

Watershed Restoration Plan for the New River Basin



2001



Executive Summary

This document, prepared by the North Carolina Wetlands Restoration Program (NCWRP), presents a description of Targeted Local Watersheds within the New River Basin. It is the first update since the original Basinwide Wetlands and Riparian Restoration Plan for the New River Basin was released in 1998. This plan is different from the preceding document in that a more in-depth description is provided focusing on the areas of interest, the Targeted Local Watersheds. Local watersheds are targeted based on their need and opportunity for stream, wetland and buffer restoration. The watershed approach is the outgrowth of the recognition that water quality improvements are likely to have more pronounced and longer lasting effects if assessments and restoration efforts are focused on the local watershed level as opposed to discrete and isolated stream segments within the basin as a whole. The NCWRP hopes that the geographic targets provided will be used by other agencies, groups and local governments for the location of water quality improvement projects. Coordinating project implementation in watersheds with significant restoration need can allow for organizations with similar goals to generate greater positive ecological impact on North Carolina's aquatic resources through complementary efforts with cumulative impacts.

This document is designed for use in conjunction with the Guide to NCWRP's Watershed Restoration Planning Strategy (Version 1). General information pertaining to program goals and plan methodology are provided in the planning guide. Information relating to New River Basin restoration goals and basin-specific resource assessments are contained within this Watershed Restoration Plan.

In general, this document provides an overview of the New River Basin, describes the Priority Subbasin, and describes each Targeted Local Watershed. In the overview of the basin (Section 2) is a map showing all three New River Subbasins highlighting the Priority Subbasin and the three Targeted Local Watersheds. Section 2 also contains a general description of the basin, habitat information, permitted wetlands losses and use support information.

In Section 3, basin-specific restoration goals are outlined, as well as a brief discussion of the Priority Subbasin and Targeted Local Watershed selection process. This section also provides detailed information regarding the stakeholder process that was a valuable part of the development of this plan, as public input was solicited and weighed heavily in the selection of Targeted Local Watersheds.

The Priority Subbasin and Targeted Local Watersheds are described in Section 4. Maps of Targeted Local Watersheds follow the text describing the watersheds within the Priority Subbasin. One Targeted Local Watershed has been selected outside of the original Priority Subbasin. It was selected on the merit of potential stream restoration opportunities in that watershed. This Targeted Local Watershed is described at the end of Section 4.

Section 5 contains descriptions of several water quality initiatives taking place within the New River Basin, as well as contact information.

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Section 1: Introduction

Purpose and Background of the NC Wetlands Restoration Program

Recognizing the value of wetlands and riparian areas for maintaining water quality, storing floodwaters, providing fish and wildlife habitat, and performing other valuable functions, the North Carolina General Assembly established the North Carolina Wetlands Restoration Program (NCWRP) in 1996 (N.C.G.S. 143-214.8-214.13). The purpose of the NCWRP is to restore, enhance, preserve and create wetlands, stream, and streamside (riparian) areas throughout North Carolina's seventeen major river basins. The goals of the program are:

1. To protect and improve water quality through restoration of wetlands, streams and riparian buffer functions and values lost through historic, current, and future permitted impacts.
2. To achieve a net increase in wetlands acres, functions, and values in all of North Carolina's major river basins.
3. To promote a comprehensive approach for the protection of natural resources.
4. To provide a consistent approach to address compensatory mitigation requirements associated with wetland regulations, stream and riparian buffer regulations, and to increase the ecological effectiveness of compensatory mitigation projects.

Purpose of Watershed Restoration Plans

To accomplish the goals described above, the NCWRP develops Watershed Restoration Plans to focus planning and implementation of restoration activities within each of the 17 major river basins. These plans provide information on areas in the state that have been determined to be a priority for restoration efforts. The NCWRP uses the Watershed Restoration Plans to target degraded wetland and riparian areas which, if restored, could contribute significantly to the goal of protecting and enhancing watershed functions.

A significant purpose of this document is to communicate to interested parties and individuals specific areas in the New River Basin that will be the focus of projects for the NCWRP. The document concentrates on identifying the NCWRP's areas of focus and providing justification for those choices. It is intended to complement two other NC Division of Water Quality documents: 1) The New River Basinwide Water Quality Plan (2000), and 2) the Guide to the NCWRP's Watershed Restoration Planning Strategy (version 1).

One purpose for communicating the specific watersheds in which the NCWRP intends to focus its projects is to encourage other groups and organizations to consider implementing projects in these areas also. It is the NCWRP's position that multiple restoration projects concentrated within a local watershed will result in greater benefits to water quality.

Application of Geographic Information Systems (GIS)

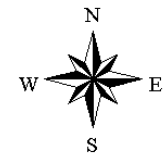
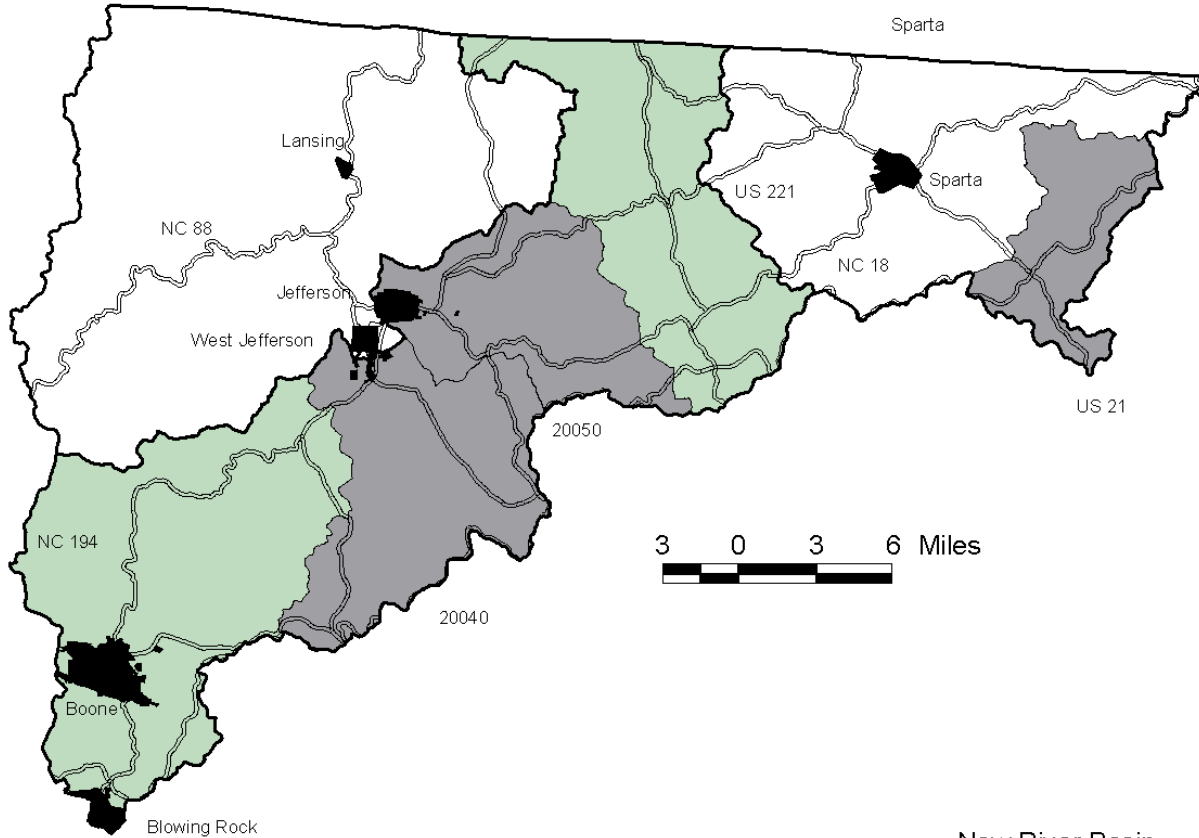
In order to target areas of focus, the NCWRP relies heavily on geographic data. With a variety of habitat and water quality data available electronically, NCWRP staff can interactively view a variety of information for river basins, subbasins and local watersheds to help make decisions about areas on which to focus. Information available includes water quality data (use support ratings and surface water quality classifications), resource information (location of streams, wetlands and important aquatic habitats), and basic location references (such as municipalities, roads and county boundaries).

As a component of the Watershed Restoration Plans, GIS-based maps have been developed to communicate NCWRP target priorities for restoration work. In each restoration plan maps of the whole basin, Priority Subbasins and Targeted Local Watersheds are provided. Most of these maps are black and white in order to minimize printing costs. However, a full set of color maps are provided through the NCWRP web site for those who are interested in referencing more thorough and detailed geographic information on NCWRP targets.

Section 2: New River Basin Overview

The New River Basin (Figure 1) is the fourth smallest river basin in the state covering 765 square miles. It is located within the Blue Ridge Province of the Appalachian Mountains region of western North Carolina. Eventually, waters from this system, originating in North Carolina, drain to the Gulf of Mexico via the Ohio and Mississippi Rivers. The New River is part of the oldest river system in North America, flowing through a terrain containing metamorphic rocks that date up to 1.1 billion years old. A segment of the New River, including the lower South Fork New River and the North Carolina portion of the New River mainstem, has been designated as a National Scenic River, a State Natural and Scenic River (one of just four in North Carolina), and an American Heritage River (one of twelve in the United States). This particular segment is also classified as an Outstanding Resource Water (DWQ, 2000).

**Figure 1
New River Basin**



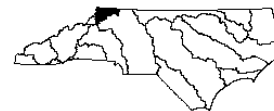
- Primary Roads
- Subbasin Boundaries
- Municipalities
- Targeted Local Watersheds
- Priority Subbasin

3 0 3 6 Miles

This map was produced on 02/08/2001 by the North Carolina Division of Water Quality Wetlands Restoration Program. Data was provided by the North Carolina Center for Geographic Information and Analysis.

The map is based on:
 Projection: Stateplane
 Zone: 4901
 Datum: NAD83
 Spheroid: GRS1980
 Units: Meters

New River Basin



Use Support Information

North Carolina waters are classified according to their best-intended uses. Determining how well a water supports its designated uses is an important method of interpreting water quality data and assessing water quality. NCWRP uses the use support assessments as a primary component in the prioritization process for determining restoration need within a local watershed. A stream that is designated as “partially supporting” or “not supporting” its designated uses indicates that wetland or stream restoration initiatives within that local watershed could be beneficial to water quality. Should a stream be listed as impaired and nonpoint source pollution determined to be the primary factor affecting water quality, it is likely that this watershed would become a Targeted Local Watershed, thus prioritized for restoration efforts.

Section 303(d) of the federal Clean Water Act requires states develop a 303(d) list of waters not meeting water quality standards or which have impaired uses. The 303(d) list and accompanying data are updated as the basinwide plans are revised. In some cases, the new data will demonstrate water quality improvement and waters may receive a better use rating. These waters may be removed from the 303(d) list since water quality improvement has been attained. In other cases, the new data will show a stable or decreasing trend in overall water quality resulting in the same, or lower, use support rating. Attention remains focused on these waters until water quality has improved.

In some cases, a stream or lake appears on the 303(d) list, but has a fully supporting rating. There are two major reasons for this: 1) biological data show full use support, but chemical impairment continues; or 2) fish consumption advisories exist on the water. These waters will remain on the 303(d) list until the problem pollutant meets water quality standards or until a Total Maximum Daily Load model is developed. Thus there are inconsistencies between the use support impaired waters and the 303(d) listed waters. Waters considered supporting their uses may continue to appear on the 303(d) list because of standard violations. The 2000 303(d) list is not yet EPA approved.

The New River Basin has a total of 801 miles of freshwater streams. Of these streams, 1% are rated as not supporting; 1% are rated as partially supporting; and 95% are rated as fully supporting their uses. The remaining 3% of freshwater streams in the New River Basin were not rated.

Impaired waters in the basin include: Peak Creek, Little Peak Creek, and Ore Knob Branch, all draining the old Ore Knob Mine in Ashe County; and Naked Creek in Jefferson which is impaired due to habitat degradation and excess nutrients. This use support information comes from the Division of Water Quality’s New River Basinwide Water Quality Plan (DWQ, 2000).

Permitted Wetland Losses in the New River Basin

Section 404 of the Clean Water Act established a program to regulate the discharge of dredged and fill materials into the waters of the United States, including

wetlands. Examples of activities that are regulated under this program include fills for development, dams and levees, and conversion of wetlands to uplands for farming and forestry. Section 401 of the Clean Water Act stipulates that a dredge and fill permit is not valid until the state issues a 401 Water Quality Certification.

The tables below and on the following page present a summary of data maintained by the Division of Water Quality's 401 Wetlands Certification Unit. It represents permitted wetland impacts associated with the state 401 Water Quality Certification Program and the federal 404 Program. More information on state 401 Water Quality Certification Program can be found at:

<http://h2o.enr.state.nc.us/ncwetlands/regcert.html>.

More information about the federal 404 Dredge and Fill Program administered by the U.S. Army Corps of Engineers may be found by contacting their website at:

<http://www.saw.usace.army.mil/wetlands/regtour.htm>

Although in the majority of cases the impacts authorized by the 401 Water Quality Certification are consistent with the impacts authorized by the Section 404 Permit, it should be noted that the amount of impact authorized by the Section 404 Permit could be less than that authorized by the 401 Water Quality Certification, and in some cases a Section 404 Permit may never be issued. Also, the authorized impacts may not occur during this fiscal year and in some cases may never occur. The Division of Water Quality is increasing its efforts to monitor and track the impacts that actually occur during each fiscal year.

According to the 401 wetlands tracking database maintained by the Division of Water Quality's Wetlands/401 Certification Unit, 7.32 acres of wetlands were filled in the New Basin from 1995-2000 and 20,680 linear feet of streams were altered between 1997 and 2000. See Tables I and II below.

Table I Permitted Wetland Fill in Acres

Subbasin	1995	1996	1997	1998	1999	2000	Total
050701	0.76	1.52	0.2	1.65	0.02	0.39	4.54
050702	0.49	0.52	0.08	0.03	0	0.27	1.39
050703	1.1	0.2	0	0.08	0	0.01	1.39
Total	2.35	2.24	0.28	1.76	0.02	0.67	7.32

Table II Permitted Stream Impacts in Linear Feet

Subbasin	1997	1998	1999	2000	Total
050701	2,191	0	1,455	14,526	18,172
050702	1,708	0	0	350	2,058
050703	200	0	150	100	450
Total	4,099	0	1,605	14,976	20,680

Concerning both wetland mitigation and stream mitigation required, Subbasin 01 (the South Fork of the New River) has by far the largest permitted impacts. Subbasin 01 represents over 62% of wetland alteration in the basin and almost 88% of the altered streams.

Habitat Information /Wetland Communities

The New River Basin is located in the mountain physiographic province of the state. The basin contains examples of Southern Appalachian Bog and Swamp Forest - Bog Complex wetland communities. Examples of High Elevation Seep and Southern Appalachian Fen community types can also be found in this river basin (Natural Heritage Program, 1998).

Wetland and Riparian Area Species Information

The New River Basin contains over 150 rare animal and plant species. There are two threatened and endangered aquatic animal species listed by federal and state agencies within the New River Basin - the bog turtle and a freshwater mussel - the green floater. (Natural Heritage Program, 1999).

In addition, the New River Basin has many rare plant species, including five species federally listed as threatened or endangered. Several of the rare plants in the New River Basin grow in the wet soils of bogs and are indirectly affected by water quality and quantity (Natural Heritage Program, 1998).

The New River Basin also contains 45 warm, cool, and coldwater fish species; the North Carolina Wildlife Resources Commission considers nine of these game fish. Most fishing effort by anglers is targeted at a limited number of species including brook, brown, and rainbow trout, largemouth, smallmouth, and rock bass, muskellunge, sunfish, catfish and several sucker species. The New River is generally considered to provide the best smallmouth bass fishing of any river in the state, although the fishery appears to have declined in recent years (DWQ, 2000). Fisheries management activities within the New River basin by the Wildlife Resources Commission include monitoring the abundance of fish populations, establishing harvest and size limit regulations, stocking fish, and protecting or enhancing habitat

A detailed listing of the state's rare animal and plant species can be found in the "Natural Heritage Program List of Rare Animal Species of North Carolina" (1999) or the "Natural Heritage Program List of the Rare Plant Species of North Carolina" (1999), which are published every two years.

Section 3: Restoration Goals for the New River Basin

Based on an assessment of existing watershed characteristics and extensive resource information, the NCWRP has developed restoration goals for the New River Basin. The overriding goal for all river basins is to protect and improve water quality.

New River Basin Goals:

- Reduce sediment loading and other pollutants from surface runoff by increasing the soil retention, filtration, and nutrient uptake functions of wetland and riparian areas;
- Stabilize streambanks and to reduce erosion and sedimentation;
- Restore and protect wildlife buffers, corridors, and other key links to high-value habitat areas and;
- Restore and protect natural breeding, nesting and feeding habitat to promote species richness and diversity.

Priority Subbasin and Targeted Local Watersheds

In order to meet the identified restoration goals, the NCWRP has identified one Priority Subbasin and three Targeted Local Watersheds in the New River Basin. These geographic priorities have been selected based on need and opportunity for restoration in order to focus projects in specific areas in the basin. One Targeted Local Watershed is not contained within the Priority Subbasin but was chosen based on its need for restoration and restoration potential. The decision-making process used to make these selections is described in detail in the Guide to NCWRP's Watershed Restoration Planning Strategy –Version 1. The purpose for selecting the subbasin and local watersheds for NCWRP focus is to concentrate project efforts in areas with the highest need and opportunity for restoration. In doing so, projects are more likely to result in water quality protection and improvement through the cumulative effect of multiple projects.

Public Input into the Selection Process

To solicit input on proposed Priority Subbasins and Targeted Local Watershed selections, the NCWRP held a Resource Professionals Meeting on Tuesday, August 22, 2000 at the New River Soil and Water Conservation District Office in West Jefferson, NC. The purpose of the meeting was threefold:

1. Explain the NCWRP to resource personnel;
2. Describe the types of sites NCWRP seeks for stream and wetland restoration, and to find out about existing and ongoing water quality improvement projects within the basin; and
3. To gather information from local resource professionals and citizens about which subbasins and local watersheds NCWRP should target.

The following agencies and groups were notified about this meeting: The Natural Resource Conservation Service, NC Soil and Water Conservation Districts, Department of Environment and Natural Resources -Winston-Salem Regional Office, North Carolina Farm Service Agency, the Town of Boone, the Town of Sparta, the Towns of Jefferson and West Jefferson, and the governments of Ashe, Allegheny and Watauga counties.

As a follow up to the Resource Agency Professional Meeting, a letter was sent out to all invitees on September 18, 2000 informing them of the Draft Priority Subbasin and Targeted Local Watersheds. The deadline for commenting on the Draft Targeted Local Watersheds was October 20, 2000. The National Committee for the New River sent extensive comments to the NCWRP during the comment period.

Section 4: Priority Subbasin and Targeted Local Watersheds

This section summarizes the condition of natural resources within the NCWRP's Priority Subbasin in the New River Basin. Potential causes of water resource degradation within the NCWRP's Priority Subbasin are briefly described based on information contained in DWQ's Basinwide Water Quality Plans. Figure 1 depicts the New River Basin with Priority Subbasin and Targeted Local Watersheds. Targeted Local Watersheds are depicted in Figures 3 and 5.

The term "Targeted Local Watershed" is used throughout this section; this term denotes a small, defined drainage area within a larger subbasin. Specifically, the term "Targeted Local Watershed" refers to the 14-digit hydrologic unit as defined by the Natural Resource Conservation Service; within this report, the last five digits are used as reference. The term "subbasin" is reserved solely to denote a subbasin (component watershed) of the larger New River Basin, as defined by the DWQ.

In the summary information representing each local watershed, the following terms apply: "Approx. Miles of Impaired Streams" indicates the approximate number of stream miles within that local watershed that are rated as either partially supporting (ps) or not supporting (ns); "major sources of impairment" indicates point and/or nonpoint source pollution; and "303 (d) list" indicates whether the Targeted Local Watershed contains waters which are on the North Carolina's 2000 303(d) List (not yet EPA approved) for impaired waters.

Please note that the use support data displayed on these subbasin maps does not include all of the use support designations assigned by DWQ. A more detailed explanation of use support information and complete listing of use support designations may be obtained from DWQ's Basinwide Water Quality Plans, produced for each major river basin in the state.

Priority Subbasin 01 – South Fork New River and New River Mainstem

This subbasin (Figure 2) consists primarily of the South Fork New River (and its tributaries) plus a short segment of the New River from the confluence with the North Fork New River to the Virginia / NC state line. Water Quality problems include stormwater runoff from Jefferson that has impaired Naked Creek. Acidic runoff from the abandoned Ore Knob copper mine has negatively influenced Ore Knob Branch and Peak and Little Peak Creeks. However, The Blowing Rock Wastewater Treatment Plant, problematic in the past, made improvements to its sludge disposal program which benefited the upper section of the Middle Fork New River.

The National Committee for the New River is initiating a project to identify all wetlands within Subbasin 01. Phase 1 of the project will be to identify all wetland areas and develop a preliminary priority list of the highest quality wetlands. Phase 2 will involve field checking and mapping the locations of these wetlands. This information will be used to refine the priority list developed in Phase 1. Phase 3 will encompass restoring and protecting priority wetland areas. Phase 1 began in the winter of 2001.

The National Committee for the New River is also working on a Riparian Corridor Conservation Plan for the South Fork of the New River. The organization is working on the 25-mile segment wholly contained in Targeted Local Watersheds 20040 and 20050. The segment begins in 20040 at the confluence of the South Fork of the New River with Pine Swamp Creek and ends in 20050 at the confluence of South Fork with Nathan's Creek. The purpose of the Riparian Corridor Plan is to target tracts for preservation and restoration.

In addition, *Spirea virginiana*, a rare plant species, maintains a subpopulation within riparian areas of the South Fork of the New River. This information will be part of the resource information the National Committee for the New River considers when prioritizing tracts.

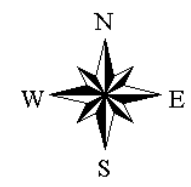
Additionally, the National Committee for the New River has initiated the River Builder Riparian Restoration Project – an effort to fence out livestock and revegetate stream buffers in the area. The organization received a \$75,000 grant from the Clean Water Management Trust Fund and the Mary Duke Biddle Foundation to perform streambank stabilization efforts.

Many organizations are active on the South Fork of the New. The Conservation Fund received an Environmental Protection Agency grant to look at flood hazards and other issues throughout the entire New River system (North Carolina, Virginia, and West Virginia) and is actively working to acquire conservation easements on the South Fork of the New River.

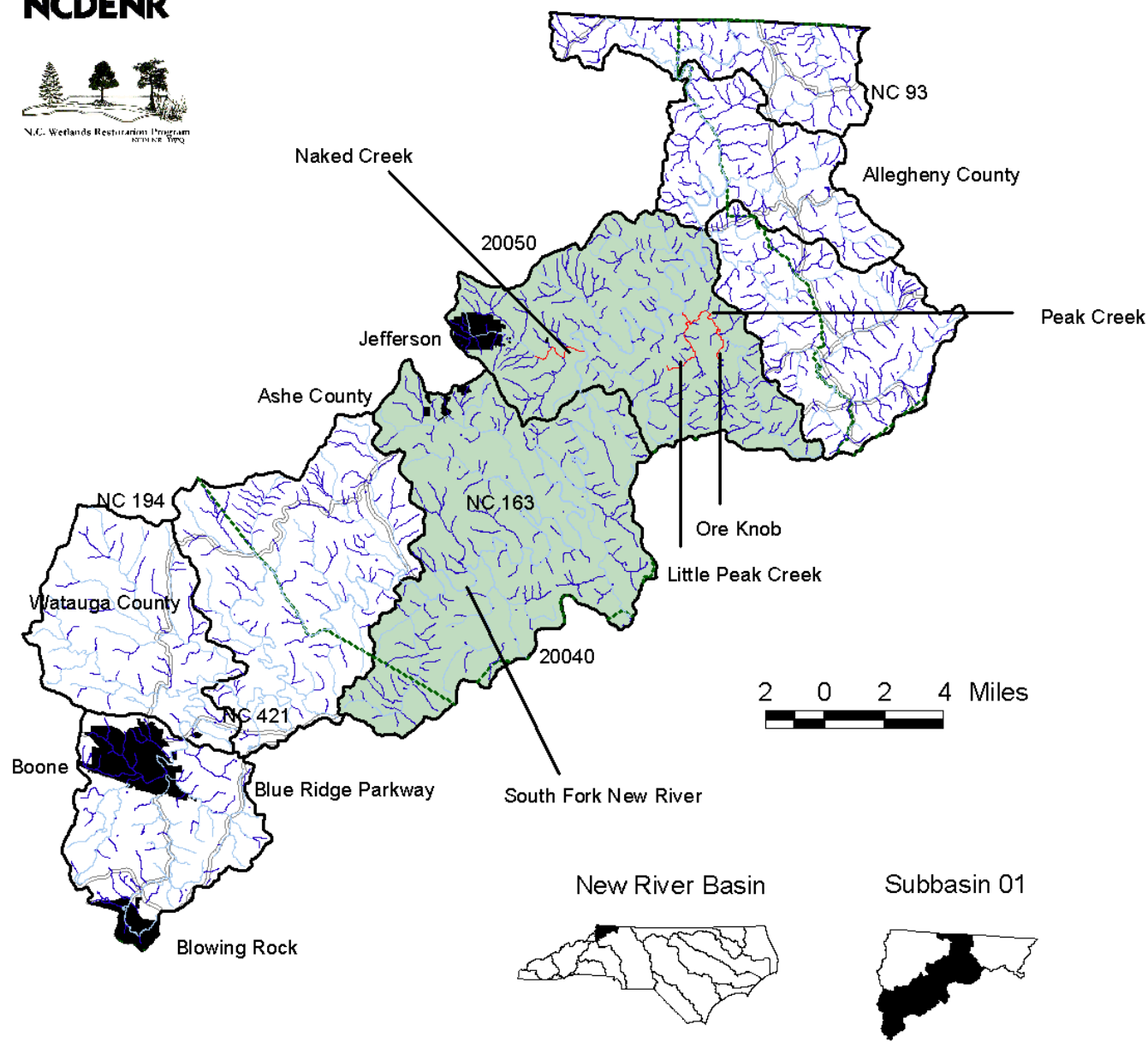
Likewise, The New River Community Partners, The Conservation Fund and the National Committee for the New River are active in acquiring conservation easements on the South Fork and have assisted the state in acquiring properties to extend the New River State Park.



Figure 2
New River Basin
Subbasin 01



- Hydrography**
- Fully Supporting
 - Partially Supporting
 - Not Supporting
 - Not Rated
 - Municipalities
 - County Boundaries
 - Local Watersheds
 - Targeted Local Watersheds
 - Primary Roads



This map was produced on 02/08/2001 by the North Carolina Division of Water Quality Wetlands Restoration Program. Data was provided by the North Carolina Center for Geographic Information and Analysis.
 The map is based on:
 Projection: Stateplane
 Zone: 4901
 Datum: NAD83
 Spheroid: GRS1980
 Units: Meters

The Town of Boone has secured Federal Emergency Management Agency funds to remove houses from the floodplain and a Clean Water Management Trust Fund Grant to perform a stream restoration project on 1,700 feet of the South Fork of the New River. The result of this work will be to re-establish the hydrological connection between The South Fork of the New River and its floodplain. These activities are particularly significant given Boone's location at the headwaters of the South Fork. Boone has also recently acquired 9.4 acres adjacent to this site containing 3 acres of wetlands. The town is protecting this property as a city park and will use the area as an environmental education site.

Table III Statistics of Targeted Local Watersheds within Subbasin 01

Targeted Local Watershed	South Fork New River 20050	South Fork New River 20040
Square Miles	56.85	75.75
Impaired stream miles	8.2	NA
Problem parameters	Low pH, metals, habitat degradation, excessive nutrients	NA
Sources of Impairment	Nonpoint/Point	NA
Possible Causes of Impairment	Old Copper mine, Ag., Urban Runoff	NA
On 303(d) list	Yes	No
Agricultural Land Cover	30%	23%
Developed Land Cover	0%	0%
Forested Land Cover	70%	76%
Within Water Supply Watershed	Yes	Yes
HQW or ORW	Yes	Yes
Trout Waters	Yes	Yes
Presence of Natural Heritage Element	Yes	Yes

South Fork New River

Targeted Local Watershed 20050

In the entire New River Basin only four streams were rated nonsupporting and this local watershed (Figure 3) contains all of them. Peak Creek, Little Peak Creek and Ore Knob Branch have all been severely impacted from acidic runoff from the old Ore Knob Mine. Naked Creek suffers from extensive habitat degradation, stormwater runoff effects and a host of other nonpoint source issues from livestock to second home development.

Jefferson's Wastewater Treatment Plant as well as stormwater from the town have impacted Naked Creek, which runs east out of Jefferson. Additionally, the stream receives significant nonpoint source runoff from second home development and unfenced cattle access. Naked Creek also has almost no riparian buffer whatsoever for most of its length and suffers from extensive bank erosion.

Ore Knob

Ore Knob is an abandoned copper and lead mine in Ashe County, North Carolina. Ore Knob ceased production in the 1960s; however, runoff from the mine is high in sulfur as well as many metals. This runoff is very acidic and has had a negative effect on aquatic life.

In 1998, the US Army Corps of Engineers began a detailed site assessment of the Ore Knob Mine area. The NCWRP applied for and received a \$1.3 million grant from the Clean Water Management Trust Fund to restore water quality by cleaning and raising the pH of Ore Knob's runoff.

This effort is a multi-agency partnership involving the US Army Corps of Engineers, the NCWRP, The Environmental Defense Fund, and a local nonprofit – New River Community Partners. The restoration plan involves 3 key components: 1) diversion of discharges around tailings (tailings are mine wastes that have been piled on the surface, water running through these tailings is how the problem starts); 2) isolation of the tailings; and 3) passive treatment of the acidic discharge to raise the pH.

The goal of this ambitious project is to return aquatic macrobiota and fish to Peak and Little Peak Creeks. Improvements in water quality achieved by the aforementioned plan should allow this to occur. Currently, the US Army Corps of Engineers is involved in an Ecosystem Restoration Report. The project implementation is scheduled for July of 2001.

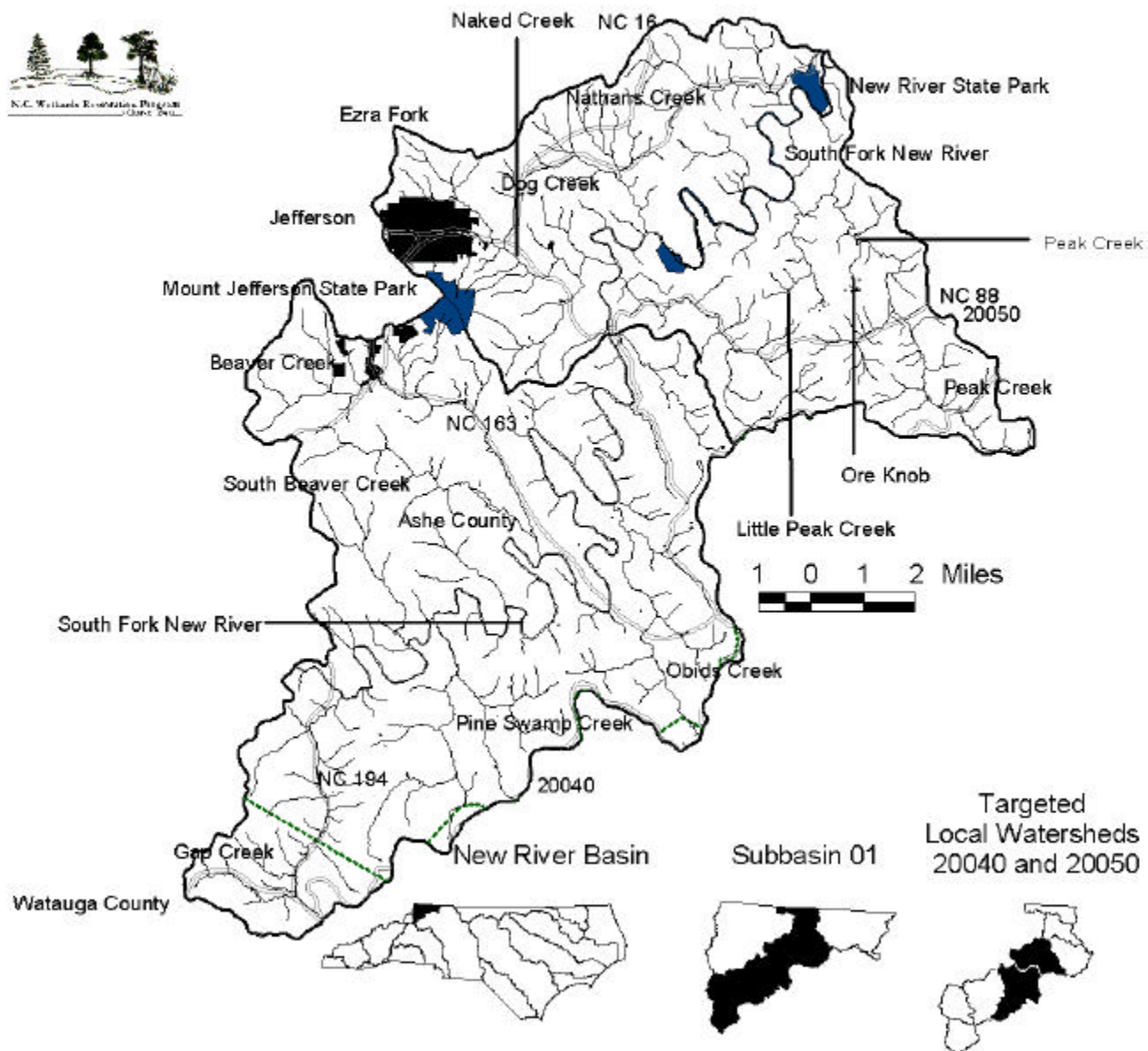


Figure 3
New River Basin
Subbasin 01
Targeted
Local Watersheds
2004 and 2005
South Fork New River



- Hydrography
- Primary Roads
- State Parkland
- County Boundaries
- Municipalities
- Local Watershed Boundaries

This map was produced on 02/05/2001 by the North Carolina Division of Water Quality Wetlands Restoration Program. Data was provided by the North Carolina Center for Geographic Information and Analysis.

The map is based on:
Projection: Stateplane
Zone: 4901
Datum: NAD83
Spheroid: GRS1980
Units: Meters

South Fork New River

Targeted Local Watershed 20040

This watershed (Figure 3), like the one adjacent to it, is beginning to experience some development pressure. This is particularly true on the South Fork of the New River where many second homes are being developed. Although there are currently no impaired waters within this local watershed, there is an increasing amount of residential development. Additionally, many of the tributary streams have poor or nonexistent riparian buffers. Cattle access to streams has caused habitat degradation

The same local groups are just as active in this watershed as in Targeted Local Watershed 20050. The Conservation Fund, The National Committee for the New River and New River Community Partners all are actively working at easement acquisition and stream restoration.

Additional Targeted Local Watershed Brush Creek

This watershed contains Brush Creek (Figure 4) that runs north right off the Blue Ridge Parkway before joining with the Little River. Brush Creek is a Targeted Local Watershed within Subbasin 03, The Little River. The Little River flows in a northeast direction to join the New River in Virginia. The Little River and its tributaries, Brush Creek and Glade Creek drain the Town of Sparta. Although this subbasin has no impaired streams, it has a number of streams with no riparian buffer, cattle access, and the corresponding streambank and habitat degradation issues. The land use in the Brush Creek watershed is dominantly Christmas tree farms and cattle pasture. Many streams in this watershed have no riparian buffer. This lack of vegetation coupled with high gradient (many of these streams come down mountains) and cattle trampling result in a tremendous amount of streambank erosion and stream channel downcutting.

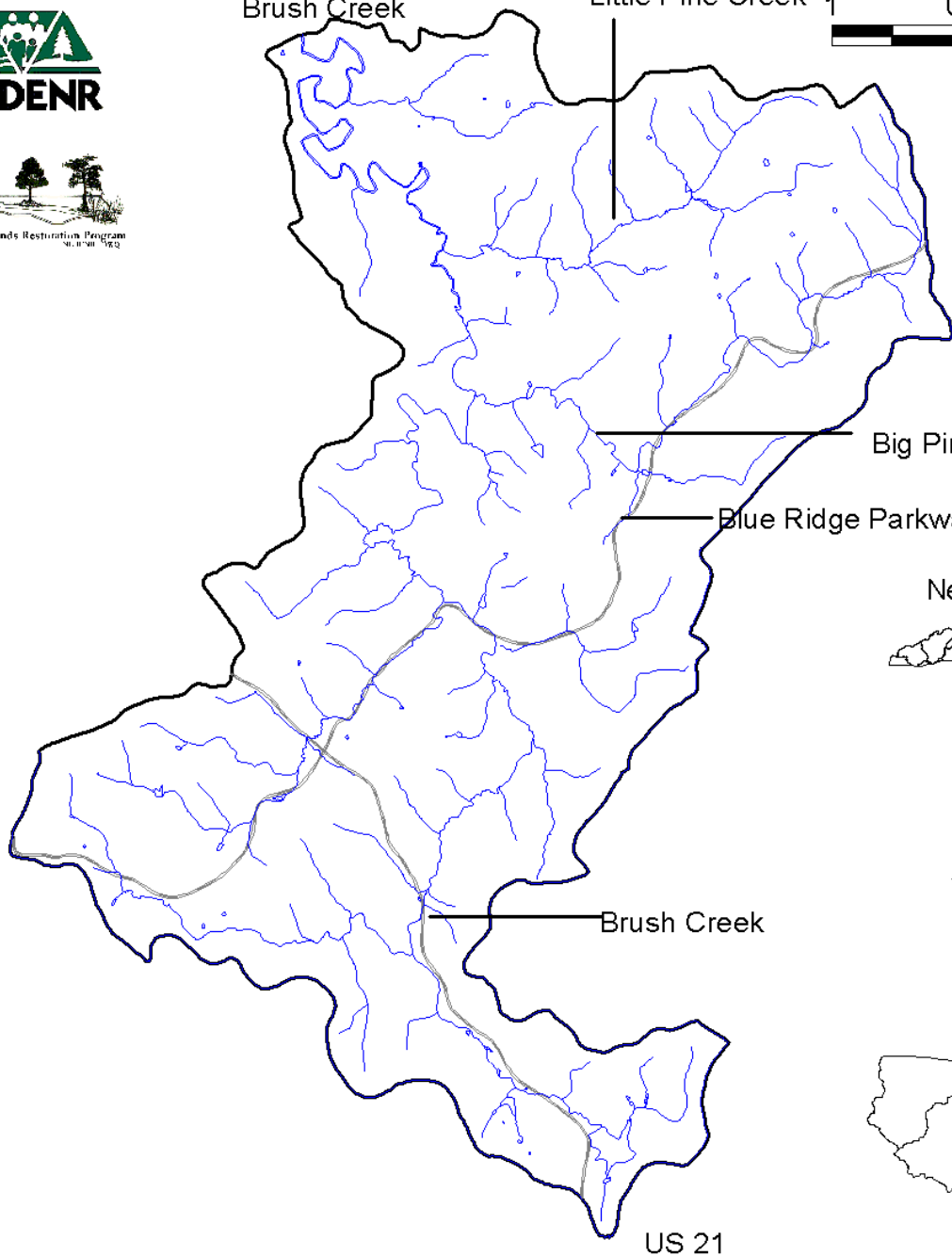
The NCWRP is actively working in this watershed with a project at the juncture of Little Pine Creek and Brush Creek. Little Pine Creek was rated partially supporting in the 1995 New River Basin Plan (DWQ, 1995). This project will add sinuosity back to the stream and greatly reduce the amount of sediment getting into the stream. Brush Creek is also trout habitat and the restoration of this site should aid the trout by reducing sedimentation and decreasing the water temperature thus increasing oxygen levels.

Table IV Statistics for Brush Creek

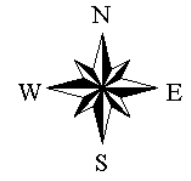
Targeted Local Watershed	Brush Creek 30030
Square Miles	34.62
Impaired stream miles	NA
Problem parameters	NA
Sources of Impairment	NA
Possible Causes of Impairment	NA
On 303(d) list	No
Agricultural Land Cover	43%
Developed Land Cover	0%
Forested Land Cover	57%
Within Water Supply Watershed	No
HQW or ORW	No
Trout Waters	Yes
Presence of Natural Heritage Element	No



Brush Creek Little Pine Creek 1 0 1 Miles



**Figure 4
New River
Basin
Subbasin 03
Targeted Local
Watershed 30030
Brush Creek**



- Hydrography
- Primary Roads
- Local Watershed Boundaries

This map was produced on 04/04/2001 by the North Carolina Division of Water Quality Wetlands Restoration Program. Data was provided by the North Carolina Center for Geographic Information and Analysis.
The map is based on:
Projection: Stateplane
Zone: 4901
Datum: NAD83
Spheroid: GRS1980
Units: Meters

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Section 5: Other Initiatives and Activities in the New River Basin

Federal Initiatives

EPA Phase II Stormwater Requirements

The EPA's Phase I stormwater requirements only applied to cities with a population of over 100,000 people. No municipality in the New River Basin is that large. At minimum, only one municipality within the New River Basin, Boone (Subbasin 01) may have to comply with the EPA's Phase II Stormwater program. Phase II mandates the following Stormwater controls:

- Public Education and Outreach
- Public Participation and Involvement
- Elicit Discharge Detection and Elimination
- Construction Site Runoff Control - 1 or more acres of land
- Post-Construction Runoff Control
- Pollution Prevention /Good Housekeeping

Boone may have to apply for a NPDES Stormwater permit with a detailed plan of how they intend to implement these 6 facets of the Phase II stormwater rule. The town must have received its permit by February 2003. For more information about the EPA's Phase II requirements see the web page at:

<http://www.epa.gov/owm/sw/phase2/>

State Initiatives

The North Carolina Division of Water Quality Basinwide Planning Program

The Basinwide Planning Program publishes Basinwide Water Quality Plans for every river basin in the state on a five-year cycle. The plans indicate the status of various streams and lakes within the river basin. The New River Basinwide Water Quality Plan was completed in 2000.

The Conservation Fund

The NC Section of the Conservation Fund has been very active in the New River Basin. The Conservation Fund was the lead organization in getting the New River designated as an American Heritage River. The organization has also worked to acquire easements to expand New River State Park.

The Clean Water Management Trust Fund

The Clean Water Management Trust Fund (CWMTF) has funded over \$2.5 million for water quality improvements within the New River Basin. Projects range from buffer acquisition along the South Fork of the New River to stream restoration within the Town of Boone.

The North Carolina Nature Conservancy

The North Carolina Nature Conservancy has been very active in Subbasin 02, the North Fork of the New River. There are several high quality natural areas within the region that have been protected by the group. Specifically, The Nature Conservancy maintains a 1,966 acre preserve at Bluff Mountain and has worked to acquire 2,289 acres at Three Top Mountain. The Three Top Mountain Tract has been transferred to the Wildlife Resources Commission. Collectively, these 2 projects protect several tributaries of the North Fork of the New River. The Nature Conservancy continues to work in subbasin 02.

Local Initiatives

The National Committee for the New River

The National Committee for the New River was mentioned previously in connection with its great work within subbasin 01, the South Fork of the New River. However, the National Committee for the New River's efforts are basinwide and they have been responsible for a great deal of easement acquisition in Subbasin 02, the North Fork of the New River, as well. Most recently, in April of 2000 the group successfully purchased a 97 acre riparian tract next to the town of Todd. The opportunity exists for the land to be part of a larger protected area because it is adjacent to Appalachian State University's 300 – acre Gilley Environmental Studies Research Area.

The National Committee for the New River has also been active in a basinwide effort to educate landowners about the advantages of conservation easements.

The New River Community Partners

The New River Community Partners are primarily concerned with economic revitalization and marketing the goods of local businesses in a sustainable manner. However, they have also been active in riparian buffer acquisition throughout the New River Basin working to protect quality of life in a way that aids local businesses.

Contacts List for the New River Basin

The following pages contain contact information for groups involved in projects and groups that provided comments and/or attended Resource Professionals meetings for the New River Basin.

Federal Initiatives

Organization	Name	Address	Phone	Web site
Natural Resources and Conservation Service Ashe County Office		PO Box 88 Jefferson School Bldg. Hwy 88 West Jefferson, NC 28640	(336) 246-5461	
Natural Resources and Conservation Service Allegheny County Office		PO Box 127 County Office Bldg. Room100 90 S. Main St. Sparta, NC 28675	(336) 372-4645	
Natural Resources and Conservation Service Watauga County Office		971 West King St. Boone, NC 28607	(828) 264-3943	

State Initiatives

Organization	Name	Address	Phone	Web site
The NC Division of Water Quality Basin wide Planning	Deanna Doohaluk	1617 Mail Service Center Raleigh, NC 27699-1617	(919) 733-5083 ext. 577	http://h2o.enr.state.nc.us/basinwide/index.html
The Conservation Fund	Mikki Sager	P.O. Box 271, Chapel Hill, NC 27514	(919) 967-2223 Fax (919) 967-9702	Email mikkisager@aol.com
The Clean Water Management Trust Fund	Tom Massie Western Field Representative	P.O. Box 595 Sylva, NC 28779	(828) 586-4133 Fax (828) 586-4133	tom@cwmtf.net
The North Carolina Nature Conservancy		Suite 201, 4011 University Drive, Durham, NC 27707	(919) 403-8558	http://64.226.151.2/tncnc/getit.htm

The NC Division of Water Quality Wetlands Restoration Program	George Norris	1619 Mail Service Center Raleigh, NC 27699-1619	(919) 733-5312	http://h2o.enr.state.nc.us/wrp/index.htm
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Local Initiatives

Organization	Name	Address	Phone	Web site
The New River Community Partners	Jeffrey Scott, Director	P.O. Box 1897, Sparta, NC 28675	(336) 372-8118	
The National Committee for the New River		PO Box 1480 West Jefferson, NC 28694	(336) 246-4871	http://www.bigspringmtn.com/ncnr/ncnrhome.html

References Cited

- North Carolina Department of Environment, and Natural Resources (DENR), Division of Water Quality, Water Quality Section. "New River Basinwide Water Quality Plan." 2000.
- North Carolina Department of Environment, and Natural Resources (DENR), Division of Water Quality, Water Quality Section. "New River Basinwide Water Quality Plan." 1995.
- North Carolina Natural Heritage Program, Division of Parks and Recreation. "Natural Heritage Program List of the Rare Animal Species of North Carolina." 1999.
- North Carolina Natural Heritage Program, Division of Parks and Recreation. "Natural Heritage Program List of the Rare Plant Species of North Carolina." 1999.
- North Carolina Natural Heritage Program, Division of Parks and Recreation, Department of Environment and Natural Resources. Unpublished Information. Rare, Threatened, and Endangered Communities and Species in the New River Basin. April, 1998.
- North Carolina Wildlife Resources Commission, Division of Inland Fisheries. "Draft Fisheries Management Plan for The New River Basin." 1998

Appendix 1

List of Targeted Local Watersheds

The following is a comprehensive list of local watersheds targeted by the NCWRP. Other agencies, individuals and private groups are encouraged to target their search for restoration sites in the New River Basin within these local watersheds. The five digit local watershed codes have been assigned by the NCWRP. They are simply the last five digits of the fourteen digit code for each local watershed in the state that have been designated by the USDA Natural Resources Conservation Service (NRCS). Bolded watersheds are printed in color.

Priority Subbasin 01

(contains a total of 8 local watersheds)

050500010**20040** South Fork New River
050500010**20050** South Fork New River

Subbasin 03

(contains a total of 4 local watersheds)

050500010**30030** Brush Creek