Chapter 2
New River Subbasin 05-07-02

Including the: North Fork New River, Big Laurel Creek, Big Horse Creek, Helton Creek, Three Top Creek, Buffalo Creek and Little Buffalo Creek

2.1 Subbasin Overview

Subbasin 05-07-02 at a Glance

Land and Water Area

Total area:	255 mi²
Land area:	254 mi²
Water area:	<1 mi²

Population Statistics

2000 Est. Pop.:	24,140 people
Pop. Density:	95 persons/mi²

Land Cover (percent)

Forest/Wetland:	84%
Surface Water:	<1%
Urban:	<1%
Cultivated Crop:	<1%
Pasture/ Managed Herbaceous:	15%

Counties

Ashe and Watauga

Municipalities

Lansing and West Jefferson

Aquatic Life Monitored Streams Statistics

Total Streams:	136.8 mi
Total Supporting:	132.4 mi
Total Impaired:	4.4 mi
Total Not Rated:	0 mi

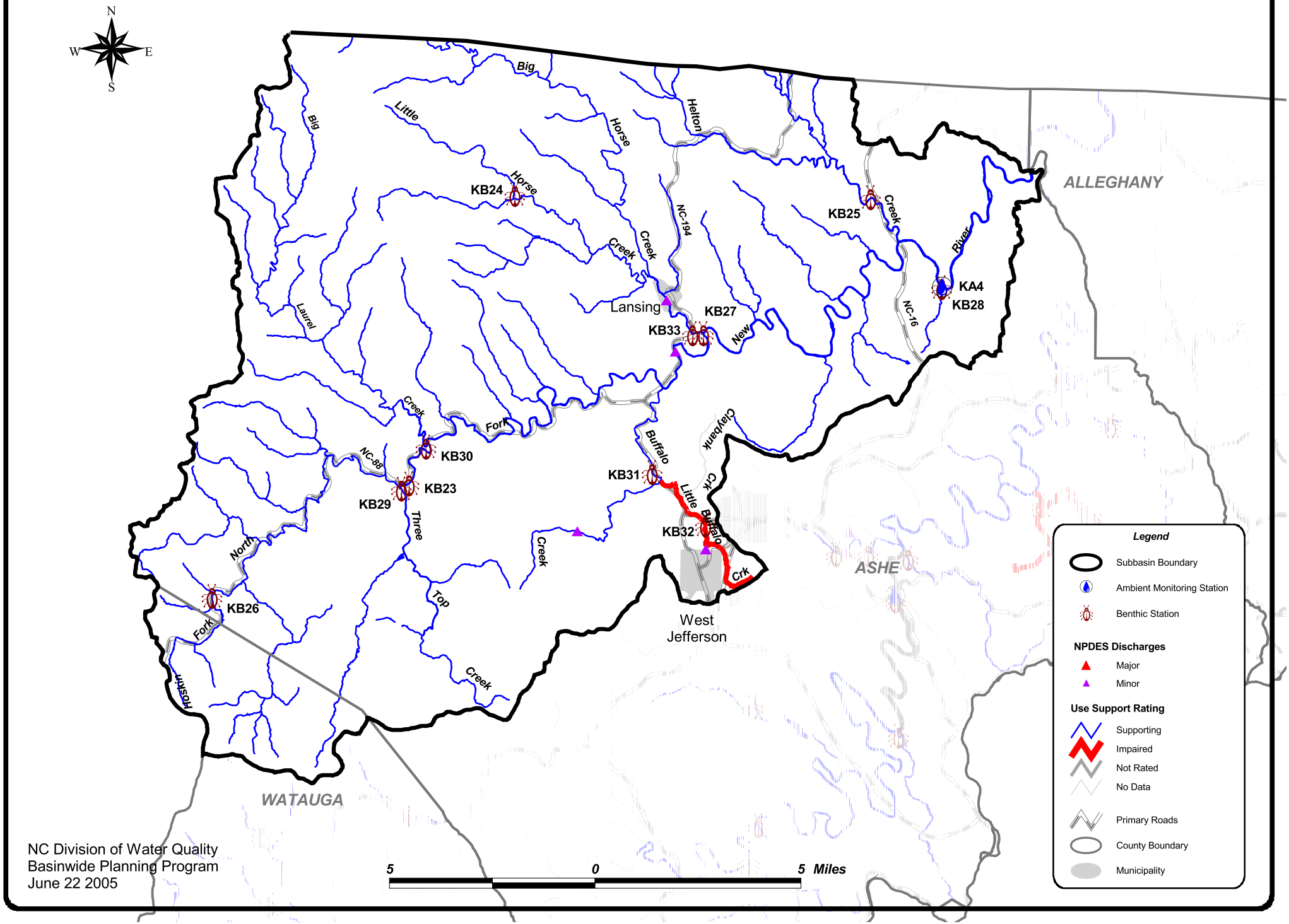
The majority of this subbasin lies within Ashe County, with the headwaters of the North Fork New River beginning in Watauga County and the headwaters of Big Horse Creek and Helton Creek beginning in Virginia. The North Fork New River flows in an east-northeast direction before it converges with the South Fork New River to form the New River.

Land in many areas of this subbasin is typified by steep, mountainous, forested slopes with little in the way of urban development. Urban land use is restricted to the areas surrounding Lansing and West Jefferson. During the last ten years (1990 to 2000), population in West Jefferson has increased by 7.9 percent but has actually decreased in Lansing by 11.7 percent.

Outside the urban areas, rural residential properties and pasturelands are scattered throughout the watershed. Agricultural activities in the subbasin have historically consisted of pasture and cultivated cropland, but within the last 15 years, Christmas tree farming has increased. Additional information regarding population and land use changes throughout the entire basin can be found in Appendix I and III, respectively.

There are four individual NPDES wastewater discharge permits in this subbasin with a total permitted flow of 1.58 MGD. The largest of these is held by the United Chemi-Con Manufacturing, Inc. facility with a total permitted discharge of 1.02 MGD. The second largest discharge is associated with the West Jefferson Wastewater Treatment Plant (WWTP). Between 2002 and 2003, daily or weekly averages were exceeded for total cadmium, total mercury, fecal coliform bacteria, and total suspended solids (TSS). Pretreatment issues are continually being addressed, and the West Jefferson WWTP received an upgrade in 2002. See Section 2.3.1 for more information. For the listing of NPDES permit holders, refer to Appendix VI.

Figure 6 New River Subbasin 05-07-02



NC Division of Water Quality
Basinwide Planning Program
June 22 2005

Table 6 Use Support New River Subbasin: 05-07-02

AU# / Description	Classification	Length/Area		Aquatic Life Assessment					Recreation Assessment			Stressors	Sources
				AL Rating	Station	Result	Year/ Parameter	% Exc	REC Rating	Station	Result		
Big Horse Creek (Horse Creek)													
10-2-21-(7)	C +	6.5	FW Miles	S					ND			Habitat Degradation	Unknown
From SR#1353 (Tuckerdale) to North Fork New R					KB33	E	2003						
Big Laurel Creek													
10-2-14	C Tr +	17.5	FW Miles	S					ND				
From source to North Fork New River					KB30	E	2003						
Buffalo Creek													
10-2-20	C Tr +	9.7	FW Miles	S					ND				
From source to North Fork New River					KB31	E	2003						
Helton Creek													
10-2-27	C Tr +	19.0	FW Miles	S					ND				
From NC-VA State Line to North Fork New River					KB25	E	2003						
Hoskin Fork													
10-2-7	C Tr +	5.2	FW Miles	S					ND				
From source to North Fork New River					KB26	E	2003						
Little Buffalo Creek													
10-2-20-1	C Tr +	4.4	FW Miles	I					ND			Habitat Degradation	WWTP NPDES
From source to Buffalo Creek					KB32	P	2003					Habitat Degradation	Impervious Surfac
Little Horse Creek													
10-2-21-8	C Tr +	10.9	FW Miles	S					ND			Habitat Degradation	Unknown
From source to Big Horse Creek					KB24	G	2003						
North Fork New River													
10-2-(1)	C Tr +	14.1	FW Miles	S					ND			Habitat Degradation	Unknown
From source to Three Top Creek					KB23	E	2003						
10-2-(12)	C +	36.5	FW Miles	S	KA4	NCE			S	KA4	NCE		
From Three Top Creek to New River					KB23	E	2003						
					KB27	E	2003						
					KB28	E	2003						

Table 6 Use Support New River Subbasin: 05-07-02

AU#	Classification	Length/Area	Description	Aquatic Life Assessment					Recreation Assessment			Stressors	Sources
				AL Rating	Station	Result	Year/ Parameter	% Exc	REC Rating	Station	Result		
Three Top Creek													
10-2-13	C Tr +	13.2 FW Miles	From source to North Fork New River	**S**	KB29	G	2003		ND				

Use Categories:
AL - Aquatic Life
REC - Recreation

Monitoring data type:
KF - Fish Community Survey
KB - Benthic Community Survey
KA - Ambient Monitoring Site
KL- Lake Monitoring

Miles/Acres
FW- Fresh Water

Results:
E - Excellent
G - Good
GF - Good-Fair
F - Fair
P - Poor
NI - Not Impaired

Use Support Ratings 2005:
S - Supporting
I - Impaired
NR - Not Rated
NR*- Not Rated for Recreation (screening criteria exceeded)
ND - No Data Collected to make assessment

Results
CE - Criteria Exceeded > 10% and more than 10 samples
NCE - No Criteria Exceeded

Aquatic Life Rating Summary

S	m	132.4	FW Miles
I	m	4.4	FW Miles
S	e	159.4	FW Miles
ND		2.7	FW Miles

Recreation Rating Summary

S	m	36.5	FW Miles
ND		262.5	FW Miles

Fish Consumption Rating Summary

NR	e	298.9	FW Miles

A map including the locations of the NPDES facilities and water quality monitoring stations is presented in Figure 6. Table 6 contains a summary of assessment unit numbers (AU#) and lengths, streams monitored, monitoring data types, locations and results, along with use support ratings for waters in the subbasin. Refer to Appendix IX for a complete listing of monitored waters and more information about use support ratings.

There were 11 benthic macroinvertebrate community samples collected during this assessment period. Data were also collected from one ambient monitoring station. This ambient station is located on the mainstem of the North Fork New River near Crumpler (NC16). No water quality standards were violated. Refer to the *2004 New River Basinwide Assessment Report* at http://www.esb.enr.state.nc.us/Basinwide/New%20River%20Basin%20Aug%202004.pdf and Appendix IV for more information on monitoring.

Waters in the following sections and in Table 6 are identified by an assessment unit number (AU#). This number is used to track defined segments in the water quality assessment database, list 303(d) Impaired waters and identify waters throughout the basin plan. The AU# 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 AU# and the DWQ index segment are the same.

2.2 Use Support Assessment Summary

All surface waters in the state are assigned a classification appropriate to the best-intended use of that water. Waters are regularly assessed by DWQ to determine how well they are meeting their best-intended use. For aquatic life, an Excellent, Good, Good-Fair, Fair or Poor bioclassification is assigned to a stream based on the biological data collected by DWQ. For more information about bioclassification and use support assessment, refer to Appendices IV and IX, respectively. Appendix X provides definitions of the terms used throughout this basin plan.

Use support ratings were assigned for waters in subbasin 05-07-02 in the aquatic life, recreation, fish consumption, and water supply categories. No fish consumption advisories or advice have been issued for this subbasin and all waters are Not Rated on an evaluated basis in the fish consumption category. There are no designated water supply waters within this subbasin.

There were 136.8 stream miles (45.8 percent) monitored during this assessment period in the aquatic life category. Approximately 4.4 stream miles (1.5 percent) are Impaired. Refer to Table 7 for a summary of use support ratings for waters in subbasin 05-07-02.

2.3 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

Table 7 Summary of Use Support Ratings by Category in Subbasin 05-07-02

Use Support Rating	Aquatic Life	Fish Consumption	Recreation	Water Supply
Monitored Waters				
Supporting	132.4 mi	0.0	36.4 mi	0.0
Impaired	4.4 mi	0.0	0.0	0.0
Not Rated	0.0	0.0	0.0	0.0
Total	**136.8 mi**	**0.0**	**36.4 mi**	**0.0**
Unmonitored Waters				
Supporting	159.4 mi	0.0	0.0	0.0
Impaired	0.0	0.0	0.0	0.0
Not Rated	0.0	298.9 mi	0.0	0.0
No Data	2.7 mi	0.0	262.5 mi	0.0
Total	**162.1 mi**	**298.9 mi**	**262.5 mi**	**0.0**
Totals				
All Waters*	**298.9 mi**	**298.9 mi**	**298.9 mi**	**0.0**

* Total Monitored + Total Unmonitored = Total All Waters.

each is identified by an AU#. Information regarding 303(d) listing and reporting methodology is presented in Appendix VII.

2.3.1 Little Buffalo Creek [AU# 10-2-20-1]

2000 Recommendations

Little Buffalo Creek, from source to Buffalo Creek (3.8 miles), was Partially Supporting due to point (West Jefferson WWTP) and nonpoint (i.e., urban/stormwater runoff, extensive loss of riparian vegetation) sources of pollution. Sections of the creek have been placed in culvert pipes, eliminating riparian zones, and many other areas had manicured grass for vegetative cover. The Town of West Jefferson was awaiting final construction approval for an upgrade to their WWTP. In addition, DWQ recommended the development of an erosion control ordinance to reduce the effects of sediment loss associated with new development activities in the surrounding area and a community education program related to stormwater runoff and the importance of riparian zones.

Current Status

Little Buffalo Creek, from source to Buffalo Creek (4.4 miles), is Impaired due to a Poor bioclassification at site KB32. Little Buffalo Creek is a small tributary of Buffalo Creek and receives effluent and urban runoff from the Town of West Jefferson. The substrate was embedded in the sampling reach, and riparian areas were limited and consisted mostly of grass.

Little Buffalo Creek has historically received a Poor and/or Fair bioclassifications and is likely impacted by effluent from the Town of West Jefferson's WWTP as well as nonpoint sources. Between 2002 and 2003, daily or weekly averages were exceeded for total cadmium, total mercury, fecal coliform bacteria, and total suspended solids (TSS). Pretreatment issues are continually being addressed. The West Jefferson WWTP received an upgrade in 2002. Using nearly $3 million in funds provided by the NC Construction Grants & Loans Section of DENR and Clean Water Bonds (NC Rural Economic Development Center), an ultraviolet (UV)-chlorination treatment process was added. Upgrades also included the addition of an oxidation ditch and tertiary filters. Discharge was increased to 0.5 MGD. The current bioclassification is based on benthic data collected in 2003. Water quality improvements associated with upgrades to the WWTP were likely overshadowed by a two-year (2001 to 2002) drought, which may have exacerbated the effluent impacts to the stream.

Other point sources that may also have contributed to the current bioclassification include: a glue spill from Catawissa Lumber; an overflow of a recycling pond at Cardinal Stone; and a 100-gallon gasoline spill in a tributary just above the WWTP. Information about each of these incidents is described below.

- Glue was released from a broken pipe at Catawissa Lumber in June 2001. The pipe was repaired, and no additional impacts were noted.

- Cardinal Stone paid a civil penalty when the facility discharged water from a recycling pond, violating the water quality standard for turbidity. The discharge occurred during a storm event in April 2000. Cardinal Stone has designed a new system to prevent the overflow from occurring during future rain events. New prevention measures include dredging the pond on a regular and planned schedule.

- One hundred gallons of gasoline was spilled into a tributary just above the WWTP in April 2001. The DWQ regional office in Winston-Salem (WSRO) issued a Notice of Violation and referred the incident to the Environmental Protection Agency (EPA). EPA issued a No Further Action letter to the responsible party. This letter indicates that appropriate clean-up measures were taken, and that there is no further threat to soil or water in the immediate vicinity of the spill.

2005 Recommendations

Little Buffalo Creek will remain on the list of impaired waters for 2006. DWQ will continue to monitor the creek and work with the Town of Jefferson to minimize impacts from the WWTP discharge and nonpoint sources. In addition, DWQ will assist local officials in identifying funding sources in order to raise awareness in the community on the importance of riparian zones and impacts associated with stormwater runoff.

2.4 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 in locating 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. The current status and recommendations for addressing these waters are presented below, and each is identified by an AU#. Nonpoint source program agency contacts are listed in Appendix VIII.

2.4.1 Little Horse Creek [AU# 10-2-21-8]

Current Status
Little Horse Creek, from source to Big Horse Creek (10.9 miles), is Supporting due to a Good bioclassification at site KB24. Little Horse Creek has been sampled twice (1998 and 2003) and received a Good bioclassification each time. However, the substrate was heavily embedded, which may reduce the available habitat for benthic communities. Land use adjacent to the sampling reach is mostly forested, with scattered residential properties and pasture.

2005 Recommendations
In order to maintain the water quality in Little Horse Creek, DWQ recommends that local agencies work with landowners to install best management practices (BMPs) along the streambanks to limit sedimentation and erosion. Since the residential properties are outside of any town or city limits, it is likely that they are equipped with on-site wastewater systems (i.e., septic systems). Septic systems should be monitored and maintained on a regular basis to prevent leakage and impact to Little Horse Creek.

2.4.2 Big Horse Creek [AU# 10-2-21-(7)]

Current Status
Big Horse Creek, from State Route #1353 to North Fork New River (6.5 miles), is Supporting due to an Excellent bioclassification at site KB33. Land use generally consists of fallow fields and pasturelands. A few scattered residential properties are also located throughout the watershed. No streambank erosion was observed in the sampling reach, and riparian areas were adequate; however, the substrate was highly embedded.

For two years (April 2002 to April 2004), monthly chemistry data has been analyzed from Big Horse Creek by the Volunteer Water Information network (VWIN). Big Horse Creek was found to exceed the trout turbidity standard during 42 percent of the monitoring events. Sedimentation and nutrient levels are also elevated in Big Horse Creek following rainfall events (Maas, et *al*., August 2004). These elevated sediment and nutrient levels are most likely associated with nonpoint runoff.

2005 Recommendations
In order to maintain the water quality in Big Horse Creek, DWQ recommends that local agencies work with landowners to install BMPs along the streambanks to limit sedimentation and erosion. Since the residential properties are outside of any town or city limits, it is likely that they are equipped with on-site wastewater systems (i.e., septic systems). Septic systems should be monitored and maintained on a regular basis to prevent leakage and impact to Big Horse Creek.

Water Quality Initiatives
Ashe County received over $600,000 in Clean Water Management Trust Fund (CWMTF) money to conduct a Virginia Creeper Trail Feasibility Study along Big Horse Creek. In North Carolina, Virginia spiraea (*Spiraea virginiana*) is an endangered plant species commonly found in the rocky, flood-scoured riverbanks of gorges or canyons.

The NC Ecosystem Enhancement Program (NCEEP) has initiated a stream restoration project along Ripshin Creek [AU# 10-2-21-3], a tributary to Big Horse Creek. NCEEP has identified stream restoration potential along 3,500 linear feet of streambank and plans to enhance the buffer of an additional 19,000 linear feet. In addition to streambank restoration and enhancement, there is also the potential to preserve 7.4 acres of wetland and enhance an additional 5.1 acres. For more information about NCEEP, see Chapter 12 or visit http://www.nceep.net.

Several wetland and agricultural BMPs were also installed throughout the Big Horse Creek watershed. During this assessment period, funds totaling $5,360 were provided by the NCACSP and were administered by the New River SWCD. Using this money, 42 acres of cropland were converted, and two acres of critical areas were planted. For more information on the NCASCP, see Chapter 8. Land has also been donated for conservation easements in the area of Pond Mountain, near the headwaters of the watershed.

2.4.3 North Fork New River [AU# 10-2-(1) and 10-2-(12)]

Current Status
North Fork New River, from source to New River (87.0 miles) is Supporting due to Excellent bioclassifications at sites KB23, KB27, and KB28. In addition, many of the tributaries draining to the North Fork New River also received Good and/or Excellent bioclassifications.

At the most upstream site (KB23), land use is a mix of forest, agriculture (i.e., pasture, Christmas trees, burley tobacco) and residential properties. The site supports a highly diverse aquatic community, but the pool habitats were filled with sediment and low gradient riffle areas were embedded.

At site KB27, the sampling reach is mostly rocky with well-defined gravel riffles. Here, instream habitat is plentiful, and the streambanks are stable. Land use along both sides of the river consisted of open pasture and agricultural fields.

The most downstream site (KB28) has a total drainage area of 224 square miles. The gradient is higher here than in the headwaters, creating gorge-like conditions along some sections of the river. Land use along the sampling reach is primarily forested with scattered pastures and fallow fields, and instream habitat is favorable for colonization. All three sites have historically received Good and/or Excellent bioclassifications.

2005 Recommendations
In order to maintain the water quality in the North Fork New River, DWQ recommends that local agencies work with landowners to install appropriate BMPs along the streambanks to limit sedimentation and erosion. Since the residential properties in the headwaters are outside any town or city limits, it is likely that they are equipped with on-site wastewater systems (i.e., septic

systems). Septic systems should be monitored and maintained on a regular basis to prevent leakage and impact to the river.

Water Quality Initiatives
In Bent River Estates, just outside Jefferson, the National Committee for the New River (NCNR) along with the New River Soil and Water Conservation District (SWCD) stabilized and restored nearly 1,400 feet of riparian area. New road and residential development in the area caused large amounts of sediment to enter the river. In some instances, construction activities also contributed to severe streambank erosion. Numerous livestakes were planted along the river's edge on several residential properties to reduce erosion and improve aquatic habitats. Funding for the stabilization project was provided by the U.S. Fish and Wildlife Service (FWS) and the CWMTF. DWQ will continue to work with the local agencies and NCNR to maintain the excellent water quality in the North Fork New River and to educate the community about the importance of riparian areas.

2.4.4 Three Top Creek [AU# 10-2-13]

Current Status
Three Top Creek, from source to the North Fork New River (13.2 miles), is Supporting due to a Good bioclassification at site KB29. Three Top Creek is a headwater tributary of the North Fork New River and drains Bluff and Three Top Mountains in Ashe County. Land use in the area is mostly forested, and streambanks were stable. This high gradient stream has a boulder, gravel and rubble substrate with frequent riffles and an abundant instream habitat. Even though the sampling reach has a good aquatic habitat, DWQ regional staff and local SWCD personnel note that there has been a slight decline in water quality. This decline is most likely associated with residential development along Three Top Road, which parallels the creek for several miles.

2005 Recommendations
In order to maintain the water quality in Three Top Creek, DWQ recommends that local agencies work with landowners to install appropriate BMPs along the streambanks to limit sedimentation and erosion associated with construction activities. DWQ also encourages the importance of community involvement and education related to riparian areas.

2.5 Additional Water Quality Issues within Subbasin 05-07-02

The previous sections discussed water quality concerns for specific stream segments. 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 discusses ideas, rules and practices in place to preserve and maintain the pristine waters of the New River basin. In subbasins 05-07-01 (Chapter 1) and 05-07-02, this is particularly important since many of the waters are designated high quality or outstanding resource waters (HQW and ORW, respectively). Special management strategies, or rules, are in place to better manage the cumulative impact of pollutant discharges, and several landowners have voluntarily participated in land conservation, stabilization and/or restoration projects.

2.5.1 Low Head Dams

Several small, private dams have been constructed on the tributaries leading to the North Fork New River. In some instances, the stream has rerouted itself around the dam, and the dam is no longer serving its function. Improper dam removal can lead to excess sedimentation and scouring conditions that ultimately impact the benthic and fish communities downstream. This was recently seen in September 2003 when DWQ received information that a dam had been removed from a tributary of the North Fork New River, just ¼-mile from the confluence. The dam was removed with the intention of removing old tires, batteries and plastic from along the streambanks. In the process, however, a large amount of sediment was flushed downstream.

Before any dam is repaired, altered or removed, ecological and economic costs should be assessed, and the appropriate federal and state agencies should be contacted. These include the U.S. Army Corps of Engineers (USACE), the DWQ Wetlands & 401 Unit, and the Division of Land Resources (DLR). Any disturbance to the soil or substrate (i.e., bottom material) of a wetland or waterbody, including a streambed, is an impact that may adversely affect the hydrology of an area. For this reason, the regional USACE office should be contacted in order to determine how impacts can be minimized and whether a permit is needed. The USACE issues the following types of permits: Letters of Permission, Nationwide Permits, General or Regional Permits, and Individual Permits. For more information on the types of permits issued by USACE visit http://www.saw.usace.army.mil/wetlands/index.html or contact the USACE Asheville Regulatory Field Office at 828-271-7980.

Section 401 of the Clean Water Act delegates authority to the states to issue a 401 Water Quality Certification for all projects that require a Federal Permit (such as a Section 404 Permit from the USACE). The "401" is essentially a verification by the state that a given project will not degrade waters of the state or otherwise violate water quality standards. For more information on 401 Water Quality Certifications, contact the DWQ Winston-Salem regional office staff at (336) 771-4600.

North Carolina's Dam Safety Laws are implemented by DLR and require an application be submitted to DLR before any repair, alteration or dam removal begins. Dams that are exempt from this process include those that are (1) "under a single, private ownership and provide protection only to land or other property under the same ownership and that does not pose a threat to human life or property below the dam" or (2) "less than 15 feet in height or that has an impoundment capacity of less than 10 acre-feet, unless the Department determines that failure of the dam could result in loss of human life or significant damage to property below the dam." For more information about Dam Safety Laws, contact DLR at (919) 733-4574 or visit them online at http://www.dlr.enr.state.nc.us/.

Several landowners have also approached the New River SWCD for information and funds related to dam removal activities. Currently, North Carolina does not have funds dedicated for dam repair or removal; however, there are general federal, state and local environmental funding programs that could be used for dam removal if the removal were part of a project intended to improve water quality, protect or enhance wildlife habitat, restore natural resources, or alleviate dam safety concerns. Examples of dam removal and funding sources are included in the American Rivers' report entitled *Paying for Dam Removal: A Guide to Selected Funding*

Sources (American Rivers, October 2000). This report is available upon request by calling 202-347-7550 or on-line at www.americanrivers.org.

The National Committee for the New River (NCNR) has an interest in helping landowners in identifying dams in need of removal. NCNR has several documents available for review including the American Rivers document referenced above, as well as studies related to the ecological and social implications of removing a dam. For more information about NCNR and contact information, refer to Chapter 12.

2.5.2 Management Strategies for Water Quality Protection

Municipalities and smaller outlying communities are being pressured to expand and this involves construction and/or developing in areas along tributaries of the North Fork New River and the river itself. HQW and ORW are supplemental classifications to the primary freshwater classification(s) placed on a waterbody (Chapter 4). Management strategies are associated with the supplemental HQW and ORW classifications and are intended to protect the current use of the waterbody.

Waters under special management strategies are designated with a "+" symbol in the stream classifications schedule. Under these strategies, stormwater controls are required on land within one mile of and draining to the designated ORW. Discharge limitations also apply to the "+" designated waters. These limitations were developed using most of the HQW management strategies as a framework. A summary of the special management strategies for HQW and ORW waters can be found in Chapter 1. Detailed information can be found in the document entitled *Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands of North Carolina* (NCDENR-DWQ, August 2004a). This document is available on-line at http://h2o.enr.state.nc.us/admin/rules/. All of the waters in subbasin 05-07-02 are subject to special management strategies.

Many of the streams in this subbasin are also classified as trout (Tr) waters, and therefore, are protected for natural trout propagation and maintenance of stocked trout. There are no watershed development restrictions associated with the trout classification; however, the NC Division of Land Resources (DLR), under the NC Sedimentation and Pollution Control Act (SPCA), has requirements to protect trout streams from land-disturbing activities. Under General Statute 113A-57(1), "waters that have been classified as trout waters by the Environmental Management Commission (EMC) shall have an undisturbed buffer zone 25 feet wide or of sufficient width to confine visible siltation within the twenty-five percent of the buffer zone nearest the land-disturbing activity, whichever is greater." The Sedimentation Control Commission, however, can approve land-disturbing activities along trout waters when the duration of the disturbance is temporary and the extent of the disturbance is minimal. This rule also applies to unnamed tributaries flowing to the affected trout water stream. Further clarification on classifications of unnamed tributaries can be found under Administration Code 15A NCAC 02B .0301(i)(1). For more information regarding land-disturbing activities along designated trout streams, see the DLR website at http://www.dlr.enr.state.nc.us/.