GORGES STATE PARK

GENERAL MANAGEMENT PLAN

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF PARKS AND RECREATION

JANUARY 2005

GORGES STATE PARK GENERAL MANAGEMENT PLAN

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INTRODUCTION

Planning is an essential element of effective and efficient park administration and management. The North Carolina General Assembly acknowledged its importance by passing state parks system legislation that includes planning requirements.

The 1987 State Parks Act (G.S.114-44.7 through 114-44.14) stipulates that a State Parks System Plan be prepared. The first plan was completed in December 1988. It evaluated the statewide significance of each park, identified duplications and deficiencies in the system, described the resources of the system, proposed solutions to problems, described anticipated trends, and recommended means and methods to accommodate trends. The most recent update of the Systemwide Plan was completed in December 2000.

The State Parks Act also requires each park to have an individual general management plan. The general management plans are required to:

> *...include a statement of purpose for the park based upon its relationship to the System Plan and its classification. An analysis of the major resources and facilities on hand to achieve those purposes shall be completed along with a statement of management direction. The general management plan shall be revised as necessary to comply with the System Plan and to achieve the purpose of the [State Parks Act].*

The general management plan (GMP) is to be a comprehensive five-year plan of management for a park unit. A GMP's function is to:

1. Describe park resources and facilities;
2. State the purpose and importance of each park unit;
3. Outline interpretive themes and propose locations for informational and interpretive facilities;
4. Analyze park and recreation demands and trends in the park's service area;
5. Summarize the primary laws guiding park operations;
6. Identify internal and external threats to park natural and cultural resources, and propose appropriate responses;
7. Identify and set priorities for capital improvement needs;
8. Analyze visitor services and propose efficient, effective, and appropriate means of responding to visitor needs; and
9. Review park operations and identify actions to support efficient and effective park administrative procedures.

The GMP for Gorges State Park, developed with public involvement, is intended to serve these purposes.

I. DESCRIPTION OF GORGES STATE PARK

LOCATION AND ACCESS

Gorges State Park is located in southwestern Transylvania County along the North Carolina - South Carolina state line. The park is approximately 45 miles southwest of Asheville.

The park's mailing address and telephone number are:

Gorges State Park
P.O. Box 100
Sapphire, North Carolina 28774-0100
(828) 966-9099

Access to Gorges State Park is provided by US 64 which runs along the park's northern boundary and NC 281 (Bohaynee Road) along its western boundary. From the south, SC 130 leads north to the park. SC 130 becomes NC 281 at the state line. The Grassy Ridge Access is located off NC 281 about seven miles north of the state line. The Frozen Creek Access is located on the eastern side of the park off Frozen Creek Road. Frozen Creek Road connects the park to US 64. (Figure I-1)

PARK LAND

The recently created state park contains 7,172 acres of rugged and mountainous land. Plunging waterfalls, steep topography, river gorges, rock outcroppings and one of the greatest concentrations of rare and unique species in the eastern United States are found within the park. An elevation change of over 2,000 feet in a little over three miles combines with rainfall in excess of 80 inches to create a unique environment that supports rare plants and animals and diverse natural communities.

VISITOR FACILITIES

Gorges State Park is in its early stages of development. Following its creation as a state park in 1999, the Division of Parks and Recreation contracted for the development of a master plan for the park. After considerable public input, that plan was adopted in February 2003. Capital development projects that are planned are described in Chapter VII of this general management plan.

Existing facilities at the park are very limited at this time. However, some access is provided so that visitors may enjoy hiking, primitive camping, biking, fishing, horseback riding and picnicking. (Figure I-1)

From the Grassy Ridge Access area, hikers may backpack into the Ray Fisher Place campground where six primitive campsites are available. Each campsite contains a picnic table, fire ring and lantern hook. Pit toilets are also available. Campers must sign in at the registration area located at the Grassy Ridge parking lot trailhead. Primitive camping is also available near the southern park

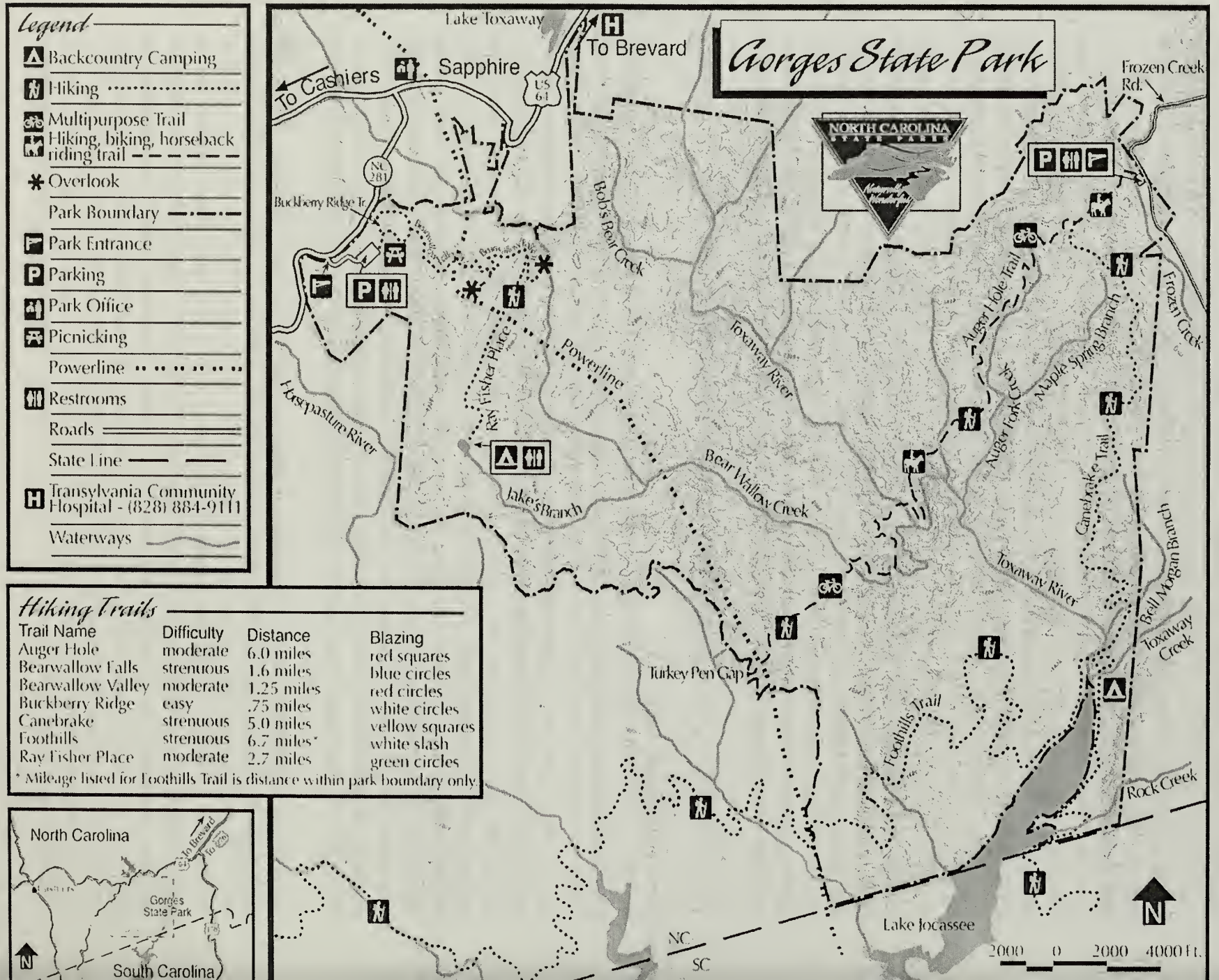

Figure I-1. Gorges State Park

boundary along the Foothills Trail.

Streams and rivers in the park are designated Wild Trout Waters, and regulations of the N.C. Wildlife Resources Commission apply. An ample supply of rainbow and brown trout, as well as smallmouth bass, attract fishermen to the park's variety of fish habitats. Lake Jocassee, a deep lake lying in both North and South Carolina, is a haven for trout and bass fishermen. Boat access to Lake Jocassee is available within Devil's Fork State Park in South Carolina.

Due to the steep topography and swift water currents, no swimming is allowed in the park's rivers and creeks. Fishermen should be careful to avoid dangerous areas above waterfalls.

The park's rugged mountain terrain will challenge any outdoor enthusiast. Views of dazzling waterfalls, mountain forests and rare vegetation, and scenic vistas may be experienced along the park's steep, backwoods trails. The popular Foothills Trail, established by Duke Energy Corporation, enters and exits the park along its southern boundary. Its trailhead is located at the Frozen Creek Access area in Rosman on Frozen Creek Road. The Frozen Creek Access area also provides parking and picnicking. From the Grassy Ridge Access, a trail leads to a small observation platform that overlooks a long cascade on Bearwallow Creek. Grassy Ridge also has picnic tables and port-a-johns. Horses and mountain bikes are currently permitted on the Auger Hole Trail from Frozen Creek Access to Turkey Pen Gap on the western boundary of the park.

Until a park visitor center is constructed, the interim park office is located near the intersection of US 64 and NC 281.

HISTORY OF THE PARK AREA

European exploration of southwestern North Carolina likely began with the explorations of Hernando DeSoto in 1540 and Juan Pardo in 1566 (DePratter et al. 1985; Hudson et al. 1984). The expeditions came into frequent contact with Indian towns, villages and agricultural fields. After the Spanish exploration, many years apparently passed without outside intervention. Even so, the early expeditions had a profound and lasting effect by introducing old world diseases that decimated native populations. Spanish claims to the area were eventually relinquished, and British slowly began to move into the area after 1670.

Early settlers were primarily involved with trading with the Indians. Both English and Native Americans used long-established trails such as the ancient Estatoe Trail, a trading route between mountain settlements of the Cherokee that passed from the area to their town Estatoe, in what is now South Carolina.

The provincial legislature of North Carolina passed laws to promote settlement of these remote areas of the colony. South Carolina and Georgia also lay claims to the area and its lucrative deer-skin trade. Eventually the area began to be seen as valuable for more than trading, and by the 1740s more settlers, including Scotch and Irish immigrants, settled in the area.

In 1763, in an effort to establish peace with the Cherokee and other Indian tribes, British law

established that all of western North Carolina was Indian Territory and outside British Territory. There was also concern by the British that settlers, located in the area far from British control and taxation, would not consider themselves British subjects.

All was not peaceful with the Cherokee, however, and near the beginning of the American Revolution, North Carolina, Virginia and Tennessee sent troops that burned homes and crops, killed many Indians and even took a few as slaves. By the late 1700s, settlers began to push westward as well as northward from South Carolina. Cherokee land holdings were gradually reduced by various land cessions with the British and then the United States between 1721 and 1835 (Encyclopedia of North American Indians).

In the spring of 1776, botanist William Bartram traveled through nearby Macon County and wrote detailed descriptions of the land. His accounts were later published in his 1791 book *Travels*. Bartram, America's first native born naturalist/artist, portrayed nature through both scientific observation and personal experience. His still popular book provides descriptions of relatively pristine western North Carolina and other states as they existed at that time as well as his accounts of Native American life (Bartram Trail Conference).

The Meigs-Freeman Indian Boundary of 1802, which ran along the northern side of the Tuckasegee River, clarified that most of what was to become Transylvania County was in control of the United States. Disputes over the area between Georgia, South Carolina and North Carolina continued before being settled in 1811 and 1815. In the end, a boundary was established at approximately the 35th parallel, although surveying it proved very difficult because of the mountain terrain and difficult angles (Blackburn, 1995).

About this time the oldest known standing farmhouse in western North Carolina was built, the Allison-Deaver House. The house, located in Pisgah Forest in Transylvania County, was never altered over the years with improvements such as electrical wiring, plumbing, heating, insulation or closets. Timbers for the house were cut in 1815 and for the barn in 1827. (www.visitnc.com)

President Andrew Jackson signed the Indian Removal Act on May 28, 1830. The act formalized US policy of sending Indians living east of the Mississippi to the west. In the decade following the Act, the US Government attempted to remove southeastern tribes through treaties negotiated in "an atmosphere of intimidation and coercion." In 1835, the Treaty of New Echota, signed by a small percentage of the Cherokee Nation, resulted in most Cherokees being removed and relocated to Oklahoma (Encyclopedia of North American Indians). Rather than leave, some chose to hide out in the mountains and forests, and in 1842 those Cherokees still living in North Carolina were granted permission to stay. It was not until 1930 that Congress finally ruled that members of the Eastern Band of Cherokee Indians were entitled to both North Carolina and United States citizenship. Cherokee names are still used for places throughout western North Carolina. In Transylvania, some of the names still in use are Toxaway, Connestee, Estatoe and Selica.

As North Carolina developed, the land that was to become Transylvania County was part of several different counties, including old Tryon County and Burke, Buncombe, Henderson and Jackson counties. In 1861, Representative Joseph P. Jordan, who was born on a farm near Blantyre, introduced a bill in the N.C. House of Commons to create a new county from Henderson and Jackson

wealthiest families to vacation in the area. The original Toxaway Inn, built in 1901 and the 540 acre Lake Toxaway, completed in 1903, became a popular resort for America's wealthy and famous (Powell, 1968). Before the railroad was extended to Rosman and Lake Toxaway, the Toxaway Company built a "turnpike" road from Brevard to Lake Toxaway (Mountain Area Information Network, 2000-2001). Advertised as "The Switzerland of America", the Lake Toxaway Inn flourished as a resort from 1903 until flooding burst the dam in 1916. Henry Ford, Thomas Edison, Harvey Firestone, Edward Baccus, John D. Rockefeller, R.J. Reynolds, the Vanderbilts, the Dukes, and the Wannamakers all visited. Guests could boat, swim, play tennis, golf, fish, hunt and horseback ride. Cultural events were also offered.

About 1900 industrialist Joseph S. Silversteen came to Transylvania County and established operations at Rosman. Rosman, incorporated in 1901 as Toxaway (Cherokee for "redbird") had its name changed to Estatoe in 1903 and then to Rosman in 1905. His influence in the area is evidenced by the renaming of Estatoe to Roseman: Silversteen compounded the name of two of his associates, Rosenthal and Ormansky (Powell, 1968). Silversteen founded the Gloucester Lumber Company and a number of tanneries. Gloucester Lumber Company logged the watershed of the French Broad River's headwaters, south of Vanderbilt's land. In 1910, Silversteen acquired approximately 30,000 acres of land from George Vanderbilt, whose inherited fortune had shrunk due to bad investing.

Logging practices of the early 1900's often scarred the land, silted the creeks, and destroyed acres of wildlife habitat. Over the years, forests slowly reclaimed many farms and most of the cut-over land. In 1914, the U.S. Forest Service bought 78,410 acres of forest from the Vanderbilt estate. This land later became part of the Pisgah National Forest, established in 1916. It was the first national forest in the country created from purchased land. (USDA, 2001)

One of the most damaging interferences to the Gorges environment occurred in 1916 when the dam containing Lake Toxaway – the largest private lake in the state – broke. In July of 1916, much of western North Carolina had experienced extensive flooding, and by August, swollen watercourses were pouring into Lake Toxaway, straining the 60-foot high earthern dam. On August 14th the dam burst, not unexpectedly, and over five billion gallons of water are estimated to have rushed downstream, destroying communities in its path, uprooting trees, scouring the gorges and leaving piles of debris 15 to 20 feet high. Remarkably, no one was killed (www.breedloveproperties.com). These debris piles still remain.

As a result of the 1916 flood, the once flourishing Toxaway Inn went out of business. Not long thereafter, the country moved into the Great Depression, and the area's tourism languished. Public works programs arising from the Great Depression did construct outdoor recreation facilities and work on conservation projects, but it would be many years before tourism recovered. The Blue Ridge Parkway, one of those projects, opened its first sections in 1939. Rural electric associations brought electricity to western North Carolina, and the area slowly recovered. The Lake Toxaway area was purchased and the lake restored in 1961, and Lake Toxaway once again became popular as a resort and mountain vacation destination.

The Singer Sewing Machine Company assembled large tracts of land in the Gorges State Park area and logged much of it. Then, in the 1940s and 1950s, Singer sold the land to Duke Energy

Corporation. The corporation purchased the land for its steep topography and high rainfall, which offered opportunities for development of hydropower projects. Crescent Land and Timber Corporation, a subsidiary of Duke Energy, managed the land, closing some roads and limiting human access to protect the environment.

Conservation studies began in the area in the late 1970s, and in 1982 nearly 275 acres of land that are currently in the park were placed on the NC Registry of Natural Heritage Areas because of the numerous rare species. In the late 1990s, Duke Energy determined that it no longer needed large portions of the Gorges for future hydropower and offered the land for sale to natural resources agencies in North and South Carolina. The NC General Assembly authorized the creation of a new state park and adjacent state game land in 1999, and 10,000 acres were purchased by the state and divided: 7,100 for Gorges State Park and 2,900 for the state game land. *Gorges State Park Master Plan* was developed with considerable public input and adopted in February, 2003. The plan will serve to guide land acquisition and development of the park.

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II. PARK PURPOSES

MISSION STATEMENT FOR THE STATE PARKS SYSTEM

The North Carolina State Parks System exists for the enjoyment, education, health, and inspiration of all our citizens and visitors. The mission of the state parks system is to conserve and protect representative examples of the natural beauty, ecological features, and recreation resources of statewide significance; to provide outdoor recreation opportunities in a safe and healthy environment; and to provide education opportunities that promote stewardship of the state's natural heritage.

GORGES STATE PARK PURPOSE STATEMENT

Prior to the Flood of 1916, the land that is now Gorges State Park was comprised of several large parcels of land owned by local citizens. Singer Sewing Machine Company purchased the property and used it for logging purposes in the 1920's and 1930's. Due to its steep topography and high levels of annual rainfall, the Gorges tract and surrounding lands offered potential for the development of hydropower projects. This potential use enticed Duke Energy Corporation to purchase the property between 1940 and 1960. In the late 1970's, Duke began conducting conservation studies and limiting access to the property to protect the environment. Nearly 275 acres were placed on the North Carolina Registry of Natural Heritage Areas in 1982 due to the presence of numerous rare species. By the late 1990's, Duke Energy had determined that it no longer needed large areas of the Gorges property and offered to sell the land to both North and South Carolina. The State of North Carolina purchased 10,000 acres in Transylvania County in 1999 and established Gorges State Park and the adjacent Toxaway Game Land.

A significant geologic feature, from which the park derives its name, is the abundance of deep gorges created in part by a dramatic change in elevation of over 2,000 feet in a little over three miles. This abrupt transition, combined with the high levels of annual rainfall and a large drainage area, produces an abundance of waterfalls that visitors seek and enjoy. Gorges State Park is unique within the state parks system in that it straddles two major geologic provinces and the Brevard Fault Zone, which separates the two. The Brevard Fault Zone, one of the major ancient fault zones of the Appalachians, contains unusual rock types such as mylonite and marble. Mass slope movement features, such as the large slide on the east side of the Toxaway River, are evident. In addition, many boulder and cobble deposits have been identified along an 8,000-foot reach of the Toxaway River, attributed to flooding that followed an earthen dam failure at Lake Toxaway during August of 1916.

The exceptional terrain and climate within Gorges State Park has made possible a rich and unusual assemblage of flora and fauna. The large and unbroken natural landscape includes high quality examples of extensive natural communities such as Montane Oak-Hickory Forest, Chestnut Oak Forest, and Acidic Cove Forest, and widespread Pine-Oak/Health Forest. Rich Cove Forest and

Spray Cliff Forest, uncommon natural communities, occur in small patches within the park. The area contains a concentration of rare plants, such as Southern Oconee Bells (Shortia galacifolia var galacifolia), that is significant for the state and the entire southern Appalachians. A particularly rich assortment of bryophytes and ferns, including a species more common to the tropical forests of Central America, is presumably owed to the high moisture and sheltered temperatures of the gorges. The animal diversities of natural communities in the park are also high, and rare mammals, birds, reptiles, amphibians, fish, and invertebrates are present.

The park's river and streams combine with topography to create a variety of scenic waterfalls that draw visitors to the park. Powerful waterfalls plunging over rocky cliffs, falls shrouded in mist, cascading waters and riffles offer sights and sounds that are among the park's more significant features. Higher up, ridge-top vistas extend for miles, offering panoramas of tree-blanketed slopes, rugged mountain ranges and lush vegetation. Overlooks offer spectacular views of the surrounding natural landscape, with the view from the Bearwallow Valley observation deck stretching up to 20 miles into South Carolina on clear days. Whether listening to the thunder of Bearwallow Falls, breathing in the rich, organic smells of the forests, or seeing the trees shimmer in a breeze along the mountainside, visitors find their time spent in the park to be both exhilarating and peaceful.

Gorges State Park offers many recreational opportunities that immerse visitors in its rich natural resources. Diverse bird species, from breeding residents to neotropical migrants, lure both the amateur and serious bird-watcher. Miles of trails offer hikers a range of experiences, from the easy Buckberry Ridge loop trail conveniently accessed from a picnicking area, to rugged overnight backpacking adventures deep within the park. Some old roadbeds are sufficiently constructed to allow a mix of trail uses such as horseback riding and mountain biking. Opportunities exist for group camping, picnicking, primitive camping and tent and trailer camping. Fishing is permitted in the park's river and streams. The park's large amount of undeveloped land and rugged terrain creates exceptional opportunities for visitors to experience wilderness.

Despite the rugged topography that typifies this portion of North Carolina, the area encompassed by the park has a history of human use that covers several thousand years. Archaeological investigations have documented numerous sites and features throughout the park. These include pre-historic sites used by Indians, such as small hunting camps, as well as historic sites used by European settlers, such as homesteads and cemeteries. The earliest pre-historic sites are believed to be up to 8,000 years in age, and sites established by Europeans date to the early 1700's.

Gorges State Park exists primarily so its outstanding geologic, biologic and scenic features can be protected, and also for its recreational and archaeological resources. The Division of Parks and Recreation is charged with preserving these values and providing experiences within its units that promote pride in and understanding of the valuable natural heritage of North Carolina.

III. SUMMARY OF INTERPRETIVE THEMES

The 1987 State Parks Act defines the purposes of the state parks system. It establishes that:

> *The state of North Carolina offers unique archaeologic, geologic, biologic, scenic and recreation resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants.*

It further provides that:

> *Park lands are to be used by the people of this State and their visitors in order to promote understanding of and pride in the natural heritage of this State.*

One of the best methods of meeting these purposes is through environmental education. The definition of environmental education as set forth in *The North Carolina Environmental Education Plan* is given below.

> *Environmental education is an active process that increases awareness, knowledge and skills that result in understanding, commitment, informed decisions and constructive action to ensure stewardship of all interdependent parts of the earth's environment.*

According to the state plan, environmental education activities should include humans and their interactions with natural systems as part of the exercise, not taught as separate components. Gorges State Park is an excellent place to observe human impacts on a landscape over time. Much of the park was logged in the early 1900s. The 1916 flood on the Toxaway River, which occurred when an earthen dam failed, provides a spectacular example of what can happen when humans alter hydrology.

The park's interrelated, primary interpretive themes revolve around geomorphology, hydrology and biodiversity. An overarching theme may be stated: Due to its steep topography, abundant surface waters and warm, wet climate, the park supports a great variety of natural communities with many unusual or rare species. A future visitor's center will help park users understand how the unique geology, topography, hydrology and climate together provide the conditions necessary for the amazing biodiversity seen in the park. Interpretive programs and displays will also highlight resource management practices that allow this biodiversity to flourish now and for years to come.

PRIMARY INTERPRETIVE THEMES

The Steep Terrain of the Blue Ridge Escarpment

Gorges State Park lies within the Blue Ridge Escarpment, a wide strip of steep, highly dissected land that drops sharply from the eastern edge of the Blue Ridge Mountains to the adjoining Piedmont

lowlands. In the park, the escarpment falls from its highest elevation of 3,200 feet to its lowest elevation of 1,200 feet in a distance of only four miles! The escarpment includes many striking landforms such as large overhangs, cliffs, pavement outcrops, cascades and waterfalls. The park is an ideal place to study geology in that it straddles two major geologic provinces separated by the Brevard Fault Zone. An active quarry is also located very near the park. The landforms and soils that result from the underlying bedrock support a variety of natural communities and many rare species.

Wet Climate and Abundant Surface Waters

The park is a very wet place, receiving an average of 80 to 90 inches of rainfall each year. These rains supply the abundant surface waters, which are the main source of weathering and erosion in the park and throughout the Blue Ridge Escarpment. The escarpment has the highest concentration of waterfalls and spray cliffs in eastern North America. The wet gorges and spray cliffs host an amazing diversity of amphibians and tropical plants. Periods of intense rainfall, such as from tropical storms and hurricanes, often cause debris flows down the steep slopes. Human disturbance via construction of dams, roads, homes and businesses has altered the hydrology of the region, sometimes with disastrous consequences, such as the flood of 1916. Hydropower projects can also be seen in the vicinity of the park.

Natural Communities and Rare Species

Because it is located in the transition zone between the Piedmont and mountains, the Blue Ridge Escarpment is a refuge for a diverse assortment of species and natural community types. The steep elevation gradient in the park creates differences in hydrology, soils and climate over very short distances, allowing for an ever-changing mosaic of natural communities. Unexpected combinations of Piedmont and mountain species occur, and of the 114 natural community types found in North Carolina, 16 have been documented in the park. These community types range from high-elevation hardwood forests to low-elevation cove forests, and include communities associated with waterfalls and spray cliffs. The deep river gorges harbor an array of disjunct, or isolated species that are tropical in origin. As a result, biologists refer to the escarpment as "the tropics in the mountains."

SECONDARY INTERPRETIVE THEMES

-Cultural History of Area
-History of Development of Gorges State Park
-Safety Concerns (waterfalls, landslides, etc.)
-Wilderness Ethics and Behavior (leave no trace)
-Astronomy (proposed Visitor Center site)
-Park's Flora not covered in the EELE (trees, medicinal plants, spring/fall wildflowers)
-Rare/Significant Mammals of the park (bears)
-Rare/Significant Birds (neo-tropical and resident) of the park
-Rare Significant Fish of the park
-Rare/Significant Reptiles and Amphibians of the park (rattlesnake and salamanders)

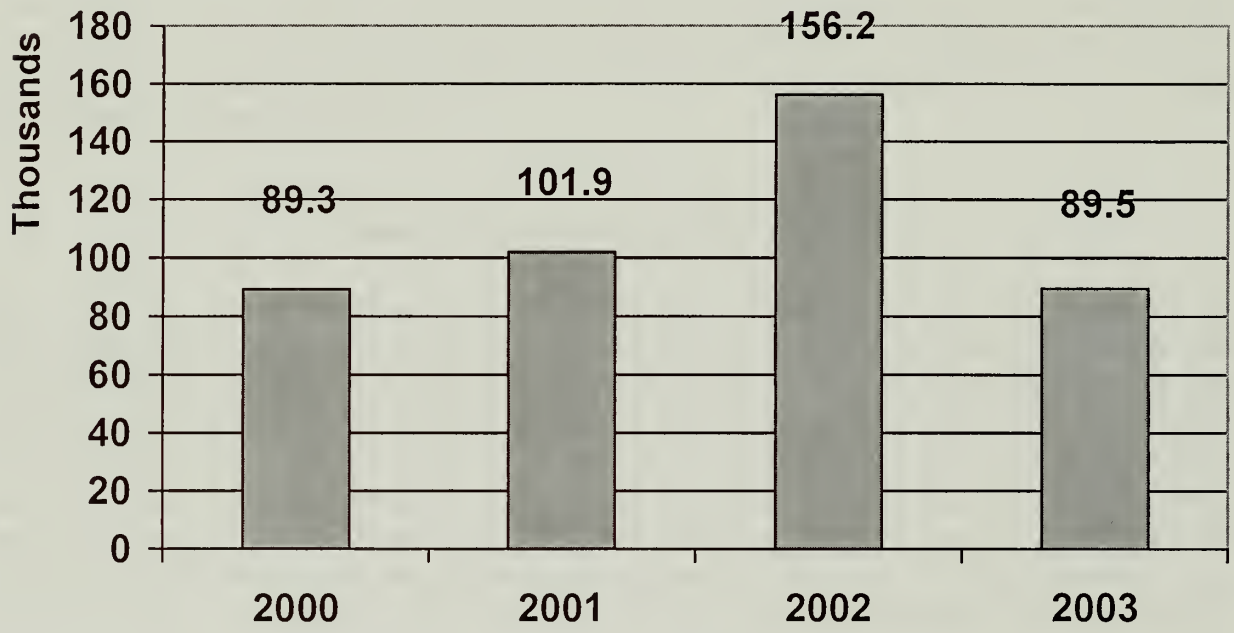
-Rare/Significant Insects of the park
-Aquatic Macro/Micro Invertebrates (stream studies)
-Non-native plants and animals

IV. PARK AND RECREATION DEMAND AND TRENDS

ANNUAL VISITATION TRENDS

Gorges State Park does not have a long history of visitation. The park was only established in 1999, and to date only minimal facility development has taken place. Figure IV-1 shows the park's annual visitation from 2000 through 2003. Visitation from January through March of 2001 is estimated. The Grassy Ridge Access opened April 9, 2001, and the Frozen Creek Access opened July 1, 2001. As additional facilities are developed, visitation to Gorges State Park should increase substantially.

Figure IV-1. Annual Visitation

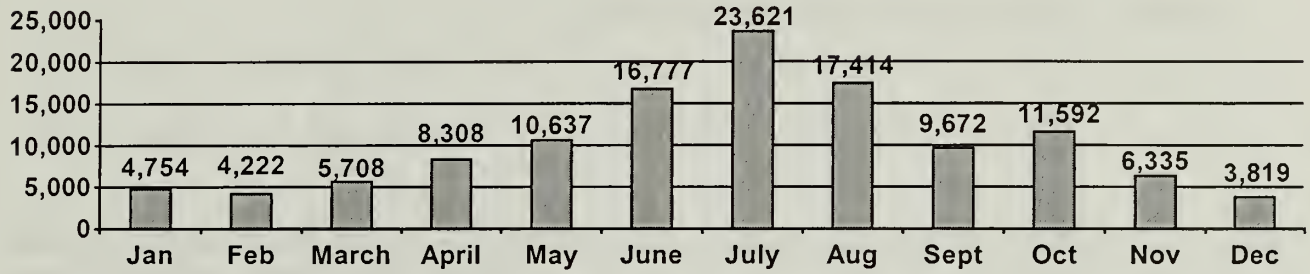


Traffic counters at the two accesses are used to determine visitation, using a per vehicle multiplier of three persons. Visitation dropped 42.7 percent from 156,185 in 2002 to 89,526 in 2003. During 2003, Transylvania County experienced one of the highest annual amounts of rainfall on record, concomitantly dampening travel and tourism. The park was also closed during parts of the popular 4th of July and Labor Day weekends due to staff involvement in rescue efforts at the Horsepasture River.

MONTHLY VISITATION TRENDS

Gorges State Park's monthly visitation is largely seasonal, with dramatic differences in visitation between the cold and warm weather months (Figure IV-2). Visitation increases with the arrival of warmer spring weather, peaks in July of the summer months, and then - except during a jump for the peak fall leaf season – decreases as the temperature drops.

Figure IV-2. Average Monthly Visitation 2002-2003



The monthly visitation pattern leads to an obvious conclusion concerning the desirability of using seasonal and peak load personnel to help staff the park during months of higher visitation.

VISITOR INFORMATION

In 1987 the United States Forest Service was contracted by the Department to conduct a Public Area Recreation Visitors Survey (PARVS) for the North Carolina State Parks System, designed to identify visitor socio-economic characteristics and economic contribution to the state' s economy. While Gorges State Park was not one of the eight parks involved in the survey, general information concerning state park visitors is useful in assessing visitation trends at the park.

Why do people visit state park units? The convenient location was cited by 31 percent of the respondents; 25 percent thought other areas were too crowded; 21 percent liked the quality facilities; 8 percent wanted to try a new area; 7 percent enjoyed the scenic beauty; and 6 percent came to see the attraction.

More than one-third (37 percent) of state park visitors come from within a 30-mile radius, while 17 percent come from 30 to 60 miles away. Survey respondents indicated that the parks were their sole destination 86 percent of the time. While many visitors come from nearby, the average one-way distance traveled was 139 miles. Approximately 25 percent of state park visitors come from out of state. These visitors averaged 4.1 trips per year to North Carolina state parks.

Seventy-eight percent of those surveyed indicated that they were return visitors. The average

number of return trips per year was six. Sixty-one percent of visitors statewide came with family members, 16 percent with friends, and 7 percent with both family and friends. Ten percent of visitors came alone. Visitors also came in small numbers in organized groups and multiple families.

PARVS data indicates that 16.8 percent of groups surveyed used more than one car, and that the average number of persons per car was 3.0. The average age of the park visitor was 38.2 years. The age distribution was as follows:

Table IV-1. Percent of Visitors by Age Group

Under 6	6-12	13-18	19-25	26-35	36-45	46-55	56-65	Over 65
6.7	11.6	10.6	12.5	20.1	16.9	0.9	7.3	4.4

Since over 18 percent of visitors are under the age of 13, a demand exists for children's programs and facilities. Approximately 12 percent of visitors are 56 and older. This older segment of the general population will be increasing, and as it does, demand for improved quality, accessibility, and safety should increase.

OUTDOOR RECREATION PARTICIPATION IN NORTH CAROLINA

The five most popular outdoor recreation activities in North Carolina are walking for pleasure, driving for pleasure, viewing scenery, participating in beach activities, and visiting historical sites. Three out of every four households participated in walking for pleasure at least once in the past 12 months (Table IV-2). In addition to the five most popular activities, over 50 percent of the households responding to a 1989 survey participated at least once in the following activities: swimming (in lakes, rivers, or oceans), visiting natural areas, picnicking, attending sports events, visiting zoos, and freshwater fishing.

The North Carolina Outdoor Recreation Participation Survey was mailed to 3,100 randomly selected residents in the spring of 1989. Forty-five percent, or 1,399 people, returned completed surveys. Each person receiving the survey was asked to estimate the number of times that household members had participated in each of 43 activities. The survey results provide good insight into the current participation of North Carolinians in a wide range of outdoor recreation activities. The survey results also closely mirror those of the National Survey on Recreation and the Environment conducted in 1994-1995 and 2000.

Table IV-2. Outdoor Recreation Activities Ranked by Popularity.

RANK	ACTIVITY	PERCENTAGE OF HOUSEHOLDS PARTICIPATING
1.	Walking for Pleasure	75%
2.	Driving for Pleasure	72
3.	Viewing Scenery	71
4.	Beach Activities	69
5.	Visiting Historical Sites	62
6.	Swimming (in Lakes, Rivers, and Oceans)	54
7.	Visiting Natural Areas	53
8.	Picnicking	52
9.	Attending Sports Events	52
10.	Visiting Zoos	51
11.	Fishing - Freshwater	50
12.	Use of Open Areas	41
13.	Swimming (in Pools)	40
14.	Fishing - Saltwater	38
15.	Attending Outdoor Cultural Events	35
16.	Bicycling for Pleasure	32
17.	Other Winter Sports	31
18.	Camping, Tent or Vehicle	29
19.	Softball and Baseball	28
20.	Hunting	28
21.	Use of Play Equipment	28
22.	Power Boating	26
23.	Trail Hiking	26
24.	Jogging or Running	24
25.	Basketball	24
26.	Nature Study	22
27.	Golf	22
28.	Target Shooting	20
29.	Water Skiing	19
30.	Camping, Primitive	14
31.	Tennis	14
32.	Use Motorcycles, Dirt Bikes, ATVs	13
33.	Use Four Wheel Drive Vehicles	13
34.	Canoeing and Kayaking	13
35.	Horseback Riding	12
36.	Volleyball	12
37.	Downhill Skiing	12
38.	Football	11
39.	Soccer	7
40.	Sailboating	7
41.	Skateboarding	6
42.	Cross Country Skiing	2
43.	Windsurfing	1

PRIORITIES OF PUBLIC OUTDOOR RECREATION FUNDING

The North Carolina Outdoor Recreation Survey asked residents a series of questions in order to identify and rank order future demand for various types of public outdoor recreation activities. Future demand was determined by asking them which activities they would have tried more often had adequate facilities been available. Respondents were then asked to rank these activities in order of importance. A scoring system was used assigning each activity a rating of high, moderate or low future demand based on the survey results.

In the second part of the analysis, the respondents' level of support for publicly funded outdoor recreation activities was determined by asking them to identify and rank those activities to which government should give highest priority when spending public money. The same scoring system used to analyze unmet demand was then applied to the survey results, with each activity receiving a high, moderate or low rating in public support for public funding.

In the final part of the needs analysis, the two ratings for each activity were combined to produce a score from one to nine that reflected both future demand and public funding priorities. The activities that ranked high in both future demand and support for public funding received the highest priority in the needs assessment. Support for public funding was given higher priority than expressed demand (Table IV-3).

Table IV-3. Priorities for Future Outdoor Recreation Activities

ACTIVITY	CODE	FUTURE DEMAND	SUPPORT FOR PUBLIC FUNDING
Walking for Pleasure	1	High	High
Camping, Tent or Vehicle	1	High	High
Picnicking	1	High	High
Beach Activities	1	High	High
Fishing - Freshwater	1	High	High
Attend Outdoor Cultural Events	1	High	High
Visiting Natural Areas	2	Moderate	High
Use of Play Equipment	2	Moderate	High
Visiting Zoos	2	Moderate	High
Visiting Historical Sites	2	Moderate	High
Bicycling for Pleasure	3	High	Moderate
Swimming (in Pools)	3	High	Moderate
Viewing Scenery	4	Moderate	Moderate
Hunting	4	Moderate	Moderate
Trail Hiking	4	Moderate	Moderate
Use of Open Areas	4	Moderate	Moderate
Target Shooting	4	Moderate	Moderate
Swimming (Lakes, Rivers, Ocean)	4	Moderate	Moderate
Fishing - Saltwater	4	Moderate	Moderate

AREA OUTDOOR RECREATIONAL OPPORTUNITIES

Transylvania County, in which Gorges State Park is located, and surrounding counties are home to a variety of outdoor recreation areas. A brief description of some of these follows.

Blue Ridge Parkway

The popular Blue Ridge Parkway runs 469 miles from Shenandoah National Park in Virginia to the Great Smoky Mountains National Park. It passes along the Transylvania County – Haywood County line. At Mt. Pisgah (milepost 408.7), camping for 70 tents and 67 trailers is provided. Facilities include water and restrooms but no showers or hook-ups. A 50 – site picnic area and several trails are nearby. Mt. Pisgah is the highest developed recreation area along the parkway. (www.nps.gov/blri/)

Cradle of Forestry in America

This 6,500 acre historic site within the Pisgah National Forest was established by Congress to commemorate the beginning of forestry conservation in the United States. Located in northern Transylvania County, it features an educational film, interactive exhibits, guided trails, historical buildings, logging locomotive, old sawmill and special programs and events. (www.cradleofforestry.com)

DuPont State Forest

DuPont State Forest, located southeast of Brevard in Transylvania and Henderson counties, offers 10,400 acres of beautiful forest that features four major waterfalls on the Little River and several on Grassy Creek. The forest provides opportunities for hunting, fishing, hiking, horseback riding, mountain biking and environmental education. The forest is used to demonstrate forest and wildlife management practices and also to protect important examples of the region's natural resources. Hooker Falls, Bridal Veil Falls, Triple Falls and High Falls are all spectacularly beautiful attractions. (www.dupontforest.com)

Horsepasture River and Falls

Adjacent to Gorges State Park is the Horsepasture River, a federal Wild and Scenic River and a North Carolina Natural and Scenic River. It has five major scenic waterfalls. Most of the river is located on US Forest Service property. See Chapter VIII for additional information.

Nantahala National Forest – Highlands District

The Highlands Ranger District of the Nantahala National Forest covers an area of about 116,000 acres in Macon, Jackson and Transylvania counties. Areas include the 39,000 – acre Roy Taylor Forest in Jackson County, adjacent to the Blue Ridge Parkway. In addition to the Horsepasture and Whitewater rivers and their falls, located close to Gorges State Park, the Highlands District contains numerous other scenic waterfalls. Within the Cullasaja Gorge along US 64 in Macon

County are Bridal Veil Falls and Dry Falls, so named because you can walk behind the falls, and Lower Cullasaja Falls. The drive along US 64 and through the Cullasaja Gorge is part of the Mountain Waters Scenic Byway. Within Cullasaja Gorge, the Cliffside Lake and Van Hook Glade recreation areas offer picnicking, swimming, fishing, camping and hiking. Not far from the Cullasaja Gorge, the Highlands Visitor Center offers exhibits and information about the forest.

Whiteside Mountain, located on the eastern continental divide off US 64 near Cashiers in Macon County, rises over 2,100 feet from the valley floor to the summit at 4,930 feet. A two-mile loop trail climbs above the750-foot cliffs along the ridge. (www.cs.unca.edu/nfsnc/recreation/recreate.htm)

Pisgah National Forest - Pisgah District

The Pisgah District of the Pisgah National Forest, located north of Gorges State Park, offers a variety of outdoor recreation areas. The visitor center, near Brevard, offers information, exhibits and trails. The popular 161-site Davidson River Campground has hiking trails, fishing streams, picnic tables, and tubing on the river. Coontree and Sycamore Flats picnic areas are also located along the Davidson River.

The Forest Heritage Scenic Byway traverses the Pisgah National Forest in Transylvania and Haywood counties. The 79-mile loop winds through areas of outstanding natural beauty that are rich in forest history. In addition to the Cradle of Forestry in America, other popular attractions include Looking Glass Falls, Sliding Rock and the Pisgah Center for Wildlife Education and Fish Hatchery. Much of the Byway route follows old roads and logging railroads from the turn of the century.

Whitewater River and Falls

The spectacular Upper Whitewater Falls is located off NC 281 between Gorges State Park and the North Carolina - South Carolina state line. The falls drop 411 feet, the most of any waterfall east of the Mississippi. The US Forest Service operated access area provides a parking lot, restrooms and a paved pathway to an upper overlook. From there, steps and a trail lead down to the river and provide additional views of the falls and river. Further downstream, across the state line, the Lower Whitewater Falls drop another 400 feet. (www.cs.unca.edu/nfsnc/recreation/whitewaterfalls.pdf)

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V. SUMMARY OF LAWS GUIDING PARK MANAGEMENT

There are many federal and state statutes, state and federal executive orders, and administrative rules and policies that govern the operation of the state parks system. This chapter includes a brief discussion of the primary legal basis for the existence and operation of the state parks system. It also includes other legal issues of particular concern at Gorges State Park.

STATE LEGAL MANDATES

North Carolina Constitution

Article XIV, Section 5 of the North Carolina Constitution sets overall policy by broadly defining the conservation and protection of natural resources and the acquisition of such resources as a proper function of government. The amendment reads in part as follows:

> *It shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina and its political subdivision to acquire and preserve park, recreation, and scenic areas, to control and limit the pollution of our air and water, to control excessive noise, and in every other appropriate way to preserve as a part of the common heritage of this state its forests, wetlands, estuaries, beaches, historical sites, open land, and places of beauty.*

State Parks Act

The State Parks Act (G.S. 113-44.7 through 113-44.14) sets forth a mission statement for the state parks system. It states that the system functions to preserve and manage representative examples of significant biological, geological, scenic, archaeological, and recreational resources, and that park lands are to be used by the people of the state and their visitors and descendants in order to promote understanding of and pride in the state's natural heritage.

The State Parks Act also calls for development and periodic revisions of a system plan to achieve the mission and purpose of the state parks system in a reasonable, timely, and cost-efficient manner. The Act describes the System Plan components and requires that public participation be a component of plan development and revisions.

The State Parks Act also calls for the classification of park resources and development of general management plans (GMPs) for each park. GMPs are to include a statement of park purpose, an analysis of major resources and facilities, and a statement of management direction.

Powers and Duties of the Department of Environment and Natural Resources

The Department is authorized to make investigations of the resources of the state and to take such measures as it may deem best suited to promote the conservation and development of such resources. In addition, the Department may care for state forests and parks and other recreational areas now owned, or to be acquired by, the state. (G.S. 113-8)

State Nature and Historic Preserve Dedication Act

The State Nature and Historic Preserve Dedication Act (G.S. 143-260.6) was authorized by Article 14, Section 5 of the North Carolina Constitution. It seeks to ensure that lands and waters acquired and preserved for park, recreational, and scenic areas for the purpose of controlling and limiting the pollution of air and water, controlling excessive noise, and in every other appropriate way preserving as a part of the common heritage of the state, continue to be used for those purposes. The State Nature and Historic Preserve Act provides a strong legal tool for protecting lands from incompatible uses. The addition and removal of lands to and from the State Nature and Historic Preserve require a vote of three-fifths of the members of each house of the General Assembly. All land and water within the park boundaries as of May 6, 2003, are protected by the State Nature and Historic Preserve Dedication Act.

Nature Preserves Act

The Nature Preserves Act (1985, G.S. 113A-164) prescribes methods by which nature preserves may be dedicated for the benefit of present and future citizens of North Carolina. It authorizes a Natural Heritage Program to provide assistance in the selection and nomination for registration or dedication of natural areas.

The state may accept the dedication of outstanding natural areas by gift, grant, or purchase of fee simple title or other interest in land. Lands dedicated are held in trust by the state and are managed and protected according to regulations. They may not be used for any purpose inconsistent with the provision of the Nature Preserves Act or disposed of by the state without a finding by the Governor and Council of State that the other use or disposition is in the best interest of the state.

At the present time, none of Gorges State Park is dedicated as a nature preserve. At some future time, however, much of the park is likely to be dedicated.

North Carolina Environmental Policy Act of 1971

Recognizing the profound influence that human activity has on the natural environment, the General Assembly passed the Environmental Policy Act "*to assure that an environment of high quality will be maintained for the health and well-being of all...*"

The Act declares that:

> *It shall be the continuing policy of the State of North Carolina to conserve and protect its natural resources and to create and maintain conditions under which man and nature can exist in productive harmony. Further, it shall be the policy of the State to seek, for all its citizens safe, healthful, productive, and aesthetically pleasing surroundings; to attain the widest possible range of beneficial uses of the environment without degradation, risk to health or safety; and to preserve the important historic and cultural elements of our common inheritance. (G.S. 113A-3)*

Archaeological Resources Protection Act

The Gorges State Park area is known to have been occupied by American Indian tribes. The area also contains some cultural resources associated with early settlements. Unknown archaeological resources may also exist, both within the existing park boundaries and in nearby areas. Development of recreational facilities should avoid destruction of these resources.

A permit is required from the Department of Administration, in consultation with the Department of Cultural Resources, to excavate, remove, damage, or alter any archaeological resource on state lands. Archaeological resources are defined as the remains of past human life or activities that are at least 50 years old and are of archaeological interest (G.S. 70-10).

While there are other General Statutes that concern the state parks system and the environment, the above-described statutes, along with Article XIV, Section 5, of the North Carolina Constitution, largely define the purposes of the state parks system and serve to guide the operation of state park system units.

FEDERAL LAWS

Land and Water Conservation Fund Act of 1965

The federal Land and Water Conservation Fund Act (PL 88-578) offers protection and places restrictions on fund-assisted outdoor recreation areas.

By virtue of receiving Land and Water Conservation Fund (LWCF) grant assistance, most of the state parks system, including most of Eno River State Park, is subject to LWCF rules and regulations. Property acquired or developed in whole or in part with LWCF assistance cannot be converted to other than public outdoor recreation use without federal approval. A conversion may take place only if approved by the Secretary of the Interior, and only then if replacement property of equal fair market value and reasonably equivalent usefulness and location is made. Most of Eno River State Park, except for lands acquired since the last of the seven federal grants, is protected by LWCF regulations.

LWCF requirements include: programming, operating and maintaining areas in a manner that encourages public participation; maintaining the property so it appears attractive and inviting to the public; maintaining property, facilities and equipment to provide for public safety; keeping facilities, roads, trails and other improvements in reasonable repair throughout their lifetime to prevent undue deterioration and encourage public use; keeping the park and facilities open for use at reasonable hours and times; and making future development meet LWCF rules and regulations. LWCF-assisted sites are periodically inspected by state and federal inspectors to ensure compliance with LWCF requirements.

The Americans With Disabilities Act

Title II of the ADA prohibits discrimination against any "*qualified individual with a disability.*"

New Construction and Alterations

> *Buildings that are constructed or altered by, on behalf of, or for the use of a public entity shall be designed, constructed, or altered to be readily accessible to and usable by individuals with disabilities.* (Section 35.151 of Title II)

Existing Facilities

> *Structural changes in existing facilities are required only when there is no other feasible way to make the public entity's program accessible.* ("Structural changes" include all physical changes to a facility [28 CFR Part 35, Section 35.150, Title II of the ADA Section-by-Section Analysis].)

When alterations affect access to a primary function of a facility, the entity shall also make alterations to the path of travel to the area and bathrooms, public telephones, and drinking fountains serving the altered area.

Programs and Services

> *....each service, program, or activity conducted by a public entity, when viewed in its entirety, be readily accessible to and usable by individuals with disabilities.*
> (Title II, Section 35.150)

This includes, but is not limited to, the provision of auxiliary aids and services, including services and devices for effective communication where necessary to afford persons with disabilities an equal opportunity to participate in and enjoy the benefits of a service, program, or activity conducted by a public entity.

Signs

A public entity must ensure that persons with impaired vision and hearing can obtain information

regarding the location of accessible services, activities, and facilities. Signs must be provided at all inaccessible entrances to each facility directing users to an accessible entrance or to a location where information can be obtained about accessible facilities. The international symbol for accessibility must be used at each accessible entrance to a facility. (Title II, Section 35.163)

Clean Water Act

Gorges State Park's sensitive wetland areas receive some protection from Section 404 of the federal Clean Water Act. The Act prohibits the discharge of dredge or fill materials into waters, including wetlands, without a permit from the U.S. Army Corps of Engineers. Activities in wetlands for which permits may be required include but are not limited to: placement of fill material; ditching activities; land clearing involving relocation of soil material; land leveling; most road construction; and dam construction (33 USC 1344). The Division will avoid undertaking construction located in wetlands unless there is no practical alternative and all practical measures are taken to minimize harm to the wetland.

VI. NATURAL AND CULTURAL RESOURCE MANAGEMENT

NATURAL RESOURCE MANAGEMENT POLICY

The Division of Parks and Recreation's approach to natural resource management is directed by the North Carolina Constitution and the State Parks Act, both of which require the prudent management of natural resources. The constitution sets the overall policy by broadly defining the conservation and protection of natural resources and the acquisition of such resources as a proper function of government. The State Parks Act states that unique archaeological, geological, biological, scenic and recreational resources are a part of the heritage of the people that "... *should be preserved and managed by those people for their use and for the use of their visitors and descendants.*"

The North Carolina state parks system plays an important role in maintaining, rehabilitating and perpetuating the state's natural heritage. The natural resources of the state parks system are: high quality, rare or representative examples of natural communities; native plants and animals; geological features and landforms; water resources; and the natural processes that affect these resources. The primary objective in natural resource management will be the protection of natural resources for their inherent integrity and for appropriate types of enjoyment while ensuring their availability for future generations.

It is the Division's policy that natural resources will be managed by allowing natural environments to evolve through natural processes with minimal human influence. Natural resource management will not attempt solely to preserve individual species or processes; rather, it will attempt to maintain all the components and processes of a park's naturally evolving ecosystems. When intervention is necessary, direct or secondary effects on park resources will be minimized to the greatest extent possible. Intervention of natural processes may occur:

1. To correct or compensate for the previous human disruption of natural processes;
2. To protect, restore or enhance rare species and natural communities;
3. To protect, restore or enhance significant archaeological resources;
4. To construct, maintain, improve or protect park facilities; and,
5. To prevent danger to human health or safety around park facilities.

All park facilities will be designed, constructed and maintained to avoid adverse impacts to high quality natural communities, rare plant and animal species, major archaeological sites and other significant natural and cultural resources.

NATURAL AND CULTURAL RESOURCE MANAGEMENT ISSUES

Category	Subcategory	Project Description	Priority[1]
Animal Management	Exotic Species Management	Develop a Feral Hog management Program.	High
	Exotic Species Management	Develop a detection and monitoring program for Hemlock Woolly Adelgid.	Medium
	Inventory Deficiencies	Obtain a copy of the small mammals inventory.	Low
	Nuisance Animal Management	Design trashcans and other trash receptacles to be bear and raccoon proof.	Low
	Nuisance Animal Management	Provide primitive campsites with food storage bins.	Low
	Rare Species Management	Develop a monitoring program for rare species (Timber Rattlesnake, Appalachian Woodrat, Bear, and Green Salamander).	Medium
Botanical Resource Management	Exotic Species Management	Inventory all Park properties for exotic plant species. Inventory should focus on road sites and disturbed areas.	Medium
	Exotic Species Management	Develop a plan to eliminate exotics after inventory has been completed.	Medium
	Inventory Deficiencies	Prepare an inventory for any new land acquisitions.	Medium
	Inventory Deficiencies	Develop a monitoring program for unique natural communities (Rich Cove Forest, Spray Cliffs, etc.)	Medium
	Rare Species Management	Develop a protection plan for the Fraser's loosestrife located near the proposed park entrance road.	High
	Rare Species Management	Monitor populations of Southern Oconee bells various and mosses	Medium
	Restoration/Reintroduction	Prepare a prairie grass restoration plan for Grassy Ridge after road construction is completed.	Low
Cultural Resource Management	Cultural Resource Management	Obtain historical information about the various cemeteries in the park.	Low
	Cultural Resource Management	Obtain historical information on the Indian Camp area.	Low
	Cultural Resource Management	Obtain home Site information.	Low
Infrastructure Management	Environmental Compliance for Planned Construction Projects	Environmental Assessment will be required for the Master Plan.	High
	Facilities Management	Ensure all new facilities are constructed to minimize/eliminate light pollution.	Low
	Road Management	Phase out access to Wildlife Resources Property by way of Auger Hole Road.	High

	Road Management	Prepare a plan to obliterate all old roads not needed by park staff.	High
	Road Management	Add wildlife crossings under roads where necessary.	Low
	Trails Management	Continue to manage all trails for sedimentation and erosion control.	High
Category	**Subcategory**	**Project Description**	**Priority**
Land Use Management	Trails Management	Determine if DPR can restrict kayaking on the Toxaway.	Medium
	Agricultural/Water/Other Leases	Review the issues related to the leased property at Lake Jocassee.	Low
	Buffer Zone to State Park Property	Continue to monitor the boundary around the Cash property.	Medium
	Fire Management	Develop a wildfire management plan for the park.	High
	Fire Management	Develop a prescribed fire management plan for the park.	Medium
	Park boundaries	Complete boundary marking on all existing properties.	Medium
	Rights of Way	Continue to work with the U. S. Forest Service to resolve issues related to access to the Horespasture River.	High
	Rights of Way	Work with Duke Power to provide leave areas near streams.	Medium
	Rights of Way	Ensure that Duke Power does not continue to plant exotics along their right of way.	Medium
	Trash and Debris Disposal	Place signs along Lake Jocasse encouraging all campers to remove their trash.	Low
	Viewshed Management	Monitor viewshed impacts along Bearwallow creek.	Medium
Water Resource Management	Point and non-point pollution sources	Implement a study to determine the impacts of the warm water discharge from Lake Toxaway. Study should include design suggestions for a coldwater discharge from the Lake.	High
	Riparian Buffer Zone Protection	Ensure enforcement and maintenance of all stream buffers both within and close proximity to the park	High
	River bank erosion	Monitor roads and trails to ensure stream bank integrity is maintained.	High
	Water Pollution	Develop a water quality testing program to determine baseline conditions and implement a long-term monitoring program to ensure high water quality within the park	High

1. Explanation of priority codes

High If the resource management activity is not undertaken in the near future there is a distinct possibility that natural resources will be compromised.

Medium Although there is a possibility that resources could be compromised, the priority is not as critical as the high priority projects.

Low Projects with low priority have significantly less chance for compromise of the natural resources if the project is not undertaken in a timely fashion or the project may depend on completion of other projects.

RESOURCE INVENTORY

The southern Blue Ridge escarpment, defined as the Chattooga, Whitewater, Thompson, Horsepasture, Toxaway, and Estatoe river gorges (collectively known as the Jocassee Gorges), has long been recognized by scientists to be an area of biological significance. In the 1960s and 1970s, biological studies of the Jocassee Gorges were completed by scientists funded by a research grant to the Highlands Biological Station (Highlands, NC) from the National Science Foundation. Starting in 1999, new Jocassee Gorges natural resource inventories were funded by the North Carolina Natural Heritage Trust Fund and coordinated by the North Carolina Natural Heritage Program and the North Carolina Division of Parks and Recreation. The purpose of these new surveys was to update and complement the past research, and to provide inventory information in a form functional for the resource management of the Gorges State Park and the Wildlife Resource Commission's Toxaway Gamelands. References to subsequent scientific publications and government and academic reports are provided below. Nearly all documented species records for Gorges State Park have been compiled and recorded in the Division of Parks and Recreation's online Natural Resource Inventory Database. A list of the rare species documented for the park follows.

Gorges State Park Documented Rare Species

Mammal:
Myotis septentrionalis, Northern Long-eared Bat, State Special Concern
Myotis lucifugus, Little Brown Bat, State Watch List
Neotoma floridana haematoreia, Southern Appalachian Woodrat, State Special Concern and Federal Species of Concern
Sylvilagus obscurus, Appalachian Cottontail, State Significantly Rare
Ursus americanus, Black Bear, State Watch List

Bird:
Accipiter cooperii, Cooper's Hawk, State Special Concern
Coragyps atratus, Black Vulture, State Special Concern
Corvus corax, Common Raven, State Watch List
Limnothlypis swainsonii, Swainson's Warbler, State Watch List
Loxia curvirostra, Red Crossbill, State Significantly Rare and Federal Species of Concern

Reptile:
Crotalus horridus horridus, Timber Rattlesnake, State Special Concern

Amphibian:
Aneides aeneus, Green Salamander, State Endangered
Plethodon teyahalee, Southern Appalachian Salamander, State Watch List

Fish:
Etheostoma inscriptum, Turquoise Darter, State Special Concern

Hybopsis rubrifrons, Rosyface Chub, State Threatened
Micropterus coosae, Redeye Bass, State Significantly Rare
Notropis lutipinnis, Yellowfin Shiner, State Special Concern

Invertebrate:
Cambarus chaugaensis, Oconee Stream Crayfish, State Significantly Rare
Tachopteryx thoreyi, Gray Petaltail, State Significantly Rare

Plant:
Asplenium monanthes, Single-sorus spleenwort, State Endangered
Asplenium resiliens, Blackstem spleenwort, State Watch List
Calystegia catesbiana ssp. sericata, Blue Ridge bindweed, State Candidate
Carex pedunculatai, Longstalk sedge, State Candidate
Cypripedium pubescens, Large yellow lady's slipper, State Watch List
Fothergilla major, Large witch-alder, State Candidate
Heuchera parviflora var. parviflora, Grotto alumroot, State Watch List
Houstonia longifolia var. glabra, Granite dome bluet, State Candidate
Huperzia porophila, Rock fir-clubmoss, State Candidate
Juglans cinerea, Butternut, State Watch List
Juncus gymnocarpus, Seep rush, State Watch List
Krigia montana, Mountain cynthia, State Watch List
Lysimachia fraseri, Fraser's loosestrife, State Endangered and Federally Endangered
Monotropsis odorata, Sweet pinesap, State Candidate, Federal Species of Concern
Panax quinquefolius, Ginseng, State Watch List
Philadelphus inodorus, Appalachian mock orange, State Watch List
Sanguisorba canadensis, Canada burnet, State Significantly Rare
Shortia galacifolia var. galacifolia, Southern Oconee bells, State Special Concern and Federal Species of Concern
Smilax biltmoreana, Biltmore carrion-flower, State Candidate
Thermopsis fraxinifolia, Ash-leaved golden banner, State Candidate
Trichomanes petersii, Dwarf filmy-fern, State Threatened
Triphora trianthophora, Three birds orchid, State Watch List
Tsuga caroliniana, Carolina hemlock, State Watch List
Vittaria appalachiana, Appalachian gametophyte, State Watch List
Waldsteinia lobata, Lobed barren-strawberry, State Candidate
Xerophyllum asphodeloides, Beargrass, State Watch List

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VII. PHYSICAL PLANT INVENTORY

FACILITY INVENTORY AND INSPECTION PROGRAM

No buildings have yet been constructed at Gorges State Park, so no inventory and inspection has taken place. After facilities are constructed, the Division will include Gorges State Park in its Facility Inventory and Inspection Program (FIIP).

MAJOR CAPITAL IMPROVEMENT PROJECT PRIORITIES

The Gorges State Park Master Plan describes the long-range acquisition and development plans for the park. The plan, developed with considerable public input, recommends developing the park in three phases. No change to the facilities proposed for construction in the master plan is recommended.

1. Phase I: Grassy Ridge Development $10,103,783

Phase I would develop the Grassy Ridge Access and would include the major park facilities. The main park entrance and roads, visitor center, overlooks, picnic area, trailhead parking areas, primitive campsites, six group campsites with restroom facilities, a tent/trailer campground and bathhouse, ranger residence, maintenance facility and utilities are all included in Phase I. Total current estimated construction cost is $10,103,783.

At the general management plan meeting, DPR personnel discussed the problem of funding such a costly project. Staff agreed that in many ways it was both desirable and cost-effective to construct the facilities listed above in one project, but staff also recognized the difficulty in spending so large a portion of the Division's total statewide construction funds in one park while other park units in other parts of the state also have high-priority development needs.

A $10 million plus project might be better funded as part of a statewide bond issue that would also include other large, expensive projects such as the initial development of new park units like the Mayo River and Haw River. In the event that the Division is not able to fund Phase I development at Gorges State Park in its entirety, Phase I would need to be split into two or more projects that would be undertaken over time. Accordingly, it was recommended that construction and operations staff study Phase I to determine the most desirable and cost-effective way to divide it into multiple projects. Such a division of Phase I into multiple projects is currently being discussed and may take place in the future.

NOTE: The Parks and Recreation Trust Fund (PARTF) in October 2004 funded a portion of this project, awarding $2.96 million to fund roads, parking and utilities at Grassy Ridge.

2. Phase II: Frozen Creek Access $980,295

Phase II at Gorges State Park as described in the master plan calls for development of the Frozen Creek Access. A parking area, picnic area, primitive campsite, restroom, office and vehicle storage area, ranger residence, helicopter landing zone, bridge and utilities are included. Total estimated current cost is $980,295.

3. Phase III: Complete Grassy Ridge $1,624,666

The master plan development for Phase III would complete the Grassy Ridge Access. A seasonal barracks, parking expansion for trailhead, seven group campsites with restrooms, picnic area and ranger residence was recommended. The current total estimated cost is $1,624,666.

These three projects were ranked for priority using the Division's Project Evaluation Program (PEP). The PEP is based upon objectives such as promoting public health, protecting natural resources, enhancing environmental education, increasing public accessibility, and improving the park's appearance. Using the PEP, projects across the state parks system are compared and ranked for funding priority.

Gorges State Park Project Priority List

Rank	Description	*Mean Score	Cost
1	Phase I: Grassy Ridge Development	692	$10,103,783
2	Phase II: Frozen Creek Access	574	$ 980,295
3	Phase III: Complete Grassy Ridge	516	$ 1,624,666
	Current Total Estimated Cost		$12,708,744

*The mean score comes from the Division's Project Evaluation Program (PEP). The PEP uses an evaluation formula to rank projects that considers four factors: the objective of the project; the justification or urgency for funding, the estimated annual number of persons (visitors and/or employees) who are affected by the project; and the project's significance, ranging from local to national. Projects are evaluated by the park superintendent, district superintendent, and division management. There are 15 objectives categorizing a project's purpose, and each project can have a primary and secondary objective.

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VIII. OPERATIONS ISSUES

INTRODUCTION

The major park issues facing Gorges State Park were identified by the Division of Parks and Recreation staff at the initiation of the general management plan process. The issues have been divided into three categories: natural resources (see Chapter VI), capital improvements (see Chapter VII) and operations. This chapter identifies park operations issues and makes recommendations for addressing them during the next five years.

Two operations issues for Gorges State Park that are of significant concern are the Auger Hole Road and the Horsepasture River.

AUGER HOLE ROAD

Background Information

The Auger Hole Road is an old gravel and dirt road starting from Frozen Creek Road outside of Rosman, in Transylvania County. The road traveled through the Duke Power properties, crossing Frozen Creek, Toxaway River, Bearwallow Creek, Horsepasture River and the Thompson River before terminating at the North Carolina/South Carolina state line. At this point the road is known as the Muster Ground Road, which terminates at the Bad Creek Project in South Carolina. Long before Gorges State Park was established, Duke Power opened the Auger Hole Road for general use. In the early 1980's it was closed due to misuse and overuse that resulted in road deterioration and environmental issues. Once it was closed, sportsmen were allowed to access Duke Power properties via the Grassy Ridge Road off of Hwy 281. During the late 70s through the late 90s Duke Power helped the Transylvania County Sheriffs Office fund a full-time deputy to patrol the area due to the misuse occurring on the property such as uncontrolled off road vehicle use, drinking, drug use, parties, camping, litter and vandalism.

Current Use

With the purchase of the Duke Power property and the establishment of the Toxaway Game Land and Gorges State Park in April 1999, the Auger Hole Road was reopened to limited traffic based on the following excerpt from then Secretary of DENR Wayne McDevitt's letter to Governor Hunt, dated May 26, 1998:

> *Access to the game lands will be provided to the hunters during the hunting season via the Auger Hole Road (also known as the Frozen Creek Road) or an alternative new or existing road mutually agreed upon by the Division of Parks and Recreation and the Wildlife Resources Commission. Hunters crossing the Gorges State Park will have their guns unloaded and cased. The road and appropriate river crossings will be maintained by both the Wildlife Resources Commission and the Division of Parks and Recreation.*

Currently Gorges State Park is maintaining six miles of the Auger Hole Road and river crossings at Frozen Creek, Toxaway River and Bearwallow Creek with very little help from the Wildlife Resources Commission. A special keyed lock system (located at the Frozen Creek access) was created by park staff to honor the agreement to let hunters access the Toxaway Game Land and to help protect the environment. Over the past three years, numerous attempts have been made by the Division of Parks and Recreation to establish a formal agreement regarding operation and maintenance of the road between the Division and the Wildlife Resources Commission without any success. The Division has therefore been left with virtually all of the expense of maintaining and managing the road. Use of the road by hunters is light. Some people also come by the park office, show a valid hunting license and receive a key, and then use the access for non-hunting purposes such as camping, fishing and joy riding.

Issues

- The Division is incurring virtually the entire cost in money, materials and staff time to maintain the six miles of the Auger Hole road for the benefit of the Wildlife Resources Commission and hunters.
- Environmental concerns exist related to erosion from the roadbed, which traverses rocky and steep terrain and three river fords. These concerns would increase with increased use.
- Use of the road by hunters is a violation of park regulations – GS113-35, Title 15A, Chapter 12b, NCAC .0901(a): No person except authorized park employees, their agents, or contractors, or officers of the state shall carry or possess firearms, airguns, bows and arrows, sling shots, or lethal missiles of any kind within any park.
- Where the road crosses the Toxaway River and Bearwallow Creek, rains can make the waters swift, deep and dangerous. People face situations where they may try to cross the streams at times when conditions make doing so a danger. Although signs make people aware of the danger, a more stable, safer, and permanent solution or another access is needed.
- Other routes that access the Toxaway Game Land can be constructed without crossing the park.

Recommendations

It is recommended that the Division follow the recommendations of the Park Master Plan (2003), developed and adopted after extensive public input, which states:

> *Auger Hole Road is represented in this master plan as a gated, but open road for public use. Based on the current agreement, Auger Hole Road will remain open until a more suitable route to the game lands can be established.*

A more appropriate permanent route to the game lands should be established. Until that time, the Division of Parks and Recreation should continue to attempt to secure a formal

use agreement with the Wildlife Resources Commission which includes specific shared cost and responsibilities of each agency. If such an agreement cannot be secured, the Division will only continue to operate the road as long as it is in a condition conducive to use and will only expend funds for its maintenance to the extent that such funds benefit the park's operation.

HORSEPASTURE RIVER

Background Information

Perhaps the most popular recreational attraction in the Gorges area is the Horsepasture River, which drops sharply off the Blue Ridge Escarpment and passes through rocky gorges and rugged terrain until it reaches Lake Jocassee. It has five major scenic waterfalls, Drift Falls, Turtleback Falls, Rainbow Falls, Stairstep Falls, and Windy Falls. The upper three falls – Drift, Turtleback and Rainbow - have traditionally been more easily accessible by short hikes from NC 281 over narrow and well-worn trails paralleling the river. Picnicking has been a popular activity on the rock outcroppings above and below the two upper falls, and these have also been popular sliding falls. The area has also been popular for fishing and camping.

In the mid 1980s, there was a proposal to build hydroelectric facilities on the river that would have diverted much of the flow from the river above Drift Falls and piped it to a power plant below Windy Falls. Public opposition mounted and support for protecting the river and its falls grew. The hydroelectric project was dropped and instead the river was studied and recommended for designation as a North Carolina *Natural and Scenic* river. In June of 1985, the NC General Assembly designated the segment of the Horsepasture downstream from Bohaynee Road (NC281) to Lake Jocassee as a *Natural* river. The designation Act called for development of a plan that would recognize and provide for protection of the river and its gorge "...so as to preserve its outstanding scenic character in perpetuity."

The Act also directed the Governor to seek inclusion of the river segment in the federal Wild and Scenic Rivers System. This was done successfully, and on October 27, 1986, Congress designated the approximately 4.25 mile segment as a federal *Wild and Scenic* river. At that time, part of the river corridor downstream of NC 281 was in US Forest Service ownership and part owned by Duke Power Company (now Duke Energy).

In the 1990s, public access to the river and falls was made more difficult as access from Bohaynee Road was curtailed by land ownership changes along the road and subsequent posting and enforcement of "no parking" and "no trespassing". Public protests arose over whether public trust rights to enjoy the river were being violated. The enforcement actions resulted in less public use of the river.

Current Use

After establishment of Gorges State Park and a nearby Gorges State Park access, public access and use of the river has increased. Visitors park their vehicles in Gorges State Park and then leave state park property to go onto US Forest Service (USFS) property to visit the river and falls. Approximately 120 acres of USFS property lies between the river and Gorges State Park. The USFS does not maintain the trails along the river nor do they staff and manage the property for public use. In effect, Division staff are called upon for search and rescue and other matters involving the Horsepasture River. As park facilities are developed and visitation increases, problems will only escalate.

Issues

- The Division does not own or control the most popular and scenic recreational resource in the Gorges area, one that is designated a NC *Natural and Scenic* river.
- The Division is the de facto manager of the USFS-owned segment of the Horsepasture River.
- The Horsepasture River environment is being damaged by poor trail maintenance and uncontrolled use. As Gorges State Park visitation increases, public use of the Horsepasture River will also increase.
- Public safety along the Horsepasture River and its waterfalls is a major concern. Better signs are needed.
- The Division has been directed by the General Assembly to protect the river and its gorge "... so as to preserve its outstanding scenic character in perpetuity", yet is not doing so.

Recommendations

The Division would like to see the Horsepasture River managed so as to allow the general public better access to the river and falls, to decrease emergency response time, to better protect the natural resources, and to improve visitor services. The Division should follow the master plan recommendation and seek to include this property as a part of the park. This could be done in the future by leasing the area from the USFS or by obtaining title to the property by trade or purchase. The Director and/or Superintendent of State Parks will contact and work with the USFS to address this issue.

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IX. GORGES STATE PARK LAND ACQUISITION

On April 29, 1999, thanks to a partnership of industry, the environmental community and the state of North Carolina 10,000 acres of the Jocassee Gorges in Transylvania County were placed in public ownership to be conserved for future generations of North Carolinians. The property was purchased by the state from Duke Energy Corporation, and the transaction created the 2,900-acre Toxaway Game Land managed by the N.C. Wildlife Resources Commission, and Gorges State Park.

Gorges State Park contains 7,172 acres and has biological, geological, and scenic significance. It contains deep gorges, waterfalls, sheer rock walls, rare plants and animals, and diverse natural communities. The elevation rises 2,000 feet in only three miles and rainfall exceeds 80 inches per year. This rare combination of conditions supports a temperate rain forest and a number of waterfalls.

LAND PROTECTION PLANNING

As the master plan for Gorges State Park was developed, the subject of the additional resource requirements for the park was addressed. The objectives for creating Gorges State Park are the protection of the unique natural resources, buffering these resources and visitor activities, protecting scenic views, and providing appropriate public recreational use. In accordance with these objectives, the adjacent lands have been reviewed and this plan addresses the future protection needs of Gorges State Park.

Several factors are considered to determine whether a piece of property should be included in a protection plan. Properties that contain or buffer rare species, natural communities, high water quality, and natural features are given the highest priority. Data from division staff surveys of the properties, the Natural Heritage Program, and the Division of Water Quality are used as information sources for locating the resources in need of protection. Threats to these properties can be logging, development, and sedimentation from upstream development as well as other forms of irreparable damage.

Properties that provide land for the construction of park facilities and that provide buffer for visitor activities also are reasons to include property within the protection plan. The North Carolina State Parks System exists to serve the state's citizens in many capacities. Providing the necessary space to carry out recreational and educational activities is part of the Division's mission and is a key reason to include property in a protection plan. This also applies to properties that protect scenic elements of the landscape. One purpose of the park is to maintain natural beauty for the public to see.

The provision of safe access and clear and simple boundaries are also factors in determining which properties are included in the protection plan. Public access to park land is key for a park to be viable. If the public and staff are unable reach the park resources, the park does not fulfill

its purpose. In order to properly manage and enforce regulations, park boundaries need to be easily accessed and identifiable.

LAND ISSUES AT GORGES STATE PARK

The total acreage of property identified as future needs for Gorges State Park is 2,469 acres. (Figure IX-1) During the planning process for protection needs for Gorges State Park, three levels of priority were established.

Priority 1: Properties identified in the first level of priority are those properties that are vital to the current and future operation of Gorges State Park. Priority one properties are shown in Figure IX-1 and the total area is 333 acres.

The properties identified on the east side of the Duke transmission line and adjacent to the park boundary as it stretches to Highway 64 are to provide access control to Bear Wallow Falls. Also identified in that general area are properties to protect the water quality of Bear Wallow Creek as it enters the park just above Bear Wallow Falls. These properties also have great value to the park due to the potential scenic impact to the park that would occur if these properties were developed.

The properties from the base of the Toxaway Falls to the park boundary and to the west are included to protect the water quality of the Toxaway River. These properties include the river and adjacent drainage ridge to the west.

On the east side of the park, the Division would like to acquire the property identified at Frozen Knob. This property will provide water quality protection for Frozen Creek, better access control, boundary management, and viewshed protection.

Priority 2: The second level of priority encompasses the properties that contain natural resources, buffer waterways, or provide better access to existing park resources. Priority two properties are shown in Figure IX-1 and the total area is 716 acres.

On the north side of the park, further land protection is needed to protect the water quality of the Toxaway River, Panther Branch, and Indian Creek. These properties run from the east portion of the Toxaway River to where the Continental Divide meets the park boundary. All of these streams flow through the core of the park into Lake Jocassee and provide vital habitat for many rare plants and animals.

Priority 3: The properties identified as third level of priority are those that are in the watershed for Lake Jocassee and would provide additional land for the development of park facilities. Priority three properties are shown in Figure IX-1 and the total area is 1,420 acres. The acquisition of the properties identified in this priority should occur on a willing-seller basis as funding allows.

The Division would like to protect the Frozen Creek watershed as well as much of the Toxaway Creek and Rock Creek watersheds. Natural Heritage data show that several naturally significant communities exist along these streams. The land identified as future needs would also provide excellent natural buffer to the existing park. The planned future needs boundary along Flat Creek Road would also provide a clearer boundary for park management.

APPROACHES

Having identified the three levels of priority for properties identified as future needs for Gorges State Park, three alternative approaches to protection have been formulated. These three approaches allow for park growth according to different reasons for protection. The first approach focuses only on the protection of the first priority. These properties are those vital to the effective management and development of the park. The total acreage for this approach is 333 acres.

The second approach incorporates the vital needs identified as priority one needs as well as those identified as priority two needs. The properties identified as priority two address resource management and protection issues that are key concerns for the park. The total acreage for this approach is 1,049 acres.

The third approach includes all the properties identified as future needs for the Gorges State Park. The priority three properties would provide additional natural resource protection and potential facility development sites. This would be in addition to the properties identified in priorities one and two. The total acreage for this approach would be 2,469 acres.

One park management issue is the lack of public access to the Horsepasture River's Turtleback Falls and Rainbow Falls on US Forest Service land adjacent to Gorges State Park. The falls are a very popular destination for many visitors for their scenic value and as a water recreational opportunity. The Division would like to see this area managed to allow the general public better access to these resources, to decrease emergency response time, and to improve visitor services. If in the future the US Forest Service would like to divest the Horsepasture property, the Division would like to obtain it in fee simple. Refer to Chapter VIII for further discussion of the Horsepasture River.

PROTECTION SUMMARY TABLE

Current size of the park (Nov 2003)		7,172 acres
Priority One needs	333 acres	
Priority Two needs	716 acres	
Priority Three needs	1,420 acres	
Total planned needs		2,469 acres
Total planned size of the park		9,641 acres

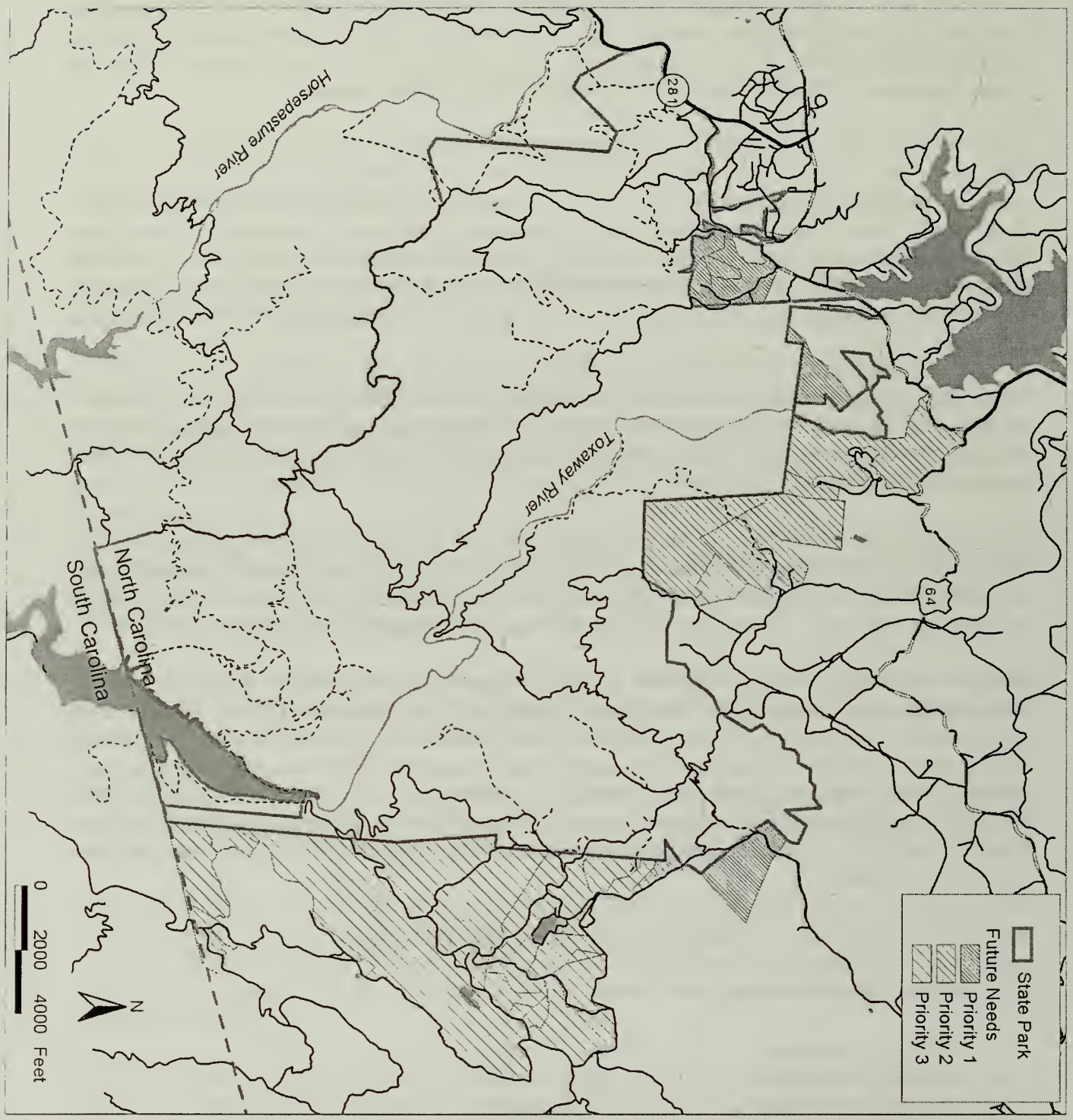

Figure IX-1. Gorges Land Acquisition Needs
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