

United States
Department of
Agriculture
Forest Service
Southern Region



North Carolina

Management Direction HORSEPASTURE WILD & SCENIC RIVER

Land and Resource Management Plan

1986-2000

NANTAHALA AND PISGAH NATIONAL FORESTS



MANAGEMENT DIRECTION

for the

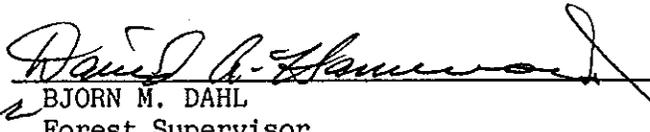
HORSEPASTURE WILD AND SCENIC RIVER

Nantahala National Forest
North Carolina

This management direction for the Horsepasture Wild and Scenic River was developed as part of the Land and Resource Management Plan for the Nantahala and Pisgah National Forests issued March 1987.

The Horsepasture River is managed to maintain and enhance the scenic and riparian features of the river and to provide water-oriented recreation opportunities in a natural setting. All National Forest lands within the river corridor are managed as not selected for timber production, and other resource management activities are restricted or modified to be compatible with the river resource.

The legal description and map herewith represent the location of the boundary of the Horsepasture Wild and Scenic River on the Nantahala National Forest as entered into the the National Wild and Scenic River System by the Act of October 27, 1986.

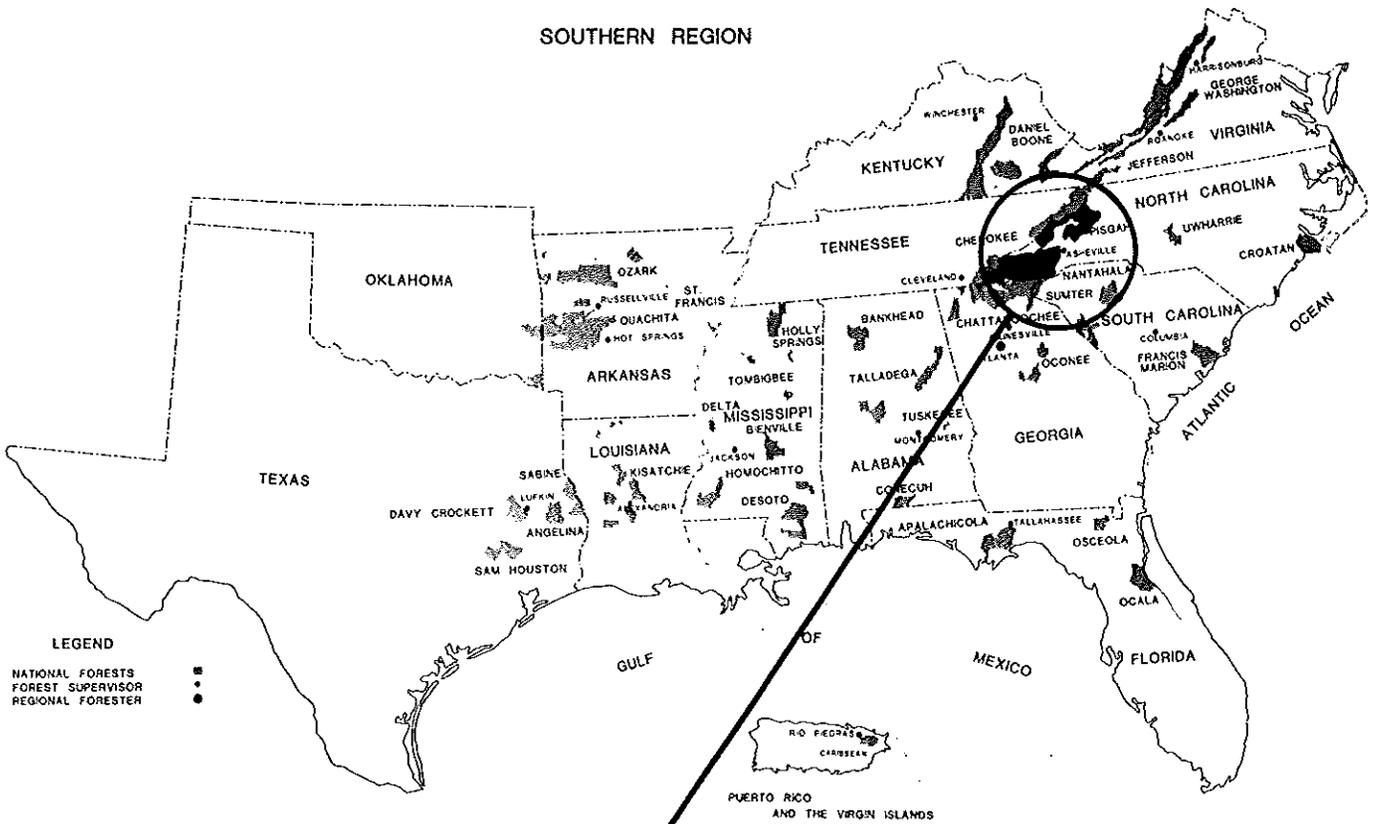
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Regional Forester

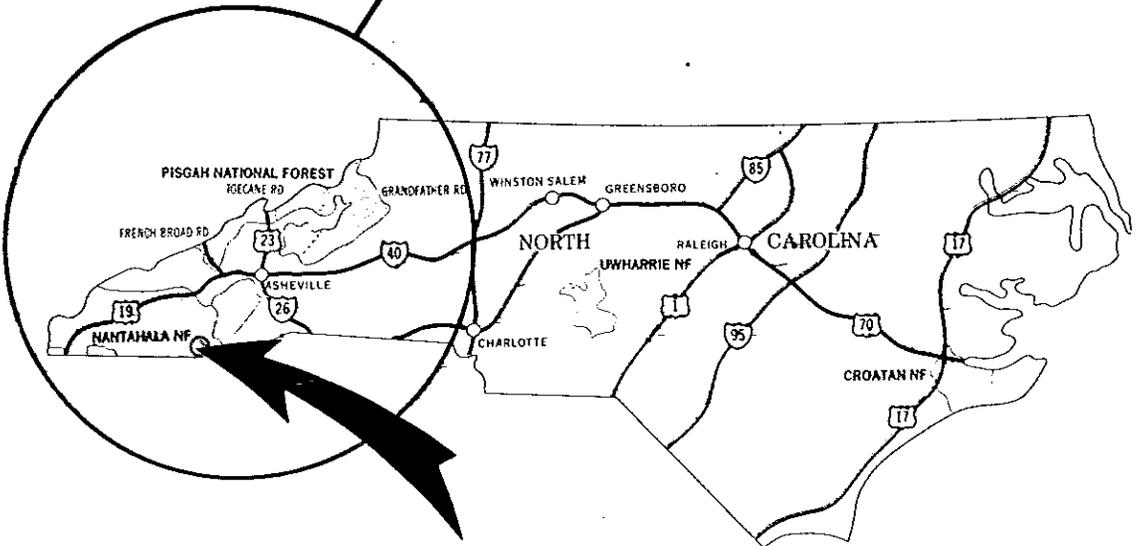
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SOUTHERN REGION

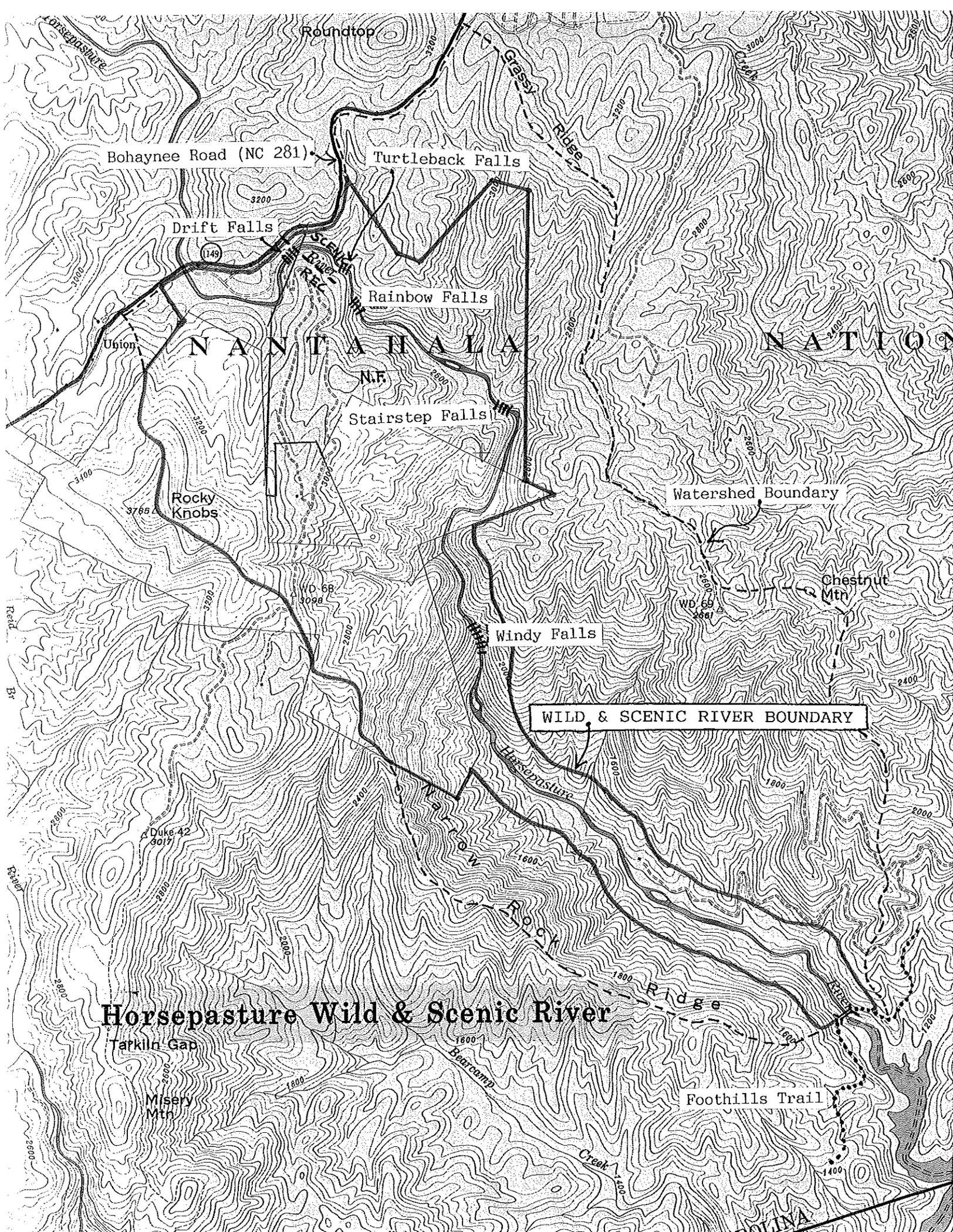


LEGEND
 NATIONAL FORESTS ■
 FOREST SUPERVISOR ●
 REGIONAL FORESTER ●



Horsepasture Wild & Scenic River

NANTAHALA NATIONAL FOREST



Bohaynee Road (NC 281)

Roundtop

Turtleback Falls

Drift Falls

Rainbow Falls

NANTAHALA

NANTAHALA

Stairstep Falls

Rocky Knobs

Watershed Boundary

Windy Falls

WILD & SCENIC RIVER BOUNDARY

Horsepasture Wild & Scenic River

Tarklin Gap

Foothills Trail

Misery Mtn

FOOTNA

MANAGEMENT DIRECTION FOR THE HORSEPASTURE RIVER

I. DESCRIPTION OF AREA

A. Regional Setting

The Horsepasture River is located in the southern mountains of Western North Carolina on the Atlantic side of the Continental Divide. This region is characterized by a mix of National Forest land and second home developments on private land. Many of these developments are concentrated in the area along US Highway 64 between Highlands and Lake Toxaway. Most are quite exclusive in nature. The primary attractions of this region are the cool summer climate, scenery, and recreation opportunities. A high monetary and amenity value is placed on the natural aesthetics of the area by the permanent and transient residents.

B. The River

The Horsepasture River is in the eastern portion of the Blue Ridge physiographic province. It originates near the Tennessee Valley Divide in the Blue Ridge Mountains of North Carolina, just north of Cashiers in Jackson County. It flows in an easterly direction to the Transylvania County line, where it turns southeast and continues through Transylvania County to its mouth at Lake Jocassee near the North Carolina and South Carolina state line. Its total length is approximately 14.8 miles, over which it drops approximately 2780 feet in elevation from 3880 to 1100 feet. The width of the river is variable, but averages 75 feet. The river channel is quite rocky, ranging from cobble-gravel to large boulders and bedrock ledges. The river is free-flowing except for four small impoundments in the upper drainage basin, two on the main stream and two on tributaries. All four lakes are used for recreational purposes only. They occasionally regulate the natural flow of the river when they are being filled or drained. There are no water supply intakes or drainage outlets in the river drainage basin.

The lower 4.2 miles of the river is designated a Wild and Scenic River. This river segment extends from the bridge on Bohaynee Road (NC Highway 281) downstream to the backwaters of Lake Jocassee. It flows through the Horsepasture River Gorge which is an exceptional example of escarpment river. The river has an undisturbed streamway characterized by five major waterfalls, numerous lesser falls, cascades, rapids, boulders, rock outcrops and pleasing vegetation. The following descriptions are specific to this 4.2 mile segment of river.

Landownership

The entire watershed for the lower Horsepasture River (NC 281 to Lake Jocassee) includes approximately 2931 acres. All of the watershed lies within the Nantahala National Forest Proclamation Boundary, but only 1.75 miles of the river flow through National Forest System lands. The National Forest boundary begins just downstream from the base of Windy Falls and ends about halfway between Stair Step and Windy Falls. Turtleback and Rainbow Falls are in the

National Forest and Drift and Windy Falls are on private land. The National Forest borders the river on both sides over the 1.75 mile segment for a total of 3.5 miles of shoreline. Approximately 947 acres (32%) in the watershed are National Forest System lands. The Crescent Land and Timber Company, a subsidiary of Duke Power Company, owns the remaining 1984 acres.

Access

Primary access to the river is from the Bohaynee Road (NC 281) which crosses the Horsepasture River. This road is a north/south route into South Carolina which intersects US 64, a major east/west route through the southern North Carolina mountains. Other vehicular access is from a single lane dirt road on Crescent Land and Timber Company land which crosses the river about midway between the base of Windy Falls and Lake Jocassee. This road takes off of US 64 near Rosman and intersects NC 281 in the area of Whitewater Falls. It is generally passable to most vehicles except during wet weather. A four wheel drive road takes off of this road near the bridge and heads upstream paralleling the east bank of the river for about 0.5 mile. Another primitive road takes off of the Crescent road about 2000 feet uphill from the bridge and parallels the river downstream for about 1400 feet. A separate system of old logging roads, some still passable to four-wheel drive vehicles, accesses the upper portion of Windy Falls. One primitive road used for rescue purposes dead ends at the top of Turtleback Falls.

All of the falls are accessible on foot over a series of primitive trails and old roads. The Foothills Trail, an 80 mile backcountry hiking trail stretching from Oconee to Table Rock State Parks in South Carolina, crosses the Horsepasture River at its mouth at Lake Jocassee. There is no through trail along the river from Bohaynee Road to the lake.

Hydrology and Water Quality

The drainage area for the river below Bohaynee Road is 25 square miles. The average annual discharge for this segment of river is 100 cubic feet per second (cfs). A study of instream flow needs conducted by the North Carolina Office of Water Resources in cooperation with the NC Wildlife Resources Commission determined that a minimum flow of 40 cfs between Drift and Windy Falls is necessary to provide adequate habitat for adult brown trout. Spawning habitat maintenance would require a higher flow, but the amount of spawning in this section of the river is relatively small. Sliding on Drift and Turtleback Falls has been observed at flows ranging from 40 to approximately 150 cfs. Recreational use becomes more difficult and hazardous at flows of 200 cfs or greater. Further study would be required to determine instream flow needs for other uses such as aesthetic appreciation of the river, maintaining spray communities of flora near the waterfalls and use of Drift and Turtleback Falls for sliding.

The river is classified B Trout by the State. This means that primary recreation is the highest best use of the water and that the river will support or maintain a native or stocked trout population year-round. Based on a very

limited sample the water quality is considered good and apparently meets the State's standards for "B Trout" water. Fecal coliform bacteria were not included in the sampling. Sediment pollution from past upstream private development gives the river a significant bedload. Storm runoff is very turbid during and immediately following storms and the river has a somewhat dingy look even during non-stormflow periods. Sediment deposits of up to one foot thick have been observed following high flows.

Macroinvertebrate taxa richness values (areas with good water quality will have many species or taxa) from a State survey in August 1984 did not indicate either exceptionally good or exceptionally poor water quality. This river, at this time, is rated as Good-Fair, which is fairly typical of North Carolina rivers in developed areas. Overall, water quality is clearly not in the range found for other high quality North Carolina rivers. No rare or unusual species were recorded during the survey. However, six intolerant species were common or abundant.

Geology, Minerals, and Soils

The Blue Ridge Escarpment is a generally pronounced physiographic boundary dividing the mountainous Blue Ridge Province from the Piedmont. The diffuse and prominent south-facing sector between Hendersonville and Highlands, North Carolina, is known as the southeastern escarpment of the Blue Ridge. It is primarily an erosional feature, the product of extraordinarily high local rainfall, steep stream gradients, and local structural control. The Horsepasture River is one of six major rivers that drain from this divide, all of which are characterized by series of cascades and waterfalls through deep gorges (Cooper and Hardin, 1970). The Horsepasture is the most rugged of these gorges. It is the narrowest and has the highest, steepest and more precipitous walls (Harrington, 1979).

The southeastern escarpment is underlain by igneous and metamorphic rocks of Precambrian or Early Paleozoic age (Stuckey, 1965). The gorges transect several folds in the gneisses and related rocks west of the Brevard Zone, as well as the Brevard Zone itself, one of the most problematic geologic structures in the eastern U.S. (Harrington, 1979).

The Toxaway Gneiss is a granitic rock that forms the core of a very large fold called the Toxaway Antiform. The Horsepasture River cuts perpendicular to the regional trend of the rocks and exposes rocks in the core of the Antiform. Here it is possible to see a dramatic difference in the direction the rocks are tilted. Rocks on the west side of the Antiform are tilted steeply to the northwest; whereas those on the east side are tilted steeply to the southeast.

The sideslopes and narrow ridges are characterized by somewhat excessively drained or well-drained coarse-loamy soils formed under forest vegetation in residuum from gneiss or granite. Soils that are high in mica content occupy such upland positions in the lower (downstream) portion of the area; micaceous soils are highly erodible when disturbed and difficult to stabilize when material is displaced. Well-drained fine-loamy soils occur on sideslopes and

ridges in the "less rugged" portions of the area. Deeper well-drained soils formed under forest vegetation in colluvium or local alluvium from the surrounding uplands commonly occur on toeslopes and in coves drained by tributary streams. Significant floodplain development is limited to a short stretch along the left bank of the river just downstream from Highway 281.

Along approximately two-thirds of the W&SR corridor, the stream is bounded on both sides by very steep (45-80 percent) sideslopes. Within these stretches, very steep sideslopes rise abruptly from the stream banks with little or no intervening floodplains or colluvial toeslopes. Such areas most commonly are Ashe stony sandy loam, 45 to 70 percent slopes. Conspicuous areas of Stony Land and Rock Outcrop occur along Narrow Rock Ridge and its easterly and northeasterly sideslopes (right side of river). Areas farthest downstream are the micaceous Chandler stony loam, 45 to 70 percent slopes. A limited acreage of Brandywine stony soils, 45 to 80 also occurs. Recreation developments/uses are severely limited by steepness and ruggedness of the terrain. Trail development requires careful route selection and on-site evaluation to determine feasibility; trail construction and maintenance are difficult and expensive, and might require special measures.

Along the remaining one-third of the corridor, one or both sides of the stream is bounded by steep (15-45 percent) sideslopes or by narrow bands of moderately steep to steep (15-45 percent) colluvial toeslopes, which themselves generally are bounded by steep to very steep sideslopes farther from the stream. The colluvial toeslopes of Tusquitee stony loam, 15 to 25 percent slopes or Tusquitee stony loam, 25 to 45 percent slopes most commonly occur along the lower-gradient segments of the river and extend headward along the tributary streams and coves. Sideslopes and ridges most commonly are Chester stony loam, 25 to 45 percent slopes. Slope and stoniness are the primary limitation for recreation development and uses other than trails and dispersed camping.

Away from the immediate vicinity of the river, there are occasional ridge sites occupied by well-drained coarse-loamy or fine-loamy soils that would have some recreation development potential. Such areas are scattered, quite limited in total acreage, and often not readily accessible.

A survey of mineral potential for the area has not been conducted.

Vegetation and Wetland Associations

The vegetation of the Horsepasture gorge is typical of acidic slopes in the southern Appalachians. The lower slopes, including the floodplain, are most often vegetated by rhododendrons and other ericaceous shrubs. The groundcover, when present, is comprised of galax. Upslope from the rhododendron zone is a mixed forest of hardwoods and conifers, usually with an open canopy. Typical hardwoods are red maple, Fraser's magnolia, poplar, hickory, red oak, and cherry. The common conifers, Canadian hemlock and white pine sometimes reach noteworthy dimensions, particularly when located on narrow promontories or very steep slopes. The upper forests are more likely to consist of various oak and pine species as well as contain a heterogenous understory of seedlings, shrubs,

and saplings. Few instances of purely hardwood forest are present. Economically the timber along this segment of river has limited commercial value. The highest value of the vegetation is the protection of fragile soils on steep slopes.

The river gorges of the Blue Ridge escarpment, as a group, are probably most noteworthy for their mosses and ferns. A remarkable number of disjunct and endemic bryophytes have been observed (Billings and Anderson 1966; Anderson and Zander 1973) as well as numerous tropical fern species (Farrar 1967). The mild temperatures, very high rainfall, and great variety of microenvironments provided in the gorges seem to be the major contributors to the persistence of many ferns and bryophytes (Billings and Anderson 1966; Cooper and Hardin 1970).

The wetlands associated with the Horsepasture gorge are limited in extent and diversity by the steepness of the river gorge and the high degree of relief of the adjacent slopes. The river course and waterfalls are categorized, according to the U.S. Fish and Wildlife Service conventions, as upper perennial riverine wetlands with a permanent, or in some instances intermittently exposed, water regime with the class and subclass varying between rock bottom/bedrock or boulder and unconsolidated bottom/cobble-gravel or sand. The only vegetation found in the river was riverweed growing in mats on shallowly submerged rocks. The class and subclass designation of such upper perennial wetlands would be aquatic bed/submerged vascular and the water regime either permanent or intermittently exposed.

The most obvious, though not extensive, vegetated wetlands are the occasional sand bars found along the banks. These palustrine associations are intermittently flooded and support shrub/scrub and non-persistent emergent species such as willow, red maple, alder, bush honeysuckle, wild azalea, golden rod, sedges, joe-pye weed, blue lobelia, and wild grape. Nowhere are these sand bars extensive; and they migrate downstream during periods of exceptionally high flow.

On occasionally inundated, nearly level surfaces of rocks, such as the upper exposures of Windy Falls, scattered patches of moss have become established.

The most unusual wetland encountered is in the spray zone on the east bank below Rainbow Falls. The soil of this palustrine emergent wetland is seasonally saturated. The steepness of the slope, the high moisture atmosphere, clay soil, and, reportedly, ice sheets in winter combine to create a highly stressed wetland habitat unlike any other in the area. The most

common plants are two grasses. One is slough grass which is a restricted species in North Carolina known only from a few counties. Interspersed with the dense mat of persistent grasses are non-persistent herbaceous species such as obedient plant, heal-all, tick-seed, sunflower, and cowbane. A shrub margin exists along the upper extent of the spray zone. Burnet, march pennywort, brook saxifrage, and creeping houstonia grow on the slippery rocks and in crevasses at the base of the slope and waterfall.

Wildlife and Fisheries

Extensive woodlands and rough terrain in the Horsepasture River area are conducive to varied and abundant wildlife populations. Game species present include black bear, deer, turkey, raccoon, grouse, and grey squirrel. Hunting is generally confined to the less rugged and more accessible areas of the headwaters.

Beaver are numerous in the watershed upstream from the escarpment and a beaver dam was once observed below Windy Falls, although no recent sign of beaver in this vicinity has been reported. At least two unverified sightings of cougar in the river escarpment have been reported to Wildlife Resources Commission personnel.

The river in the escarpment area (below NC 281) flows primarily over bedrock. Gravel, rubble, sand, and organic detritus are relatively scarce but provide habitat for the production of aquatic organisms such as stone flies, hellgramites, caddis flies, may flies, and dragon flies that sustain a variety of fishes.

More than twenty fish species have been identified in the river although the number of species and abundance inhabiting the escarpment section have not been determined. Four species of concern have been identified: the Bluehead chub; Redeye bass; Turquoise darter; and Rosyface chub. The Redeye bass is a game fish found in North Carolina only in Blue Ridge escarpment streams.

The Horsepasture is classified by the N.C. Wildlife Resources Commission as "Designated Trout Waters" and is managed primarily for brown trout which receive annual supplementary stocking. Catch success is not high because of naturally low fish population density, steep gradient, and difficult access. However, the "fishing experience" is good due to the aesthetic aspects of the stream.

Proposed, Endangered, Threatened and Sensitive (PETS) Species

A thorough biological survey of the gorge has not been conducted. There are unexplored areas which offer potential habitat for PETS.

The following PETS species are known to occur in the river gorge:

| NAME | NC STATUS | US STATUS | NC RANK |
|--|-----------|-----------|---------|
| <u>Aneides aeneus</u> (Green Salamander) | P-E 1/ | C2 | |
| <u>Botrychium jenmani</u> (=B. alabamense) (Alabama grapefern) | SR | | S1 |

| NAME | STATUS | STATUS | RANK |
|---|--------|--------|------|
| <u>Senecio pauperculus</u> (watch list) (Balsam groundsel) | SR | | |
| <u>Shortia galacifolia</u> (Oconee bells) | E-SC | C2 | S2 |
| <u>Trillium discolor</u> (Mottled trillium) | T | | S1 |

SR = significantly rare
C2 = category 2 for federal listing
E-SC = endangered, special concern
T = threatened
S1 = critically imperiled in NC
S2 = imperiled in NC

Scenic Resource

The Horsepasture gorge contains a variety and diversity of waterfalls unlike any other river in North Carolina. Five major waterfalls occur within a two-mile stretch of river. Close to Bohaynee Road is Drift Falls, a water slide approximately 45 feet high. The views up and downstream are enclosed by vegetation.

Moving downstream, the next is Turtleback Falls, a combination of slide and vertical drop of about 15-20 feet high. An unusual feature of this falls is that the river course changes about 90 degrees from the direction of flow into the plunge pool. The view upstream is enclosed, but the view downstream "opens up" at the brink of Rainbow Falls.

Rainbow Falls has a vertical drop of approximately 125 feet. The falling water generates a great deal of spray and a rainbow can be seen if the sun is at the proper angle. The view downstream from the top of the falls is panoramic.

Stairstep Falls is next downstream and is a series of broad "steps", each 10 to 15 feet high. The overall elevation change is in the range of 100-200 feet. The view upstream and downstream is enclosed by vegetation.

Windy Falls lies farthest downstream and is a series of plunges and cascades which fall about 320 feet in 1000 feet of river channel. It is characterized by a major vertical drop at the top which funnels into a natural rock flume then opens into another major vertical fall. Views from the top of the falls are panoramic. The nature of the falls does not allow it to be viewed in total at any one point, but provides a sequence of views.

All of the falls areas are characterized by hydraulic "potholes", some wet, some dry, which add to their visual interest. In addition to the falls, the river contains numerous minor falls, cascades, rapids, and plunge pools over a very rocky streambed. Refer to Appendix A for photographs of the waterfalls.

The visual diversity of the area is further enhanced by abundant rock outcroppings and varied vegetation. Narrow Rock Ridge forms the western wall of the gorge between Windy Falls and Lake Jocassee. Random, irregular rock outcroppings line the rim and sheer rock walls dot the sideslopes of this ridge. Standing Rock, another prominent rock outcropping, occurs on the east side of the gorge near Windy Falls. It can only be viewed from up close. Other rock outcroppings are common throughout the gorge.

Recreation Use

Current recreational use of the Horsepasture River includes viewing scenery, water sliding, swimming, picknicking, hiking, primitive camping (walk-in above Windy Falls and drive-in below the falls), hunting, and fishing.

The river can be divided into four sections regarding current recreation use patterns: Bohaynee Road to Rainbow Falls; Rainbow Falls to the base of Windy Falls; the lower gorge accessible to motorized vehicles including ORV's; and the inaccessible portion of lower gorge to the lake.

An old road off of Bohaynee Road permits easy vehicular access to the river bank. A large open, flat area next to the river known as Bohaynee Beach (owned by Duke Power) is used for parking, picnicking and some camping. Some users park along the highway pull-off. It is not unusual for this pull-off to exceed capacity on weekends. A primitive trail provides short easy access to the first three falls - Drift, Turtleback and Rainbow. Drift and Turtleback Falls are widely used for sliding and swimming. Use at Rainbow Falls is generally confined to more passive activities including scenic viewing and some picnicking.

Stairstep and Windy Falls are more inaccessible. Use is more limited to scenic viewing. One primitive campsite is located in the floodplain above Stairstep Falls and another in the floodplain at the head of Windy Falls. Access to the lower portion of the gorge from Windy Falls is limited to a very steep, primitive skid trail which does not appear to receive much use.

The lower portion of the gorge from the base of Windy Falls to approximately 1400 feet from the Foothills Trail bridge is accessible to vehicles, mostly four-wheel drive and some dirt bikes. This area receives heavy primitive camping use associated with the ORV use. There are numerous camping sites located along the riverbank, many of which are heavily impacted (denuded, some erosion where vehicles have accessed the sites, damage to vegetation and litter). This use does not appear to be adversely affecting the river itself.

The remainder of the lower gorge down to the lake is inaccessible except by boat or the Foothills Trail. Use here is limited to hiking on the trail and is light at this time.

Cultural Resources

Currently there are no sites listed on the National Register of Historical Places that occur within the Horsepasture Gorge. No archeological surveys have been conducted to date. There is some evidence of previous agricultural activity in the lower gorge (piles of rocks).

C. Outstanding Values

Scenic - While many rivers in North Carolina possess more spectacular waterfalls, none contain the number and variety of falls within a short segment that is found in the Horsepasture River gorge. The five major falls within a two mile stretch vary in height (20-125 feet), type of drop (vertical, slide, or flume) and surrounding views. Numerous minor falls, cascades, rapids, boulders, rock outcrops, and aesthetically pleasing vegetation combine with these falls to create a unique and dynamic viewing experience.

Geological - Horsepasture River gorge is the narrowest, steepest and most precipitous of the gorges in the southeastern Blue Ridge escarpment. It transects an extensive stratigraphic section and several important and problematic geologic structures. The exposed rocks significantly illustrate geologic processes and offer excellent opportunities for geological study.

Botanical - The river gorge has a great variety of microenvironments relative to plant species and communities. It is most noteworthy for its mosses and ferns. A remarkable number of disjunct and endemic bryophytes and tropical ferns have been observed. The spray zone of Rainbow Falls has a wetland habitat unique to this area characterized by grasses and herbaceous species. The lower gorge is one of the few known locations of the Oconee bells (Shortia glaucifolia), a state endangered species.

Recreational - The river has outstanding passive recreation value associated with viewing the waterfalls and surrounding scenery. It also provides opportunities for water-oriented activities and recreational experiences unique to a river environment, such as the sliding that occurs at Drift and Turtleback Falls. This popular activity is unique to this area and can occur only because of the character of this river. Other attractions include swimming, fishing, hiking, and primitive camping.

Scientific References:

Horsepasture River, A Report on the Qualifications of Horsepasture River for Designation into the North Carolina Natural and Scenic River System, October 1984, NC Department of Natural Resources and Community Development, pages 3-9, appendices A-K.

II. CLASSIFICATION

Recreational - Bohaynee Road (NC 281) to the base of Drift Falls. (0.6 mile)

This segment of river is freeflowing but has substantial evidence of human activity and is influenced by Bohaynee Road, a two-laned paved highway which parallels it for 0.6 of a mile. The road is within sight or sound (200 feet) of the river throughout this stretch.

Scenic - The base of Drift Falls downstream to Lake Jocassee. (3.6 miles)

This segment of river is freeflowing and is generally primitive and undeveloped with some evidence of human activity. Access is limited to foot travel on

primitive trails and old roads between Drift Falls and the base of Windy Falls. A portion of the lower gorge between the base of Windy Falls and the lake is accessible by three roads, one crossing and two paralleling the river. Primitive campsites are scattered along the corridor.

III. MANAGEMENT DIRECTION

Management direction for the Horsepasture River is included in forestwide standards and standards for Management Area 15 - Wild and Scenic Rivers and Management Area 18 - Riparian Areas in the Land and Resource Management Plan for the Nantahala and Pisgah National Forests.

The general direction and standards for these management areas shown below are only those different from, additional to, or more specific than forest-wide direction in the Forest Plan. Refer to the Forest Plan for the forest-wide activities and practices applicable to the Horsepasture River that are not addressed here.

The following excerpts from the Forest Plan are descriptions for management areas 15 and 18.

MANAGEMENT AREA 15

These are existing Wild and Scenic Rivers and the adjacent lands that make up the river corridors. They include the Congressionally designated Chattooga and Horsepasture Wild and Scenic Rivers.

Wild and Scenic Rivers are managed to maintain and enhance the wild, scenic, and riparian features of the river and to provide water-oriented opportunities in a natural setting. All lands are managed as not selected for timber production, and other resource management activities are restricted or modified to be compatible with the river resource.

MANAGEMENT AREA 18

This management area, embedded in other management areas, consists of riparian areas that include perennial streams, lakes, wetlands, 100-year floodplains and a 100-foot wide zone (horizontal distance) on each side of all perennial streams and lakes. It is managed to protect the distinctive resource values and characteristics that comprise these ecosystems. These values and characteristics include:

- Water-based cultural resources;
- Water-oriented recreational opportunities;
- Outstanding scenery;
- Ground and surface water resources;
- Stream channels, including bank stability, pools, riffles, and bottom material;
- Floodplains;
- Wild trout fisheries;
- Aquatic organisms; and
- Riparian-dependent plant and animal species.

IV. IMPLEMENTATION GUIDE

The implementation guide provides additional or more specific direction and standards for carrying out Forest Plan direction. These standards are listed in Appendix B.

V. APPENDICES

- A. Management Area Direction and Standards
- B. Implementation Guide Direction and Standards
- C. Legal Boundary Description

LAND AND RESOURCE MANAGEMENT PLAN
NANTAHALA AND PISGAH NATIONAL FORESTS

Table III-17. Direction for Management Area 15.
and
Table III-20 Direction for Management Area 18.

| ACTIVITIES | GENERAL DIRECTION | STANDARDS |
|---|---|---|
| <p>GENERAL DIRECTION AND STANDARDS SHOWN FOR THIS MANAGEMENT AREA ARE ONLY THOSE ADDITIONAL TO OR MORE SPECIFIC THAN FOREST-WIDE DIRECTIN. REFER TO FOREST-WIDE DIRECTION FOR ALL ACTIVITIES AND PRACTICES NOT ADDRESSED HERE</p> | | |
| General | 1. Manage rivers according to experience classifications. | a. Horsepasture River - scenic from base of Rainbow Falls to the NF boundary; Recreation from NF boundary below Drift Falls to base of Rainbow Falls. |
| Visual Resource Management | 1. Manage to maintain the unique characteristics and scenic values of the river corridor. | <p>a. Meet a Visual Quality Objective of Partial Retention from the National Forest boundary below Drift Falls downstream to the base of Rainbow Falls.</p> <p>b. Meet a visual quality objective of Retention from base of Rainbow Falls downstream to the National Forest boundary.</p> |
| Developed Recreation Management | 1. Make any necessary new recreation facility construction compatible with management area objectives. Generally locate developments outside this area. (MA 18) | |
| Dispersed Recreation Management | 1. Emphasize river-oriented nonmotorized recreation opportunities favoring hiking, fishing, viewing wildlife and scenery and nature observation. | <p>a. Manage for a Roaded Natural 2 recreation experience from the National Forest boundary below Drift Falls downstream to the base of Rainbow Falls.</p> <p>b. Manage for a Semi-Primitive Non-Motorized recreation experience from the base of Rainbow Falls downstream to the National Forest boundary.</p> |
| | 2. Provide no opportunities for vehicles commonly classed as ORV's. | |

ACTIVITIES

GENERAL DIRECTION

STANDARDS

| | | |
|---|--|--|
| | 3. Provide facilities as needed for public safety, resource protection and enhancement of the recreational experience. | a. Consider a viewing platform located above Rainbow Falls. |
| | 4. Allow primitive camping when compatible with river values. | a. Allow evidence of use to be noticeable, but not dominant. |
| | 5. Allow vehicular parking in designated areas only. (MA 18) | |
| | 6. Manage for low to moderated site impacts from human use. (MA 18) | |
| Trails Management | 1. Manage trails for hiking use only. | |
| | 2. Manage trails for a variety of difficulty levels dependent on the desired recreation experience. | a. Manage Horsepasture River trails for the following difficulty levels: "Easiest" from the National Forest boundary below Drift Falls downstream to Rainbow Falls. "Easiest to Most Difficult" from the base of Rainbow Falls downstream to the National Forest boundary. |
| | 3. Provide access for use and enjoyment of the river consistent with the river classification. | a. Favor access that provides viewing opportunities in scenic sections. Design trails for resource protection and some user comfort. b. Manage for more concentrated use in recreation sections. Provide for user comfort, safety, and resource protection. |
| | 4. Maintain trails consistent with the river classification. | a. Maintain trails to the following standards: Scenic - Levels 2-3 Recreation - Levels 3-5 |
| Recreation Management (Private and Other Public Sector) | 1. Issue commercial recreation use permits consistent with capabilities of the area. | a. Issue no commercial permits for floating, canoeing, rafting, or kayaking. |

| ACTIVITIES | GENERAL DIRECTION | STANDARDS |
|---------------------------------------|--|--|
| Wildlife and Fish Resource Management | <ol style="list-style-type: none"> 1. Provide conditions for the large group of game and non-game animals that are dependent on aquatic and riparian systems. Emphasize habitat for specific Management Indicator Species which represent this group. (MA 18) 2. Manage streams for wild trout where conditions are favorable. (MA 18) | <ol style="list-style-type: none"> a. Manage habitat primarily for racoon, pileated woodpecker, and trout. (MA 18) a. Improve habitat of wild trout streams as a first priority. (MA 18) |
| Vegetation Management | <ol style="list-style-type: none"> 1. Manage as not selected for timber production. 2. Maintain appropriate stream temperatures and stream environment, and protect stream banks. (MA 18) | <ol style="list-style-type: none"> a. Refer to Forest-wide Direction for a list of tree cutting practices appropriate to land not selected for timber production. a. Maintain a near continuous cover using a combination of overstory and understory forest vegetation for 30 feet on either side of a perennial stream. Refer to 1a above for reference to appropriate tree cutting practices. (MA 18) |
| Minerals Management | <ol style="list-style-type: none"> 1. Allow no mineral activities. | |
| Special Uses | <ol style="list-style-type: none"> 1. Issue permits for new special uses only when compatible with special values of the area or as specified in acquisition agreements. | |
| Land Adjustment and Rights-of-Way | <ol style="list-style-type: none"> 1. Emphasize acquisition of private lands within the river watershed by donation or exchange. | <ol style="list-style-type: none"> a. Consider scenic easements to protect river values only when acquisition of fee simple title is improbable. |
| Transportation System Management | <ol style="list-style-type: none"> 1. Manage most roads closed to public motorized travel. 2. Allow administrative use of gated roads for emergency purposes and for facility or trail construction and maintenance. | <ol style="list-style-type: none"> a. Allow the Bohyanee Beach road system and the existing access road to the lower portion of the river corridor to remain open to motorized vehicles. |

| ACTIVITIES | GENERAL DIRECTION | STANDARDS |
|--|--|---|
| Road Planning Construction and Maintenance | <ol style="list-style-type: none"> 1. Allow no new road construction which would be open to public motorized vehicles. 2. Emphasize stream crossing structures that protect the stream bank and disrupt the stream channel only one time. (MA 18) | <ol style="list-style-type: none"> a. Consider reconstruction and/or relocation of existing open roads within the river corridor. b. Consider construction of a road to access the middle reaches of the river corridor to aid in search and rescue operations. a. Provide for fish passage in all stream crossings. (MA 18) b. Use either bridges, fords, or permanent culverts for all road, trail, and four-wheel-drive way crossings. Do not use brush-, log-, or dirt-filled crossings. Use fords only when physical conditions of approaches and streambed allow fords to be designed and maintained to prevent visible siltation. Cross channels at right angles where possible. (MA 18) |
| Wildfire Management | <ol style="list-style-type: none"> 1. Suppress wildfires using techniques which will have the least impact on special features. 2. Construct fire lines to minimize ground disturbance. (MA 18) | <ol style="list-style-type: none"> a. Emphasize handtool construction of fire lines. Permit machine use only when a fire line constructed with handtools would be ineffective for fire control. a. Rehabilitate machine constructed fire lines within 2 weeks after use. (MA 18) |
| Prescribed Burning | <ol style="list-style-type: none"> 1. Use prescribed burning as necessary to maintain or enhance the unique resource values of the area. 2. Use only prescribed fire that does not kill the shade provided by a forest canopy or expose mineral soil by consuming the duff and humus layers. (MA 18) | |

IMPLEMENTATION GUIDE
HORSEPASTURE RIVER

| ACTIVITIES | GENERAL DIRECTION | STANDARDS |
|---------------------------------|---|--|
| Cultural Resource Management | 1. Manage historic and prehistoric sites consistent with forestwide standards. | a. Consult with the Forest Archeologist prior to implementing any ground disturbing activities. |
| Visual Resource Management | 1. Provide opportunities to view the scenic features without detracting from the visual quality of the feature. | a. Maintain existing vistas. Consider opening new vistas where appropriate. |
| Dispersed Recreation Management | 1. Allow recreation activities that are compatible with the values of the river corridor. | <p>a. Emphasize day hiking opportunities on the east side of the river. Consider providing backpacking opportunities on the west side of the river.</p> <p>b. Allow primitive camping when compatible with river values, except for along the main trail from NC 281 to below Rainbow Falls.</p> <p>c. Prohibit camping at trailheads and parking areas.</p> <p>c. Allow, but do not encourage, wading and swimming in the river.</p> <p>d. Allow, but do not encourage, sliding on Drift and Turtleback Falls.</p> <p>e. Provide for hunting and fishing consistent with established game laws and river values.</p> <p>f. Allow pets on a leash or under control.</p> <p>2. Provide for visitor safety.</p> <p>a. Use signing to inform visitors of hazards associated with waterfalls.</p> <p>3. Manage use to provide a level of contact among visitors that is consistent with the river classifications.</p> <p>a. Allow high density day use along the river from NC 281 to Rainbow Falls.</p> <p>b. Provide a low level of contact among users from Rainbow Falls downstream to the base of Windy Falls.</p> |

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| | | <ul style="list-style-type: none"> c. Provide a low to moderate level of contact among users from below Windy Falls downstream to Lake Jocassee. |
| | <ul style="list-style-type: none"> 4. Use the LAC system (Limits of Acceptable Change) to monitor levels of use within the river corridor. | <ul style="list-style-type: none"> a. Develop specified limits for the following indicator for the section of river below Rainbow Falls: <ul style="list-style-type: none"> - Number of encounters with other parties. |
| | <ul style="list-style-type: none"> 5. Use the LAC system (Limits of Acceptable Change) to monitor site impacts associated with visitor use. | <ul style="list-style-type: none"> a. Conduct a site condition inventory to determine the indicators and their specified limits to be monitored. Develop a schedule for monitoring. |
| | <ul style="list-style-type: none"> 6. Use resource interpretation to enhance the visitor's experience. | |
| | <ul style="list-style-type: none"> 7. Provide facilities as needed for public safety, resource protection and enhancement of the recreational experience. | <ul style="list-style-type: none"> a. Provide a viewing area for Rainbow Falls that protects the plants in the "spray zone". |
| Trails Management | <ul style="list-style-type: none"> 1. Provide access for use and enjoyment of the river consistent with the river classification. | <ul style="list-style-type: none"> a. Manage for high levels of concentrated use on the trail between NC 281 and Rainbow Falls. Provide for user safety, reasonable comfort considering site limitations and resource protection. Provide for universal accessibility to the extent possible considering topographic constraints. b. Consider developing a hiking trail that connects NC 281 and the Pothills Trail generally following Narrow Rock Ridge on the west side of the river. |
| | <ul style="list-style-type: none"> 2. Conduct a trail condition survey at least once annually for compliance with trail experience and maintenance level standards. | |
| Recreation Management (Private and Other Public Sector) | <ul style="list-style-type: none"> 1. Issue commercial recreation use permits consistent with capabilities of the area. | <ul style="list-style-type: none"> a. Issue no commercial permits for floating, canoeing, rafting, or kayaking. |

| ACTIVITIES | GENERAL DIRECTION | STANDARDS |
|---|--|-----------|
| Wildlife and Fish Resource Management | <ol style="list-style-type: none"> 1. Manage for a natural trout fishery from Rainbow Falls to Lake Jocassee. 2. Continue current State fish stocking program from Nc Highway 281 to Rainbow Falls. 3. Provide a biological evaluation for PETS species for any proposed action. | |
| Vegetation Management | <ol style="list-style-type: none"> 1. Generally allow natural processes to determine the composition and distribution of plant species. 2. Use native plant species where possible when restoring impacted sites. | |
| Gathering Forest Products | <ol style="list-style-type: none"> 1. Issue no permits for the removal of forest products. 2. Allow collection of plant products (nuts, berries, cones) for personal use. 3. Allow collection of specimen plants for research only with Forest Supervisor approval. Require a permit. 4. Allow collection of dead and down wood only for on-site campfire use. | |
| Soil and Water Management | <ol style="list-style-type: none"> 1. Maintain soils in a natural undisturbed state except for trail construction and maintenance; watershed restoration projects, wildfire control measures, and site rehabilitation projects. 2. Maintain all water resources without developed improvements, impoundments, or other modifications. | |

ACTIVITIES

GENERAL DIRECTION

STANDARDS

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| | 3. Continue to cooperate with and encourage State enforcement of State water quality standards and environmental protection regulations on private lands within the river's watershed. | a. Rehabilitate and discourage further use or stabilize any dispersed recreation sites within the riparian area that has 50% or more exposed erodible mineral soil. |
| Special Uses | 1. Issue no permits for military training activities. | |
| Land Adjustment and Rights-of-Way | 1. Emphasize acquisition of private lands within the river watershed by donation or exchange. | a. Consider scenic easements to protect river values only when acquisition of fee simple title is improbable. |
| Transportation System Management | 1. Permanently close, rehabilitate, and revegetate the section of the Turtleback Falls Road from the river to the W&S river boundary. | |
| Road Planning Construction and Maintenance | 1. Investigate potential for access road and parking area on south side of river near NC 281 to meet long-range parking needs. | |
| Research | 1. Allow research which is compatible with river values. | a. Mark test plots in a temporary and inconspicuous manner not visually evident to the average visitor. |

Boundary Description

HORSEPASTURE WILD AND SCENIC RIVER
Nantahala National Forest

A portion of the Nantahala National Forest located in the southwest corner of Transylvania County, North Carolina, and bounded generally on the north, south, east, and west by private lands, and being more particularly described as follows:

BEGINNING at Corner 5 of USA tract N-731, located at a point in the southeast edge of the right-of-way for N.C. Highway 281 (Bohaynee Road) and marked by an aluminum pipe;

thence, with five (5) lines of USA Tract N-731:

- (1) S.29°28'E., 1,687.27 feet to Corner 6 of tract N-731;
- (2) S.61°40'E., 412.27 feet to Corner 7 of tract N-731;
- (3) N.43°36'E., 1,982.38 feet to Corner 8 of tract N-731;
- (4) S.69°37'E., 662.79 feet to Corner 9 of tract N-731;
- (5) S.02°21'W., 5,491.79 feet to Corner 10 of tract N-731;

thence, S.62°42'E., approximately 500 feet to Corner 33 of tract N-68n;

thence, S.69°32'W., along the line between Corner 33 and Corner 34 of tract N-68n approximately 1500 feet to a point 500 feet from the east bank of the Horsepasture River;

thence paralleling the east side of the Horsepasture River approximately 12,000 feet in a southeasterly direction 500 feet from the east bank of said river to the intersection of said line with the Foothills Trail;

thence paralleling the Foothills Trail in a southwesterly direction to the trail bridge across the Horsepasture River;

thence from the west end of the trail bridge southwesterly up the ridge to a point 500 feet from the west bank of the Horsepasture River;

thence paralleling the west side of the Horsepasture River approximately 8,000 feet in a northwesterly direction 500 feet from the west bank of the said river to a point along the line between Corner 35 and Corner 36 of tract N-68n,

thence S.28°32'W., approximately 550 feet to Corner 36 of tract N-68n;

thence N.61°18'W., approximately 1,350 feet along the line between Corner 36 and Corner 37 of tract N-68n to a point on the crest of Narrow Rock Ridge;

thence, northwesterly approximately 6,000 feet following the meanders of Narrow Rock Ridge to the triangulation point on Rocky Knob, crossing the line between Corners 37 and 38 of tract N-68n and the line between Corners 38 and 39 of said tract;

thence, northerly approximately 2,400 feet along the meanders of a ridge to an intersection of said ridge and the line between Corner 24 and Corner 25 of tract N-68n;

thence N.38°33'E., approximately 1200 feet along the line between Corners 24 and 25 of tract N-68n to a point 500 feet from the west bank of the Horsepasture River;

thence, paralleling the west side of the Horsepasture River approximately 700 feet in a northwesterly direction 500 feet from the west bank of said river to an intersection with the right-of-way for N.C. Highway 281 (Bohaynee Road) on the southern side of said road;

thence, northeasterly approximately 4,000 feet with said right-of-way to Corner 5 of tract N-731, THE POINT OF BEGINNING, containing 1,362 acres more or less.