. It is also recommended that Yancey County develop a local sediment and erosion control program to minimize the impact of development on water quality.

7.5.2 Straight Pipes

In this subbasin, wastewater from many households is not treated at wastewater treatment plants associated with NPDES discharge permits. The wastewater from these households is treated on the property through the use of septic systems. Older or improperly maintained septic systems can fail to properly treat waste and "bubble" or leak to the surface. Wastewater from some homes in this area illegally discharge directly to streams through what is known as a "straight pipe". Wastewater from these failing or illegal systems can make its way to streams or contaminate groundwater. The discharge of untreated or partially treated sewage can be extremely harmful to humans and the aquatic environment.

According to a 1999 household survey of 313 homes in this Bald Creek watershed, the Toe River Health District, as part of the Toe River Clean Water Project, obtained the following data (NCDENR-NCEEP, February 2004b):

- 163 Properly functioning systems
- 76 Malfunctioning systems
- 42 Blackwater pipes
- 29 Grey water pipes
- 3 Failing Septic Systems
- 2 Unpermitted Pit Privies

For more information on straight pipes, wastewater and/or failing septic systems, see Chapter 13. Information is also available by contacting the environmental health section of the county health department (Appendix VIII) or the NCDEH On-Site Wastewater Section (OSWW) WaDE Program by calling 1-866-223-5718 or by visiting <http://www.deh.enr.state.nc.us/oww/Wade/wade.htm>.

7.5.3 Surface Waters Identified for Potential Reclassification

Cane River [AU# 7-3-(13.7)a]

Cane River, from the Town of Burnsville Water Supply Intake to Big Creek (21.6 miles), is Supporting due to an Excellent bioclassification at site SB-2. The current DWQ classification is C Tr.

Bald Mountain Creek [AU# 7-3-32]

Bald Mountain Creek, from source to Cane River (8.0 miles), is Supporting due to an Excellent bioclassification at site B-2. The current DWQ classification is C Tr. Refer to Section 7.4.2 for more information.