Chapter 3
Management Prescriptions

This chapter describes direction specific to the management prescriptions on the Sumter. The emphasis, desired condition, objectives, and standards for the area make up the management prescription direction.Forest-wide goals, objectives and standards apply to all management prescriptions unless specifically exempted or modified by the management prescription direction. See pages 3-2—3-4 for maps of the Management Prescriptions for each district.

1.A. Designated Wilderness Area

Ellicott Rock Wilderness Area—Andrew Pickens, 2,855 acres (approximate)

Emphasis: The emphasis is to allow ecological and biological processes to progress naturally with little to no human influence or intervention, except the minimum impacts made by those who seek the wilderness as a special place that offers opportunities to experience solitude.

Desired Condition: As stated in the Wilderness Act, Wilderness provides "...an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain... an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which; 1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; 2) has outstanding opportunities for solitude or a primitive and unconfined type of reaction; 3) ...is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and 4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value."

The natural evolving character of the landscape consists primarily of older forest communities, with many large trees. Dead and down trees are common. The forest canopy is continuous except for occasional gaps created by natural occurrences such as storms, insect or disease outbreaks, and fire.

Bad Creek, reference drainage, is contained within the wilderness boundary, north of the East Fork of the Chattooga River drainage. This reference drainage is maintained in relatively undisturbed conditions from recent human intervention or impact.

Management ignited fire can be used to reduce the unnatural buildups of fuels to reduce the risks and consequences of wildfire within wilderness or escaping from wilderness.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided through this prescription. Wildlife responsive to large diameter standing snags and living den trees (raccoon, barred owl *[Strix varia]*, great-crested flycatcher *[Myiarchus cinerascens]*, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo *(Vireo altiloquus)* and species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird *[Seiurus aurocapillus]*, etc.) would also be expected in high densities.

Existing old fields and wildlife openings are not maintained. In some cases, existing openings may be obliterated through tree planting and

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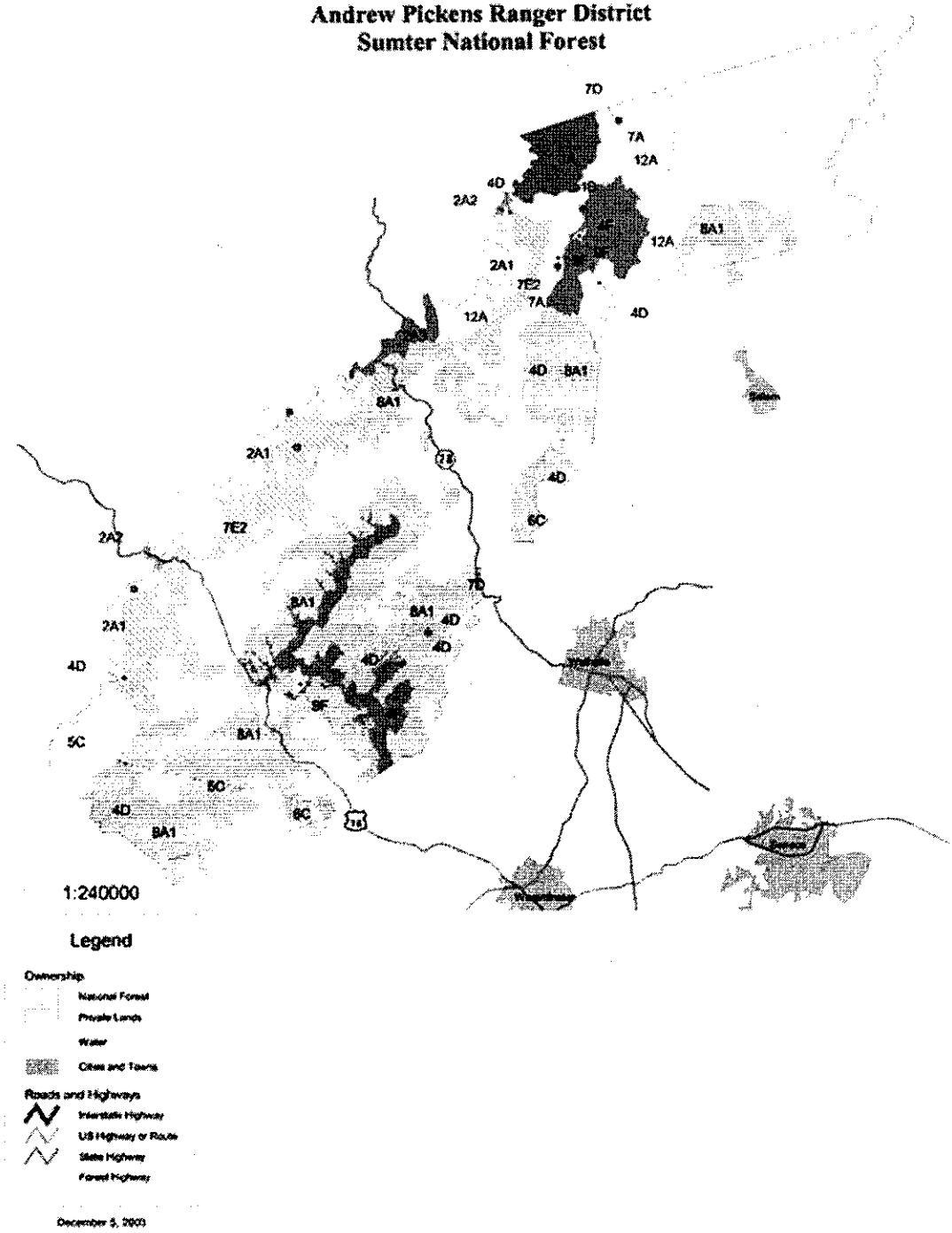
Management Prescription
For the
Andrew Pickens Ranger District
Sumter National Forest



Management Prescription
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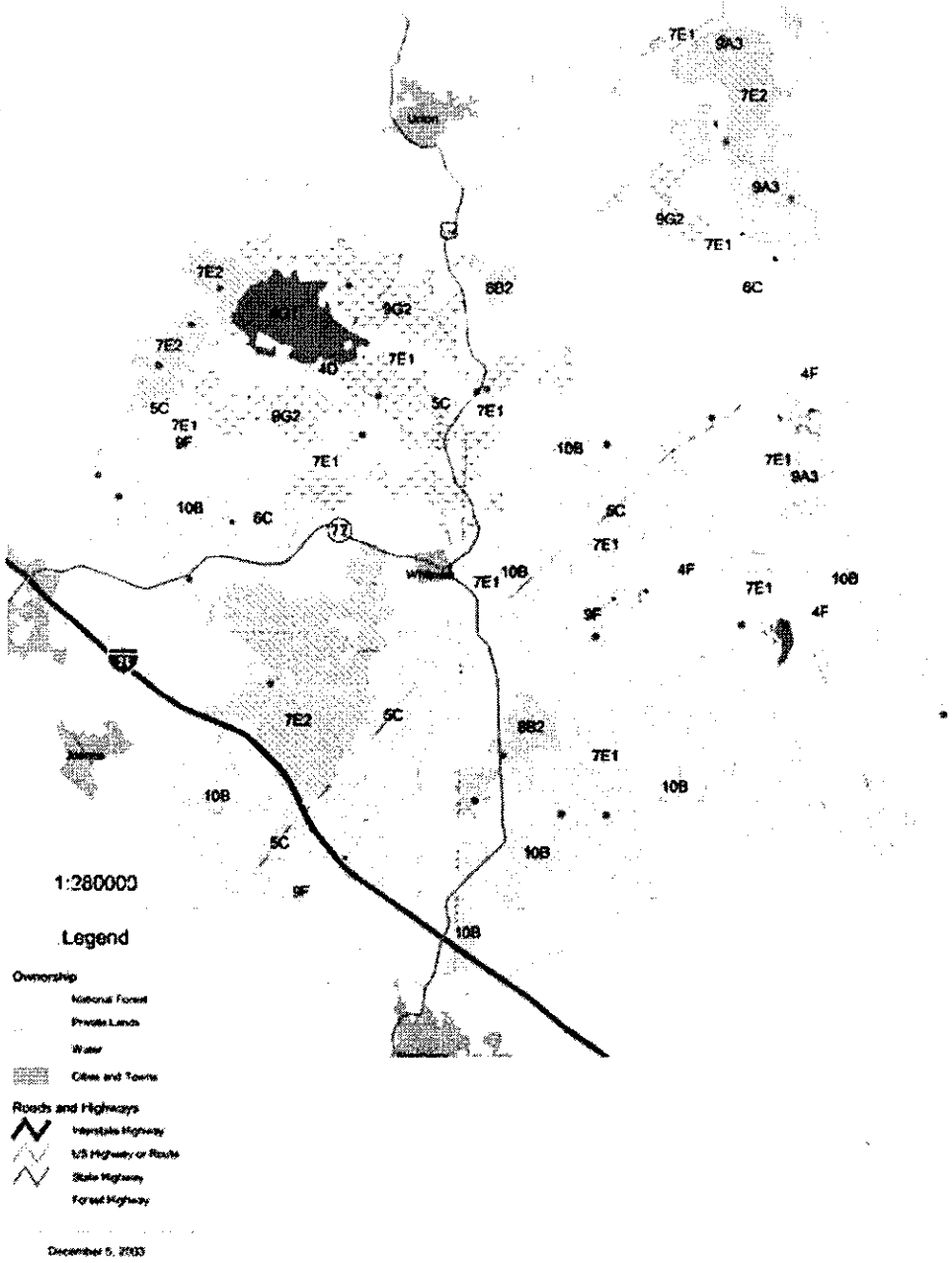
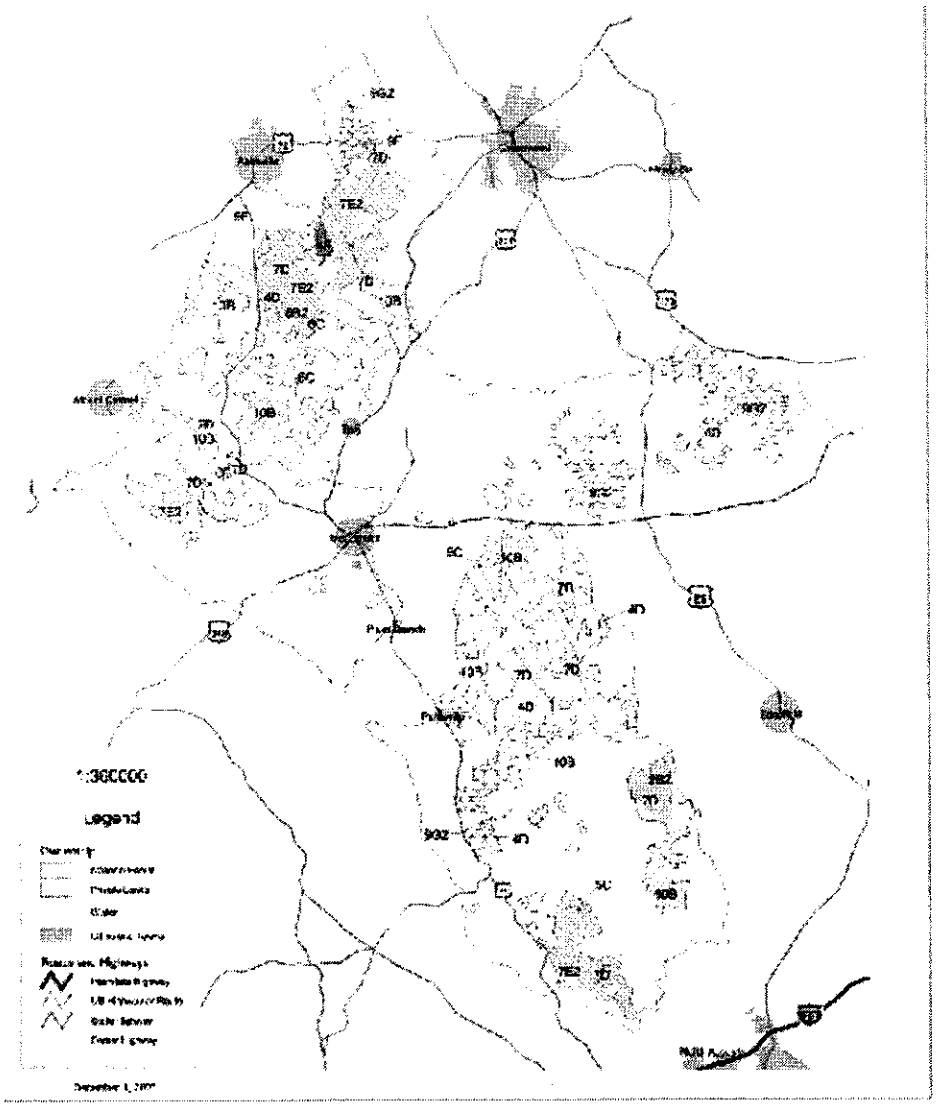


Management Prescription
for the
Long Cane Ranger District
Sumter National Forest



elimination of non-native species. New wildlife openings are not created.

Aquatic and riparian protection measures as referenced in Riparian Prescription 11 apply to this prescription.

The area provides visitors with solitude and remoteness in the most primitive and natural setting possible. Access into the areas is limited. Once in these areas, visitors must rely on their own primitive recreational skills. Recreation and trails within wilderness are non-motorized. Trailheads at surrounding roads are designed with sensitivity to scale and character to set the tone for experiencing a primitive experience. Trails, themselves lie lightly on the land, blending with the natural surroundings.Visitors are physically challenged as they ford streams and climb over downed trees. Few structures including signs and facilities are provided. The recreational opportunities are in a primitive recreational setting.

Standards

1.A.-1 The scenic integrity objective is very high for all inventoried scenic classes.

1.A.-2 The Forest Supervisor approves the use of motorized equipment or mechanical transport for emergencies where the situation involves an inescapable urgency and temporary need for speed beyond that available by primitive means or for exploration (categories include fire suppression, health and safety, law enforcement involving serious crime or fugitive pursuit, removal of deceased persons, and aircraft accident investigations) and development of valid existing mineral rights.

1.A.-3 Monitor and mitigate for acid rain and other pollution as needed on a case-by-case basis with Forest Supervisor approval.

1.A.-4. Allow fish stocking only to reestablish or maintain native species; species of fish traditionally stocked before wilderness designation may be considered native if the species is likely to survive. Stocking shall normally be done by primitive means; however, Regional Foresters may permit dropping of fish from aircraft for those waters where this practice was established before the area was designated a wilderness.

1.A.-5 No new utility corridors or communication sites will be authorized in these areas.

1.A.-6 Forest insect and disease outbreaks are controlled only if necessary to prevent unacceptable damage to resources on adjacent land, to prevent an unnatural loss to the wilderness resource due to exotic pests, or to protect threatened, endangered, and sensitive species.

1.A.-7 Hand-applied chemicals to eradicate non-native invasive plants requires Regional Forester approval.

1.A.-8 No permits for commercial use of any forest product is allowed.

1.A.-9 The Regional Forester approves the use of motorized equipment or mechanical transport for non-emergency purposes.

1.A.-10 Fire lines are obliterated as soon as practical.

1.A.-11 Following a catastrophic natural occurrence, chainsaw use to reopen trails is permitted with Regional Forester approval.

1.A.-12 Commercial and organized group size is limited to 12.

1.A.-13 No new permits for special uses, except for research and outfitter-guide operations. Phase out existing non-conforming uses.

1.A.-14 These areas are statutorily withdrawn for federal oil and gas and other mineral leases.

1.A.-15 These areas are not available for mineral materials for commercial purposes.

1.A.-16 Road construction is prohibited, subject to valid existing rights or leases.

1.A.-17 Motorized equipment for search and rescue requires Forest Supervisor approval.

1.A.-18 These lands are unsuitable for timber production.

1.A.-19 Use minimum impact suppression techniques (MIST) for fire suppression activities in wilderness.

1.B. Recommended Wilderness Study Areas

Ellicott Rock Extension—Andrew Pickens, 1,982 acres (approximate)

Emphasis: Manage this area to protect wilderness characteristics pending legislation as to their classification and provide for existing uses where compatible with protecting wilderness character.

Desired Condition: As stated in the Wilderness Act, Wilderness provides "...an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain... an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which; 1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; 2) has outstanding opportunities for solitude or a primitive and unconfined type of reaction; 3) is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and 4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value."

Wilderness consists primarily of older forest communities with many large trees. Dead and down trees are common. Forests are dense with a thick, shrubby, evergreen understory. The forest canopy is continuous except for occasional gaps created by natural occurrences such as storms, insect or disease outbreak, and fire.

Management ignited fire can be used to reduce the unnatural buildups of fuels to reduce the risks and consequences of wildfire within wilderness or escaping from wilderness.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided though this prescription. Wildlife responsive to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo and species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities.

Existing old fields and wildlife openings are maintained. In some cases, existing openings may be obliterated through tree planting and elimination of non-native species. New permanent wildlife openings are not created.

Aquatic and riparian protection measures as referenced in Riparian Prescription 11 apply to this prescription.

Trails lie lightly on the land, blending with the natural surroundings. Visitors are physically challenged as they ford streams and climb over downed trees. Few facilities are provided. Wilderness recreation includes inherent risks. Encounters with other visitors are rare.

Access into the area is limited. Once in the area, visitors must rely on their own primitive recreational skills. The recreational opportunities are in primitive to a semi-primitive non-motorized setting.

Standards

1.B-1 The scenic integrity objective is very high for all inventoried scenic classes.

1.B.-2 The Forest Supervisor approves the use of motorized equipment or mechanical transport for emergencies where the situation involves an inescapable urgency and temporary need for speed beyond that available by primitive means or for exploration (categories include fire suppression, health and safety, law enforcement involving serious crime or fugitive pursuit, removal of deceased persons, and aircraft accident investigations) and development of valid existing mineral rights.

1.B-3 Allow mitigation for acid rain and other pollution effects and evaluate on a case-by-case basis with Forest Supervisor approval.

1.B.-4 Allow fish stocking only to reestablish or maintain native species; species of fish traditionally stocked before wilderness designation may be considered native if the species is likely to survive. Stocking shall normally be done by primitive means; however, Forest Supervisor may permit dropping of fish from aircraft for those waters where this practice was established before the area was designated a wilderness.

1.B.-5 No new utility corridors or communication sites will be authorized in these areas.

1.B.-6 Forest insect and disease outbreaks are controlled only if necessary to prevent unacceptable damage to resources on adjacent land, prevent an unnatural loss to the wilderness resource due to non-native pests, or protect threatened, endangered, and sensitive species.

1.B.-7 Hand-applied chemicals to eradicate non-native invasive plants require Forest Supervisor approval.

1.B.-8 No permits for commercial use of any forest products are allowed.

1.B.-9 The Forest Supervisor approves the use of motorized equipment or mechanical transport for non-emergency purposes.

1.B.-10 Fire lines are obliterated as soon as practical.

1.B.-11 Commercial and organized group size is limited to 12.

1.B.-12 Scenic integrity objective for these areas is very high.

1.B.-13 Livestock grazing is not allowed.

1.B.-14 These areas are administratively withdrawn for federal oil and gas and other mineral leases.

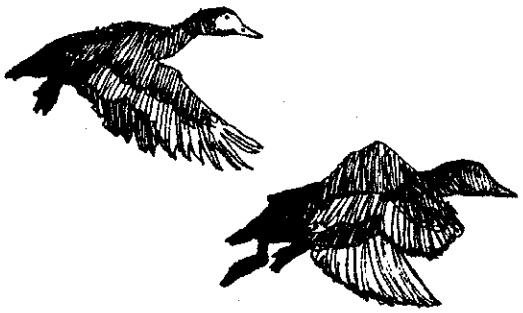
1.B.-15 These areas are not available for mineral materials for commercial purposes.

1.B.-16 Road construction is prohibited, subject to valid existing rights or leases.

1.B.-17 Motorized equipment for search and rescue requires Forest Supervisor approval.

1.B.-18 These lands are unsuitable for timber production.

1.B.-19 Use minimum impact suppression techniques (MIST) for fire suppression activities in wilderness.



2.A. Chattooga Wild and Scenic River Corridor

Table 3-1. Acres in Chattooga Wild and Scenic River Corridor by Forest by Classification			
National Forest	**Wild**	**Scenic**	**Recreational**
Sumter (South Carolina)	3,290	224	1,030
Nantahala (North Carolina)	1,065	305	985
Chattahoochee (Georgia)	5,998	468	1,551
Total Acres	10,353	997	3,566

Emphasis: Congress designated this corridor as part of the National Wild and Scenic Rivers System. It is managed to protect and enhance the outstandingly remarkable values of the river and its surroundings. The river will be preserved in a free-flowing condition for the benefit, use, and enjoyment of present and future generations.

The Chattooga Wild and Scenic River corridor is located in the Sumter, Nantahala, and Chattahoochee National Forests. Its 57 designated miles begin in North Carolina (Nantahala National Forest) and forms the state boundary between South Carolina (Sumter National Forest) and Georgia (Chattahoochee National Forest). The river includes sections designated as 'wild,' 'scenic' and 'recreational'.

The direction in this Forest Plan specific to the Chattooga (prescriptions 2A, 2.A.1, 2.A.2. and 2.A.3.) constitutes the comprehensive plan as required in Section 3(d)(2) of the Wild and Scenic Rivers Act (Act).

Relative to the requirements in the Act, this direction:

- Describes the outstandingly remarkable values.
- Includes emphasis statements, desired conditions and standards to protect river values.
- Provides detailed direction for on-river recreational capacity and establishes capacity for in-corridor recreation through a desired condition for facility development.
- Addresses water quality issues within the watershed, particularly through partnerships in Chapter 4.
- Includes river-specific monitoring measures for water quality and the outstandingly remarkable values in Chapter 5. Plan Implementation, Monitoring and Evaluation.

The Nantahala and Chattahoochee National Forests will use this direction for management of the river within their respective forest boundaries.

By agreement among the three forests, the Sumter National Forest has the lead authority for all boating/floating use (commercially-guided and self-guided) on the Chattooga River when it involves the main channel from Burrell's Ford to Lake Tugaloo, as well as the West Fork .

Outstandingly Remarkable Values of the Chattooga River

In 1974, when the river was designated by Congress as a part of the National Wild and Scenic Rivers System, the river possessed several outstandingly remarkable values including geology, biology, scenery, recreation and history. These values have generally improved over the years.

Geology—The geologic and geomorphologic values of the Chattooga, as described in the 1971 *Wild and Scenic River Study Report* for the Chattooga River and included the deeply dissected escarpment and the steep, rocky, forested slopes that plunge into deep, narrow gorges. There are a series of outstanding monolithic treeless domes and slopes of exposed resistant granite, which occur at the upper

headwaters of the river in North Carolina. Another feature of the river is that it is the headwaters of the Savannah River, which flows into the Atlantic Ocean. It is likely that a combination of geologic fault, severe erosion, and channel entrenchment associated with the headwaters of the Savannah River, now known as the Tugaloo River (formed by the confluence of Chattooga and the Tallulah) captured these rivers from the Chattahoochee River. A stream capture of this magnitude is unusual in the region, but the adjacent Chauga River also exhibits these characteristics.

Biology—There is a variety and richness of the plant life within the Chattooga Watershed, including the Chattooga Wild and Scenic River Corridor. The unique geography and climate characteristics provide habitats for uncommon assemblages of endemic, disjunct, and relic plant species. The most rare species within the Chattooga River Gorge landtype are the Southern Appalachian endemics, which include the liverworts; the rock gnome lichen and Blue Ridge bindweed, Fraser's loosestrife, Manhart's sedge, Biltmore's sedge pink shell azeala and the divided leaf ragwort. Old growth communities comprise almost 10 percent of the corridor. Federal and state agencies consider several non-game wildlife species within the watershed sensitive species.

Scenery—The scenery along the Chattooga River is exceptional. The scenery plays an important part of the Wild and Scenic River experience. The river is deeply entrenched between high ridges for large stretches of its length. Steep forested slopes on either side of the river give a feeling of seclusion. The river constantly meanders and curves, and there are excellent views along these bends. The seasons change the landscape from the varying soft greens of spring and summer to the patchwork of red, yellow, and orange. The winter finds the leaves stripped away and the patches of green from the white pines stand out against the gray-brown hillsides and exposed rock formations. The river itself provides a varying scene from a smooth flowing stream to a river with thundering falls and cascades, raging rapids, enormous boulders, and cliff-enclosed deep pools.

Recreation—The recreational values of the river and corridor are outstanding along its 57-mile course. The river offers a wide variety of activities in a high-quality setting. Activities range from swimming to hiking and horseback riding with spectacular scenery, to excellent trout fishing and nationally recognized white-water rafting opportunities. Other activities include backpacking, photography, and nature study. Most of these activities take place in largely unmodified natural surroundings, with many opportunities for remoteness and solitude.

History—Very little systematic survey has been completed in the river corridor. A total of 38 archeological sites have been recorded within the corridor. These include 15 prehistoric sites, 15 historic house and farmstead sites, a railroad embankment, 2 historic cemeteries, a 19th century mineral prospecting pit, and a rock shelter. About half of these sites are considered potentially eligible for the *National Register of Historic Places*. The Cherokees destroyed Chattooga Town, a large settlement of Indians, before 1600. The site is near the present day Highway 28 bridge site. This regionally significant site is potentially eligible for the *National Register of Historic Places*.

Standards

2.A.-1 Floating on the Chattooga River is not allowed upstream of the Highway 28 bridge.

2.A.-2 Organized events (such as boat races) are not allowed on the river.

2.A.-3 Motorized boats or craft are not allowed on the river.

2.A.-4 The number of multi-year permits to provide guided inflatable raft trips for the public on the Chattooga River will not exceed three (3).

2.A.-5 The number of multi-year permits to provide guided hardboat trips on the Chattooga River will not exceed five (5).

2.A.-6 The recognized holidays for all boating/ floating uses (both guided and self-guided) are Memorial Day, Independence Day, and Labor Day.

2.A.-7 Allow no more than 12 craft on all guided trips.

2.A.-8 Overnight camping at locations along the river by guided (inflatable and hardboat) permittees must be approved by the Forest Service.

2.A.-9 The total allocation of guided inflatable trips (for all multi-year permittees combined) and their locations are as follows (See Tables 3-2 and 3-3.):

Allocation

Low Water Level (below approximately one foot at the Highway 76 gauge)

A. Weekdays, except for Holidays - 9 Section IV trips and no Section III trips (A map of these sections is found in Appendix I). Only 6 of these trips may run Five Falls.
B. Weekends and Holidays:
   1. October-April—9 Section IV trips and no Section III trips. Only 5 of these trips may run Five Falls.
   2. May-September—8 Section IV trips and no Section III trips. Only 4 of these trips may run Five Falls.

Moderate Water Level (approximately 1 to 2 1/2 feet on the Highway 76 gauge)

A. Weekdays, except for Holidays—6 Section IV
   trips and 7 Section III trips.
B. Weekends and Holidays:
   1. October-April—5 Section IV trips and 4 Section III trips.
   2. May-September—4 Section IV trips and 4 Section III trips.

High Water Level (approximately 2 1/2 to 3 feet on the Highway 76 gauge) At this level, the Section IV trips may launch as far upstream as Thrift's Ferry, thus the Section III and Section IV trips may overlap between Thrift's Ferry and Highway 76. At this level, the Section IV trips may not run Five Falls.

A. Weekdays, except for Holidays—6 Section IV trips and 7 Section III trips.
B. Weekends and Holidays:
   1. October-April—5 Section IV trips and 4 Section III trips.
   2. May-September—4 Section IV trips and 4 Section III trips.

Very High Water Level (approximately 3 feet on the Highway 76 gauge up to the maximum safe water level)

A. Weekdays, except for Holidays—No Section IV trips and 13 Section III trips.
B. Weekends and Holidays:
   1. October-April—No Section IV trips and 9 Section III trips.
   2. May-September—No Section IV trips and 8 Section III trips.

Trip size (including guides, paying clients and non-paying clients) does not exceed 40. Trips may exceed 30 clients: however, total number of clients served per section per day does not exceed the average of 30 per trip.

Location

A. Section III trips launch as far upstream as Earl's Ford and take out as far downstream as Woodall Shoals, unless otherwise noted.
B. Section IV trips launch as far upstream as Highway 76 and takeout as far downstream as Lake Tugaloo, unless otherwise noted.
C. Section III and IV trips may overlap between Highway 76 and Woodall Shoals.

D. Inflatable raft trips in Sections III and IV can be moved to Sections I or II.
E. Short-term adjustments to the locations of launches and takeouts are necessary on rare occasions because of occurrences such as accidents or natural disasters, which affect access to or navigability of the river. These adjustments will only be made with the approval of the Forest Service.

2.A.-10 The total allocation of guided hardboat trips (for all multi-year permittees combined) and their locations are as follows (See Table 3-3):

Allocation

A. No more than 48 trips per week (20 on Section I/II and 28 on Section III) on weekdays.
B. No more than 13 trips (6 on Section I/II and 7 on Section III) on weekdays.
C. No more than 2 trips per day on weekends.
D. No trips on holidays or holiday weekends.
E. The combined total number of clients and instructors will not exceed 24 people per trip.
F. Two inflatable canoes and kayaks are allowed on each trip.

Location

A. Section I/II trips launch as far upstream as the West Fork registration site and take out as far downstream as Earls Ford.
B. Section III trips launch as far upstream as Earls Ford and take out as far downstream as Highway 76.
C. A trip in Section IV is allowed in the place of a scheduled Section IV guided inflatable trip.

2.A.-11 The total allocation of short-term canoe, kayak and inner-tube guided trips (for short term permits) and their locations are as follows:

Allocation

A. The number of permits is unlimited.
B. The maximum number of trips permitted each year by each different organization is 5. (Each day on the river is considered one trip.)
C. The maximum group size is 12 crafts (10 for students) for canoes and kayaks, not to exceed 24 people (including instructors).
D. The maximum group size is 24 inner tubes, not to exceed 24 people (including instructors).

E. Trips are allowed on weekdays only from April 1 through September 30 and on all days (including weekends) during the remainder of the year.

Location

A. Canoe and kayak trips can be taken in Sections I, II, and III only.
B. Inner tube trips can be taken in Sections I and II only.

2.A.-12 The total allocation of self-guided boaters and their locations are as follows. (See Table 3-5.)

Allocation and Location

A. In Section III, year-round allocation for self-guided use at all water levels is 175 people per weekend day and holidays and 125 people per weekday.
B. In Section IV, year-round allocation for self-guided use at all water levels is 160 people per weekend day and holidays and 75 people per weekday.
C. The procedure for the enforcement of self-guided use allocations in Sections III and IV is:

In Section III between April 1 and August 31, should daily self-guided use ever reach 175 people per weekend day (holidays included) for 20 days per year for 2 consecutive years, reservations would be required for self-guided boaters on Section III on weekends and holidays during those

months beginning the following year. Similarly, should daily self-guided use reach 125 people per weekday for 50 weekdays per year for 2 consecutive years, reservations would be required for self-guided boaters on Section III on weekdays during those months beginning the following year.

In Section IV between April 1 and August 31, should daily self-guided use ever reach 160 people per weekend day (holidays included) for 20 weekend days per year for 2 consecutive years, reservations would be required for self-guided boaters on Section IV on weekends and holidays during those months beginning the following year. Similarly, should daily self-guided use reach 75 people per weekday for 50 weekdays per year for 2 consecutive years, reservations would be required for self-guided boaters on Section IV on weekdays during those months beginning the following year.

D. Self-guided users will use a non-voluntary registration system.

Tables 3-2 through 3-5 summarize some of the requirements discussed above in standards 2.A.-9 through 2.A.-12.

2.A.-13 The total allocation of shuttles for self-guided boaters is as follows:

A. No more than two shuttle permittees.

B. No more than 30 percent of the daily self-guided allocation by section is authorized for shuttle services.

2.A-14 Possessing or using a saddle, pack, or draft animal is prohibited within the corridor unless on a designated trail or road.

2.A-15 The corridor is unsuitable for timber production.

2.A-16 New utility corridors or communications/ electronic sites will be discouraged within the corridor.

2.A.-17 Fire can be used within the corridor if the outstandingly remarkable values of the stream are protected.

2.A.-18 Limit mountain biking to designated routes.

Table 3-2. Chattooga River Guided Rafting Allocations Section III

Water Levels	Capacity Permitted	May–September		October–April	
		Weekdays	Weekends[1]	Weekdays	Weekends[1]
Low	Trips/day	0	0	0	0
	People/day[2]	0	0	0	0
Moderate	Trips/day	7	4	7	4
	People/day[2]	280	160	280	160
High	Trips/day	7	4	7	4
	People/day[2]	280	160	280	160
Very High[3]	Trips/day	13/3	8/3	13/3	9/3
	People/day[2]	520	320	520	360

[1]Includes Holidays
[2]Includes Guides
[3]Denominator indicates portion of trips allowed from Hwy 28 to Earl's or Sandy Ford

Table 3-3. Chattooga River Guided Rafting Allocations Section IV					
Water Levels	**Capacity Permitted**	**May-September**		**October-April**	
		Weekdays	Weekends[1]	Weekdays	Weekends[1]
Low[3]	Trips/day	9/6	8/4	9/6	9/5
	People/day[2]	360	320	360	360
Moderate	Trips/day	6	4	6	5
	People/day[2]	240	160	240	200
High[4]	Trips/day	6	4	6	5
	People/day[2]	240	160	240	200
Very High	Trips/day	0	0	0	0
	People/day[2]	0	0	0	0

[1]Includes Holidays
[2]Includes Guides
[3]Denominator indicates portion of trips allowed in Five Falls
[4]These trips may put in at Thrift's Ferry

Table 3-4. Chattooga River Guided Hardboat Allocations			
Day of the Week	**Capacity Permitted**	**River Section**	
		I & II	**III**
Weekdays	Trips/week	20	28
	Trips/day	6	7
Weekends	Trips/day	2	

Table 3-5. Chattooga River Self-guided Boating Use Allocations (boaters/day) for Sections III and IV	
All Year	
Weekdays	**Weekends***
Section III	
125	175
Section IV	
75	160
*Includes holidays	

2.A.1. Designated Wild River Segments, Chattooga River

Table 3-6. Designated Wild River Segments of the Chattooga River	
National Forest	**Wild River Segments (in acres)**
Sumter (South Carolina)	3,290
Nantahala (North Carolina)	1,065
Chattahoochee (Georgia)	5,998
Total Acres	10,353

Emphasis: Congress designated these wild river segments and their associated corridors as part of the National Wild and Scenic Rivers System. They are managed to protect and enhance the outstandingly remarkable values of the river. The river will be preserved in a free-flowing condition for the benefit, use, and enjoyment of present and future generations.

Desired Condition: These segments of the Chattooga River are the most primitive and remote. Management of these segments is focused on protecting the outstandingly remarkable values of the river and preserving the natural environment and natural processes from human influences. Access to the area is limited to roads outside of the corridor. Non-motorized trails accommodate use and river access while protecting the resources and the river's outstanding resource values. Canoeing, kayaking, fishing, outfitted use, hiking, backpacking, and wildlife viewing are all typical uses along some activities without seeing many other users except parts of this corridor. Most users enjoy these at the occasional boat put-ins and trailheads. Capacity of facilities is typically low, and they are rustic in character. Limited new facilities are provided, and if constructed, are usually in response to the need to correct environmental problems rather than increase capacity. Type, number, location, and degree of facility development are a primary means of limiting visitor use. There is no emphasis on upgrading recreational facilities to provide more amenities. Floating these segments of the river (If allowed, some wild segments do not allow floating/ boating.) requires considerable skill and self-reliance. The recreational opportunities are in a semi-primitive non-motorized setting.

The landscape character is natural evolving with a mostly continuous canopy except for the linear swath of the river itself. Occasional gaps occur from the results of natural disturbances. Most of the forest is mature, with many large trees. Most common tree species include hemlock, white pine, and various hardwoods. Understory plants, particularly rhododendron, silverbell, dogwood, redbud, and ferns such as Christmas fern and New York Fern provide a lush vegetative understory visible from the river and trails. Old growth forests predominate, except where significant natural disturbances occur.

Existing old fields and openings for wildlife may be present and maintained when consistent with and do not detract from the outstandingly remarkable values, but no creation of new permanent openings of this type occurs. Native species are preferred but non-invasive, non-native species may be used when establishing food plants for wildlife.

Aquatic and riparian protection measures in Riparian Prescription 11 apply to this prescription.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided though this prescription. Wildlife responsive to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo and species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities.

Disturbance is primarily caused by natural process (floods, wind storms, insects, diseases, and fires) or prescribed fire. Prescribed fire may be used to mimic natural disturbances and to maintain and restore rare communities and threatened, endangered and sensitive species habitat, and fuel reduction. Integrated pest management practices might be used to control or minimize impacts from native and non-native invasive species. This may include the use of mechanized equipment, power tools and approved pesticides. Mechanized equipment and power tools may also be used to provide for public health and safety; search and rescue; facilities, trail and wildlife opening maintenance and fire line construction.

Standards

2.A.1.-1 The scenic integrity objective is very high for all inventoried scenic classes.

2.A.1.-2 Road construction and new river crossings are prohibited, subject to valid existing rights or leases.

2.A.1.-3 No federal mineral leasing. No mineral material authorization is permitted for commercial or private use.

2.A.1.-4 No new wildlife clearings will be developed, but existing ones may be maintained.

2.A.2. Designated Scenic River Segments, Chattooga River

Table 3-7. Designated Scenic River Segments of the Chattooga River

National Forest	Scenic River Segments (in acres)
Sumter (South Carolina)	224
Nantahala (North Carolina)	305
Chattahoochee (Georgia)	468
Total Acres	997

Emphasis: Congress designated these scenic river segments and their associated corridors as a part of the National Wild and Scenic Rivers System. They are managed to protect and enhance the outstandingly remarkable values that led to their designation. The river itself is preserved in a free-flowing condition for the benefit, use, and enjoyment of present and future generations. Recreational opportunities emphasize relatively low development levels.

Desired Condition: The scenic river segments on the Chattooga are slightly more developed than the wild segments. The river's shorelines are undeveloped with occasional roads or bridges crossing the river and there may be designated parking areas and trailheads. Non-motorized trails accommodate use and river access while protecting the resources and the river's outstanding resource values. Non-motorized trail users may include hikers, anglers, boaters, mountain bikers, and horseback riders.

Visitors enjoy a natural setting although the sights and sounds of other visitors and civilization may be present. Visitors' outdoor skills are challenged moderately. The opportunity to encounter other visitors is moderate to high, depending upon the location and time of year. Visitors seeking solitude visit during non-peak seasons, mid-week, or by hiking some distance from roads and parking areas.

Recreational facilities are primarily for visitor safety and access and to protect the river resources. Capacity of facilities is typically low, and they are rustic in character. Limited new facilities are provided, and if constructed, are usually in response to the need to correct environmental problems rather than increase capacity. Type, number, location, and degree of facility development is a primary means of limiting visitor use. There is no emphasis on upgrading recreational facilities to provide more amenities. The recreational opportunities are in semi-primitive motorized setting.

The landscape character is natural appearing and pastoral with a mostly continous canopy except for the linear swath of the river itself. Most of the forest is mature, with many large trees. Most common tree species include hemlock, white pine, and various hardwoods. Understory plants, particularly rhododendron, silverbell, dogwood, redbud, and ferns such as Christmas fern and New York Fern provide a lush vegetative understory visible from the river and trails. Old growth forests predominate, except where significant natural disturbances occur. Existing old fields and openings for wildlife may be present and maintained. New wildlife openings may be created if they enhance the outstandingly remarkable values of the corridor. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife.

Aquatic and riparian protection measures as referenced in Riparian Prescription 11 apply to this prescription.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided though this

prescription. Wildlife responsive to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo and species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities.

Disturbance is primarily caused by natural process (floods, wind storms, and fires) or prescribed fire. Management actions may provide scenic vistas and watchable wildlife opportunities, maintain developed recreation facilities and trails, restore native vegetative communities, restore aquatic and riparian ecosystems, reduce fuel buildup and control non-native invasive vegetation. Prescribed fire is used to mimic natural disturbances and to maintain and restore desired communities. Integrated pest management practices might be used to control or minimize impacts from native and non-native invasive species. This may include the use of mechanized equipment, power tools and approved pesticides. Mechanized equipment and power tools may also be used to provide for public health and safety; search and rescue; facilities, trail and wildlife opening maintenance.

Standards

2.A.2.-1 The scenic integrity objective is high for inventoried scenic classes.

2.A.2.-2 Road construction and new river crossing are prohibited, subject to valid existing rights or leases

2.A.2.-3 Federal mineral leasing is allowed with a no surface occupancy (NSO) stipulation. No mineral material authorization is permitted for commercial or private use.

2.A.2.-4 Allow no new wildlife openings unless they enhance the outstandingly remarkable values.

2.A.3. Designated Recreational River Segments, Chattooga River

Table 3-8. Acres of Recreational River Segments

National Forest	Recreational River Segment
Sumter (South Carolina)	1,030
Nantahala (North Carolina)	985
Chattahoochee (Georgia)	1,551
Total Acres	3,566

Emphasis: Congress designated these recreational river segments and their associated corridors as part of the National Wild and Scenic Rivers System. They are managed to protect and enhance the outstandingly remarkable values that led to their designation. The river itself is preserved in a free-flowing condition for the benefit, use, and enjoyment of present and future generations. A range of recreational opportunities is provided in this prescription area. These opportunities are characteristic of, and in harmony with, the natural setting of the individual river segments.

Desired Condition: The river corridor provides outstanding opportunities for people to enjoy a wide variety of river-oriented recreational opportunities in an attractive natural setting.

Visitors are likely to see others. Non-motorized trails may be highly developed, including hardened trails for a high level of accessibility for persons of all abilities. The river is readily accessible by roads. Roads may parallel the river for stretches.

There is evidence of human activity along the shores of these segments of river.
There is limited need for visitors to rely on their personal physical abilities and primitive recreational skills within developed and trail areas of these segments. Other areas remain

remote and difficult to access or negotiate. Visitors seeking solitude may find it difficult to achieve, particularly in peak-use rafting and fishing seasons. On National Forest system land, visitors enjoy a natural-appearing setting with a range of man-made recreational developments. Since there is the potential for large numbers of visitors at peak-use seasons, regulations may be necessary to protect resources and visitors. Facilities provide visitor safety and comfort and protect the river resources. Facilities may include parking areas, trailheads, bulletin boards, interpretive kiosks, signs, restrooms, canoe/raft launches, fishing platforms, picnic sites, etc. The recreational opportunities are in roaded natural setting.

The landscape character is mostly natural appearing and pastoral. Plant communities are structurally diverse with occasional small gaps occurring from natural events and manipulation. However, most of the forest in these sections is mature, with many large trees. Most common tree species include hemlock, white pine, and various hardwoods. Understory plants, particularly rhododendron, silverbell, dogwood, redbud, and ferns such as Christmas fern and New York Fern provide a lush vegetative understory visible from the river and trails. Management actions may provide scenic vistas and watchable wildlife opportunities, maintain developed recreation facilities and trails, restore native vegetative communities, restore aquatic and riparian ecosystems, reduce fuel buildup, and control non-native invasive vegetation. Prescribed fire is used to mimic natural disturbances and to maintain and restore desired communities. Integrated pest management practices might be used to control or minimize impacts from native and non-native invasive species. This may include the use of mechanized equipment, power tools and approved pesticides. Mechanized equipment and power tools may also be used to provide for public health and safety; search and rescue; facilities, trail and wildlife opening maintenance. Existing old fields and openings for wildlife may be present and maintained, but no creation of new permanent openings of this type occurs. New wildlife openings may be created if they enhance the outstandingly remarkable values of the corridor. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided though this prescription. Wildlife responsive to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo and species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities. Species associated with habitat conditions found in riparian areas, i.e., Acadian flycatcher, parula warbler, Louisiana waterthrush, could potentially be found in high densities in these areas.

Standards

2.A.3.-1 The scenic integrity objective is high for inventoried scenic classes 1 and 2 and moderate for scenic classes 3 through 5.

2.A.3.-2 No new river crossings are permitted, subject to valid existing rights.

2.A.3.-3 Federal mineral leasing is allowed with a no surface occupancy (NSO) stipulation. Mineral material authorizations will be allowed.

2.A.3.-4 Allow no new wildlife openings unless they enhance the outstandingly remarkable values.

4. D. Botanical-Zoological Area

4,399 acres (approximate)

Enoree Ranger District
Rosehill Chestnut Oak/Oak-Hickory Forest

Long Cane Ranger District
Parsons Mountain Monadnock
Post Oak Savanna Complex
Turkey/Stevens Creek Corridor

Andrew Pickens Ranger District
Brasstown Creek and Falls
Cedar Creek Natural Area
King Creek
Opossum Creek
Station Cove/Station Mountain Cove
Tamassee Knob and Coves/Tamassee Creek

Emphasis: These lands serve as a network of core areas for conservation of significant elements of biological diversity. These areas serve to perpetuate or increase existing individual plant or animal species that are of national, regional, or state significance as identified on PETS lists; and to perpetuate plant and animal communities that are unique at the scale of their ecological section or subsection unit.

Desired Condition: The goals of designation and management of these areas are:

1. Perpetuate or increase existing individual plant or animal species that are of national, regional, or state significance as identified on PETS lists.
2. Perpetuate plant and animal communities that are unique or uncommon at the scale of their ecological section or subsection unit.
3. Allow for public use and enjoyment.

The botanical-zoological areas on the Sumter National Forest are primarily dominated by a variety of older forested communities containing a variety of species native to the area. Disturbances within these areas are primarily caused by natural events and prescribed fire. Management that maintains or enhances the botanical, zoological, or interpretive properties for which these areas were designated, such as the control of non-native invasive species, may be seen. Interpretive signs encouraging the protection of native plant and animals in these areas are commonly seen.

This prescription area encompasses a wide variety of habitat conditions, from deep rich coves, to natural barrens and glades, to table mountain pine woodlands. Wildlife and plants found in these areas are a combination of species commonly found across the Sumter (warblers, vireos, squirrels, bats, etc.) and species that are almost always found in or near these specialized habitats (i.e., walking fern, nodding trillium). Existing old fields and wildlife openings are not maintained but are allowed to succeed to forest. In some cases, existing openings may be obliterated by tree planting and eliminating non-native species. New permanent wildlife openings are not created.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

The Turkey and Stevens Creek corridor is eligible for wild and scenic river designation and will be studied for wild and scenic river suitability by the year 2009. The outstandingly remarkable values, including wildlife, botanical/ecological, and fish/aquatic, will be protected within this prescription.

The landscape character is natural evolving to natural appearing to most forest visitors. Hikers, hunters, anglers, and backpackers commonly use these areas. Signs that interpret the biological or cultural aspects of each area may be commonly seen along interpretative trail sections. Closed roads and trails, compatible with maintenance of the botanical, zoological, or interpretive values, are available for non-motorized uses. The recreational opportunities are in a roaded natural setting.

Density of open roads and/or motorized trails may decrease over time as roads and/or trails that are unneeded or are causing undesirable resource impacts are closed. This decrease results in improvements in remote recreational opportunities, habitat for disturbance-sensitive wildlife, and water quality.

Standards

4.D.-1 The scenic integrity objective is high for inventoried scenic classes 1 and 2 and moderate for inventoried scenic classes 3 through 5.

4.D.-2 New federal mineral leases will contain a no surface occupancy stipulation or controlled surface use stipulation.

4.D.-3 No mineral material operations are allowed.

4.D.-4 OHVs and horses are not permitted.

4.D.-5 These lands are unsuitable for timber production.

4.F. Scenic Areas

10,020 acres (approximate)

Enoree Ranger District
Henderson Island/Broad River Scenic Area
Sandy River Scenic Area
Lower Rennick's Branch

Long Cane Ranger District
Long Cane Scenic Area

Andrew Pickens Ranger District
Chauga Scenic Area
White Rock Scenic Area

Emphasis: Protect and enhance the scenic qualities and natural beauty of designated scenic areas.

Desired Condition: Visitors enjoy a variety of activities in these areas that may include hiking, photography, wildlife viewing, canoeing/ kayaking, mountain bicycling, horseback riding, hunting, and fishing. The landscape is natural appearing with an intact, mostly continuous forest canopy containing a variety of species native to the area. Old growth forest communities develop over time.

Disturbances are primarily caused by natural process (floods, wind storms, insects, diseases, and fires). Occasionally, some vegetation would be manipulated, and open forest canopies would be present. Many factors contribute to these conditions: PETS habitat may be improved; wildlife viewing opportunities provided; native vegetation restored; southern pine beetle activity suppressed; salvage timber removed; riparian ecosystems restored; or hazard trees removed. Existing old fields and openings for wildlife may be present and maintained. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife. Prescribed fire is an essential component of maintaining fire-adapted communities within the areas and fuel reduction.

Hiking, biking, and horseback riding trails may be present. Recreational facilities fit the character of the specific sites where they are located. Facilities might include roads, pullouts, and overlooks, parking areas, trails, trailheads, bulletin boards, interpretive kiosks, signs, restrooms and picnic sites. Trails may be highly developed, including hardened trails for a high level of accessibility for persons of all abilities. The recreational opportunities are in roaded natural and rural settings. Open road density will not increase or decrease significantly.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Density of open roads and/or motorized vehicle trails remains near the current level throughout the planning period, with only small increases and decreases.

Standards

4.F.-1 The scenic integrity objective is very high for inventoried scenic class 1 and high for inventoried scenic class 2.

4.F.-2 New federal mineral leases will contain a no surface occupancy stipulation and controlled surface use stipulation.

4.F.-3 These lands are unsuitable for timber production.

4.G.1 Calhoun Experimental Forest

4,862 acres (approximate)

Emphasis: Meet the current and future research needs of the Southern Research Station. Demonstrate common forestry practices to non-industrial private forest landowners

Desired Condition: Research results supply needed information to forest landowners and land managers. Demonstration aspects of the experimental forest transfer knowledge to non-industrial private forest landowners to meet the increased demands for forest benefits in an environmentally conscientious manner.

Forest vegetation is in a variety of conditions that meet the research needs of the Southern Research Station. Aside from demonstration, the main need is to maintain various age classes and conditions for future research. Within the natural area (908 acres) of the experimental forest, old growth conditions exist. The following conditions apply outside of the natural area, and outside of riparian areas. Trees are typically grown to ages of 50 to 80 years for pine, and 80 to 120 years for hardwood. Relatively equal amounts of area are in each 10-year age class up to rotation age. Pine stands are maintained at moderate densities (less than 100 square feet/acre basal area) to reduce susceptibility to southern pine beetle attack and to promote understory development. A flow of wood products is provided to local economies.

For wildlife, the emphasis of this prescription is to balance objectives that result in a range of beneficial habitat conditions . Animals that utilize a variety of habitats (white-tailed deer, wild turkey, gray squirrel, woodpeckers, and migrating neotropical birds) would benefit and would be expected to be found in high densities in this area. Existing old fields and openings for wildlife may be present and maintained. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife.

Aquatic and riparian protection measures as found in Riparian Prescription 11 apply to this prescription

Hiking, biking, and horseback riding trails may be present. Visitors enjoy a natural appearing setting especially on trails away from high use areas. The recreational opportunities are in roaded natural and rural settings. Open road density will be maintained at the current level.

Prescribed fire may be used to reduce hazardous fuels, maintain or restore PETS habitat or rare communities, maintain wildlife habitat, or meet research needs.

Standards

4.G.1.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic class 2 and low for scenic classes 3 through 5.

4.G.1.-2 New federal mineral eases will contain a no surface occupancy stipulation.

4.G.1.-3 No mineral leases or mineral material operations are allowed in the natural area

4.G.1.-4 The natural area is unsuitable for timber production, the remainder of the experimental forest is suitable for timber production.

5.A. Administrative Sites

(285 acres embedded in adjoining prescriptions)

Emphasis: Sites are managed to serve and support resource programs and will be maintained to protect capital investment. Site such as work centers, lookout towers, and Forest Service owned offices are included.

Desired Condition: Provide administrative sites and facilities that effectively and safely serve the public and accommodate the work force. Administrative sites are readily accessed by road, and should have barrier-free access.

The landscape character can range from natural appearing to urban/cultural. The limited recreational opportunities are in rural settings. Occasionally, short, hiking trails can complement the offices. Where possible these sites provide condensed examples of open grassland/shrub land to backyard habitats.

Sumter offices provide educational and interpretive opportunities such as exhibits and displays, books, videos, and brochures.

Standards

5.A.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic classes 2 through 5.

5.A.-2 No mineral leasing or mineral material operations are allowed.

5.A.-3 Dispose of administrative sites no longer needed for national forest management purposes.

5.A.-4 These lands are unsuitable for timber production.

5.B. Designated Communication Sites

(4 acres embedded in adjoining prescriptions)

Emphasis: These specific sites serve a public benefit and include ridge top radio towers and support facilities to provide for local governmental agencies and the nation's communication and electronic network. Areas are managed to minimize adverse impacts on other areas.

Desired Condition: The Long Mountain Communication site is the only designated communication site. Existing special-use authorizations for communications and electronics continue within these designated areas. Where possible, existing sites are expanded as needed rather than creating additional areas. All users' equipment is compatible to forest surroundings and other users equipment and frequencies. New equipment is as inconspicuous to the surrounding terrain as possible.

These sites are non-forested, benefiting wildlife species that favor grass, shrubs, old fields, and forest edges. These areas contain low-growing vegetation, which conforms to the safe-operating requirements of the utility and reduces surface water runoff and erosion. Recreation is not emphasized nor encouraged at these sites.

Standards

5.B.-1 The scenic integrity objective is moderate for inventoried scenic class 1 and 2 and low for inventoried scenic classes 3 through 5.

5.B.-2 No mineral leasing will be allowed.

5.B.-3 No mineral material operations are allowed.

5.B.-4 These lands are unsuitable for timber production.

5.C. Designated Utility Cooridors

2,948 acres (approximate)

Emphasis: These uses serve a public benefit and include long linear features such as high voltage electric transmission lines and buried pipelines for public drinking water or natural gas. These designated corridors serve uses that require at least 50 feet of right-of-way. Local distribution lines are not included in this prescription area, but rather are part of the prescription area where they are physically located.

Desired Condition: Existing linear special-use authorizations for electric transmission lines and pipelines for water and natural gas will continue within these designated corridors. Utility corridors are authorized either by special-use authorization or license. Where possible, existing corridors are expanded to add new transmission lines as needed rather than creating additional areas. Compatible multiple uses are encouraged. Utility access roads and trails within corridors are designed, managed, and maintained to forest standards, including appropriate stream crossings, surfacing and/or drainage dips, or other appropriate water control structures. Recreational use is generally hunting related, although existing trail systems occasionally cross these corridors. The recreational opportunities are in roaded natural and rural settings. The landscape character ranges from natural appearing to pastoral/cultural.

Utility corridors, electric transmission lines, and oil or gas pipelines are prime areas for viewing wildlife species that favor grass, shrubs, old fields, and forest edges. These areas are managed to retain a variety of low-growing and/or shallow-rooted vegetation, which conforms to the safe-operating requirements of the utility and reduces surface water runoff and erosion. These areas provide opportunities for annual plantings. When the permit is renewed or revised opportunities are taken to utilize these corridors by planting and maintaining wildlife plantings.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Standards

5.C.-1 The scenic integrity objective is moderate for inventoried scenic classes 1 and 2 and low for inventoried scenic classes 3 through 5.

5.C.-2 Herbicide application methods will target woody or invasive non-native species only.

5.C.-3 These lands are unsuitable for timber production.

5.C.-4 No mineral leasing will be allowed.

6.C. Old-Growth Areas Managed with a Mix of Natural Processes and Restoration Activities

1,640 acres (approximate)

Emphasis: This prescription is part of an overall network of large (2,500+ acres), medium (100 to 2,499 acres), and small (fewer than 100 acres) old growth patches associated with a disturbance regime. Management of these areas emphasizes protection, restoration, and management of old growth forests and their associated wildlife, botanical, recreational, scientific, educational, cultural, and spiritual values. Within this prescription, most of the area will contain forest communities where no forest management activities or intervention will take place. On a smaller portion of the area, forest management activities are allowed to restore or maintain old-growth conditions.

Desired Condition: The area contains a variety of old growth community types including dry and dry-mesic oak-pine forest, dry-mesic oak forest, mixed mesophytic forest, dry and xeric oak forest, woodland, and savanna, river floodplain hardwood forest, and eastern riverfront forest.

Desired future conditions and natural disturbance regimes (including fire) specific to each old growth community type are described in the "Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests in the Southern Region" (May 1997). There may be evidence of past land use in most of these areas especially in the piedmont. Dead, dying, and down trees, and large-diameter trees are common. Forest canopies are typically continuous, interspersed with small gaps from natural causes. Management to restore or maintain the desired composition and structure for the respective old growth community types will be allowed.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided though this prescription. Wildlife that responds to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo and species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities. Existing old fields and wildlife openings are not maintained but are allowed to succeed to forest. In some cases, existing openings may be obliterated by tree planting and eliminating non-native species. New permanent wildlife openings are not created.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

The landscape character of the area is natural appearing. Hikers, backpackers, dispersed campers, boaters, hunters, or anglers commonly use these areas. Closed roads and trails are available for non-motorized uses. The recreational opportunities are in roaded natural settings. Open road density is likely to decrease in this area.

Standards

6.C.-1 The scenic integrity objective is high for inventoried scenic classes 1 and 2 and moderate for inventoried scenic classes 3 through 5.

6.C.-2 New federal mineral leases will contain a no surface occupancy stipulation. Mineral material authorizations with conditions to protect the old-growthcharacter may be permitted.

6.C.-3 These lands are unsuitable for timber production.

6.C.-4. OHVs are not permitted and horses are only permitted on designated trails.

7.A. Scenic Byway Corridor

Oscar Wiggington Scenic Byway—Andrew Pickens,

3,044 acres (approximate)

Emphasis: A scenic byway corridor is managed to provide visitors with the enjoyment of outstanding scenery of natural and cultural landscapes along a well-maintained road. The area may also contain recreational and interpretive trails. The area that is visible during the leaf-off season for up to ½ mile from either side of the road, unless other criteria are established in a site-specific scenic byway corridor management plan. Management is focused on protecting and showcasing the unique and scenic natural and cultural resources, which were the basis for the corridor's being designated a scenic byway.

Desired Condition: The area provides exceptional opportunities for motorized recreation, including scenic driving. The scenic byway, state highways 107 and 413, is a mixture of private ownership and national forest lands. The landscape results in a patchwork of

pastureland, residences, farms, forests, and woodlands.

The landscape character of the area is natural appearing to pastoral settings. On national forest lands, the byway has a mostly continuous overstory canopy of large hardwoods and pines as well as diverse midstory and understory vegetation, which provide colorful accents. Both natural processes and humans influence vegetation. Occasional openings allow visitors to enjoy viewing wildlife, native wildflowers, flowing water, geographic features, or a cultural landscape. A combination of prescribed fire and some vegetative management result in a forest of deciduous and mixed hardwood-pine forest community types primarily in mid- and late-successional conditions. Areas of older forest communities are common and increase over time. Tree harvest may also be used to control insect infestation or disease, or to remove salvage timber. Existing old fields and openings for wildlife may be present and maintained. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife. Additional openings and open park-like woodland conditions may be developed to improve views in the area. Openings may provide views of wildlife, water, or geographic features.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

This area is easily accessed with a moderate to high potential to encounter others.Byway facilities may include pullouts, overlooks, interpretive kiosks, trails, restrooms, and picnic sites. Scenic, historical and/or natural resources are interpreted for the benefit of visitors. There is little need for visitors to rely on personal abilities or primitive recreation skills. Most, if not all facilities are designed to accommodate persons with disabilities. The recreational opportunities are in roaded natural and rural settings.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided by this prescription. Wildlife that responds to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo would also be expected in high densities.

Density of open roads and/or motorized vehicle trails remains near the current level throughout the planning period, with only small increases and decreases.

Standards

7.A.-1 The scenic integrity objective is high for inventoried scenic classes 1 and 2.

7.A.-2 New federal mineral leases will contain a no surface occupancy stipulation. (Mineral material authorizations with conditions to protect the scenic character may be permitted.

7.A.-3 These lands are unsuitable for timber production.

7.D. Concentrated Recreation Zone

605 acres (approximate)

Emphasis: Concentrated Recreation Zones are managed to provide the public with a variety of recreational opportunities in visually appealing and environmentally healthy settings. Developed recreation areas, concentrated use areas, and areas of high-density dispersed recreational activity are the components of Concentrated Recreation Zones. Facilities are provided to enhance the quality of the recreational experience and/or to mitigate damage to the affected ecosystems. These areas also serve as "gateways" to the wide diversity of recreational opportunities on the remainder of the forest.

Desired Conditions: Provide and maintain high quality recreation sites in natural forested settings.

Visitors will be able to choose from a variety of recreational experiences. Campgrounds, rifle ranges, picnic sites, boat ramps, river access sites, swimming beaches, interpretive sites, primitive camping areas, and trails provide a variety of enjoyable recreational experiences. Recreational information and interpretive programs enhance visitors' experience. Access to fishing, hunting, trails, and nature study are provided. Outdoor skills are generally of little importance, except where knowledge of specialized activities (boating or horseback riding) is critical. Motorized access and their support facilities (i.e., roads, parking lots, or water access) will be provided, but some experiences (for example, walking, and viewing nature) will be non-motorized. The recreational opportunities are in roaded natural and rural settings.

The landscape character is natural appearing with visitors enjoy a pleasing mosaic of tree species of various densities and stem forms, flowering trees, character trees and shrub species, park-like effects in the understory, fall color species, opportunities for photography, and minimal impacts from insect and disease outbreaks.

These areas are in a variety of vegetative communities. The landscape character will be natural appearing with variations created by the recreational facilities. Over time, native hardwoods component of the piedmont forest recreation zones increase. Risk to visitors from hazard trees is minimal. Older forest communities are common and increase over time.

Wildlife tolerant of high levels of human activity and open park-like conditions are commonly found in these areas. Sights and sounds of American robin (*Turdus migratorius)*, chipping sparrow *(Spizella passerina),* northern mockingbird *(Mimus polyglottos)*, cardinal *(Cardinalis cardinalis),* barn swallow *(Hirwood rustica),* gray squirrel, American crow *(Corvus brachyrynchos),* raccoon *(Procyon lotor),* and opossum *(Didelphis virginiana)* are evident in and around these sites.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Standards

7.D.-1 The scenic integrity objective is high for inventoried scenic classes 1 and 2, moderate for inventoried scenic classes 3 through 5.

7.D.-2 New federal mineral leases will contain a no surface occupancy stipulation. Mineral material authorizations with conditions to protect the recreational character may be permitted.

7.D.-3 These lands are unsuitable for timber production.

7.E.1. Dispersed Recreation Areas (Piedmont Only)

12,575 acres (approximate)

Emphasis: Dispersed recreational demand is managed to provide the public with a variety of recreational opportunities in a setting that provides quality scenery, numerous trails, and limited facilities.

Desired Condition: These areas include the foreground view shed of the Enoree, Tyger, and Broad Rivers on the Enoree Ranger District. These areas are approximately ¼ mile from each side of the Enoree, Tyger, and Broad Rivers. Visitors may choose from a variety of high quality, well maintained dispersed recreational opportunities including, but not limited, to day hiking, mountain biking, horseback riding, photography, canoeing, kayaking, boating, fishing, hunting, waterfowl hunting, dispersed camping, and nature study. Recreational information, interpretive trails, and self-guided programs enhance visitors' experiences. Visitors will frequently see other people in some parts of

this area. Outdoor skills are of moderate importance. The recreational opportunities are in roaded natural and rural settings.

The landscape character is natural appearing with visitors enjoying a pleasing mosaic of tree species of various densities and stem forms, flowering trees, character trees and shrub species, park-like effects in the understory, fall color species, opportunities for photography, and minimal impacts from insect and disease outbreaks. Prescribed fire is used to reduce fuel buildup, mimic natural disturbance, maintain pleasing open park-like views, and maintain and restore desired native communities. Additional open park-like woodland conditions may be developed to improve habitat conditions or views in the area. Tree harvest may be used to control insect infestation or disease, to remove salvage timber, to maintain moderate stand densities, to create small canopy gaps, or to create openings for canebrakes. Existing openings and linear strips may be found or new ones created to improve habitat conditions or views in the area. Native species are preferred but non-invasive, non-native species may be used when establishing food plants for wildlife.

Road and river access is conveniently located within some parts of this area.

Mature forests and older stands in various stages of climax canopy development and decline dominate habitat conditions provided by this prescription. Wildlife responsive to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as yellow-throated warbler and red-eyed vireo as well as species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Density of open roads and/or motorized vehicle trails remains near the current level throughout the planning period, with only small increases and decreases.

Standards

7.E.1.-1 The scenic integrity objective is high for inventoried scenic classes 1 and moderate for inventoried scenic classes 2 through 5.

7.E.1.-2 These lands are unsuitable for timber production.

7.E.2. Dispersed Recreation Areas with Vegetation Management

61,938 acres (approximate)

Emphasis: These areas receive moderate to high recreational use and are managed to provide a variety of dispersed recreation opportunities, improve the settings for outdoor recreation, and enhance visitor experiences, in a manner that protects and restores the health, diversity, and productivity of the land. These areas provide a sustained yield of timber products; however, timber harvest methods used will be compatible with the recreational and aesthetic values of these suitable lands.

Desired Condition: Visitors may choose from a variety of high quality, well maintained dispersed recreational opportunities that may include, but are not limited to, horseback riding, hiking, hunting, fishing, mountain bike riding, OHVriding, and nature study. Maintain, improve, or expand trails to meet local demands without negatively affecting the local ecosystem. These areas absorb moderate to high levels of use while protecting air, soil, vegetation, and water resource conditions. The recreational opportunities are in roaded natural and rural settings. A flow of wood products is provided to local economies.

Forest management activities maintain the natural characteristics that make the area

popular. They include restoring native vegetative communities, creating permanent openings, establishing a pleasing mosaic of tree species of various densities and stem forms, feature flowering trees, character trees and shrub species, enhance fall color species, enhance both game and non-game wildlife habitat for viewing, photography and hunting, minimize impacts from insect and disease outbreaks and rehabilitate areas damaged by insects and disease. Pine stands are maintained at moderate to low densities (less than 100 square feet/acre basal area) to reduce susceptibility to southern pine beetle attack and promote understory development. Existing old fields and openings for wildlife may be present and maintained. Expansion of existing openings and linear strips or creation of new ones may occur to improve habitat conditions or views in the area. Native species are preferred but non-invasive, non-native species may be used when establishing food plants for wildlife. Over time, the oak/ hickory component of the piedmont forest increases, especially within trail and road corridors.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

In the mountains, Loblolly pine stands will be replaced over time with openings and native species including, woodlands or native forest types. Permanent openings, savanna to woodland conditions and oaks, hickories, shortleaf pine and pitch pine dominate locations previously occupied by loblolly pine.

An intermediate mix of forest successional stages characterizes these areas. Mid-and late-successional forests are common, but 4 to 10 percent of the forested land is in early-successional forest conditions. Fifty percent of the forest acres are in mid-to late successional forests conditions. Within this 50 percent, at least 20 percent are in late successional or old growth conditions

Provide for tree diversity for current and future production of hard and soft mast and den trees. In addition, existing patches dominated by mast producing hardwoods, or scattered hard and soft mast or fruit producers, will be retained across the stand to the extent compatible with achieving desired conditions of open pine forests.

Retain soft mast producing species (dogwood, black gum, hawthorn, grapes, serviceberry, etc.) during vegetative treatments to the extent compatible with meeting treatment objectives.

This prescription provides habitat conditions for wild turkey, white-tailed deer, gray squirrels and other small mammals, tanagers, whip-poor-wills and a variety of passerine birds.

Prescribed fire is used to reduce fuel buildup, mimic natural disturbance, maintain pleasing open park-like views, create and maintain wildlife and plant habitat, and maintain and restore desired communities such as woodland conditions.

Densities of open roads remain near current levels.

Standards

7.E.2.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic classes 2 through 5.

7.E.2.-2 These lands are suitable for timber production.

8.A.1. Mix of Successional Forest Habitats

41,544 acres (approximate)

Emphasis: This area provides habitat for plants and animals associated with mid- to late-successional forest habitats. Management activities are designed to: (1) maintain a minimum of 50 percent of the forested acres in mid- to late-successional habitat, (2) maintain or enhance hard and soft mast production, (3) increase vegetative diversity (structural and spatial), and (4) limit motorized access across the prescription area.

Desired Condition: A full range of wildlife habitats is provided with most of the forested stands in this prescription in mid- to late-successional forest conditions. Develop and maintain high capacities for hard mast production across the landscape. Create and maintain woodland/savannah habitats on suitable sites. Hunting and wildlife viewing are emphasized recreation opportunities. A flow of wood products is provided to local economies.

Forests 40+ years of age dominate the landscape, occupying 50 percent or more of the prescription area. These forested stands will be maintained in more open forest conditions than currently exists, with an emphasis on oak and hickory mast production on appropriate sites, i.e., oaks and hickories with large, well-developed crowns.

An intermediate mix of forest successional stages characterizes these areas. Mid-and late-successional forests are common, but 4 to 10 percent of the forested land is in early-successional forest conditions. Fifty percent of the forest acres are in mid-to late- successional forests conditions. Within this 50 percent, at least 20 percent are in late successional or old growth conditions. Additional areas will be maintained in open woodland, savanna habitat conditions.

On ridges, south and west facing slopes, and in pine, pine-oak, oak-pine or oak forest types, most of the stands in mid-to late-successional forest conditions will be maintained as moderately stocked, with a desirable level of 60 to100 square feet of basal area, and open crown conditions. Older trees will occur as individuals and inclusions in these stands to retain high canopy, late successional habitat characteristics.

Loblolly pine stands will be replaced over time with more native habitats including openings, woodlands, or native forest types. Permanent openings, savanna to woodland conditions and oaks, hickories, shortleaf pine and pitch pine dominate locations previously occupied by loblolly pine.

Sweetgum will be discouraged for future production of hard and soft mast and den trees. In addition, existing patches dominated by mast producing hardwoods, or scattered hard and soft mast or fruit producers, will be retained across the stand to the extent compatible with achieving desired conditions of open pine forests.

Soft mast producing species (dogwood, black gum, hawthorn, grapes, serviceberry, etc.) remains during vegetative treatments to the extent compatible with meeting treatment objectives

Habitats in this prescription are weighted towards mid-to late-successional forest conditions in a forested landscape that includes young forested stands, grass/shrubland openings and woodland/savanna conditions. Principal beneficiaries of this management approach would favor species such as pileated woodpecker, red-eyed vireo, and Eastern wood peewee. With the emphasis on hard mast, all species that consume acorns and hickory nuts (squirrels, turkey, deer, raccoon, black bear, etc.) would also benefit. Well developed crowns and multi-layered canopies within mature forest stands benefit most breeding forest-dwelling birds, i.e., black-and-white warbler *(Mniotilta yaria),* wood thrush *(Hylocichla mustrlina),* vireos, flycatchers, and northern flicker *(Colaptes auratus),* and are extremely important to a majority of neotropical migrants that pass through the Sumter in the spring and fall.

The compliment of early successional habitat in a landscape dominated by mature forest in this prescription is important to species such as prairie warbler, yellow-breasted chat, Bobwhite quail, Swainson's warbler, ruffed grouse, wild turkey, white-tailed deer, and a variety of small mammals. Existing old fields and openings for wildlife may be present and maintained. Existing openings and linear strips may be expanded, and/ or new openings may be present and maintained. Additional open, park-like woodland conditions may be developed to improve habitat conditions in the area. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife. Permanent forest openings, woodland, and savanna conditions with a well developed herbaceous layer, to a grass/shrub dominated area with

scattered trees will benefit several other species of wildlife. These species include Bachman's sparrow, American kestrel, red-tailed hawk, Cooper's hawk, eastern cottontail, fox, cotton mouse, eastern bluebird, and mourning dove.

Aquatic and riparian protection measures foundin Riparian Prescription 11 apply to this prescription.

Prescribed fire plays an important role in maintaining forest openings, woodland conditions, and many forested communities. Prescribed fire encourages oak sprouting and reduces competition from more shade tolerant species, creates conditions for developing an uneven canopy which stimulates shrubs as well as mid-story development and forage production, restores and maintains habitat for federally-endangered smooth coneflower, restores and maintains habitat for sensitive species such as Fraser's loosestrife and sun-facing coneflower. Prescribed fire may also be used to reduce fuel build up and the risk of wildfire.

Recreational opportunities in this area include, but are not limited to, driving for pleasure, day hiking, mountain biking, horseback riding, dispersed camping, backpacking, hunting, fishing, rock climbing, nature study, viewing, and photographing scenery. Trails through this area are well marked and may include features for visitors with special access needs, loop systems, and/or interpretive programs. Facilities within these areas may include portable or permanent toilets, trash receptacles, fire grills, signs, or vehicle barriers, but are generally rare and are only provided for health and sanitation or to protect the area from resource damage. The landscape character of the area appears natural.

The sights and sounds of other visitors and motorized vehicles may be present. The opportunity to encounter other visitors is high along roadways, at parking areas, pullouts, and overlooks, but may be moderate to low on trails away from congregated use areas. At points of highly developed recreational use, visitors take on low risk and are not challenged to rely on their own physical abilities and outdoor skills. Once away from the more developed areas, opportunities for solitude are available. In these more remote areas, visitors may take on some risk and be challenged to rely on their own personal physical abilities and primitive recreational skills. The recreational opportunities are in roaded natural and rural settings.

Open road densities may decrease over the planning period. Roads that are unneeded or are causing undesirable resource impacts may be closed.

Standards

8.A.1.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic class 2 and low for inventoried scenic classes 3 through 5.

8.A.1.-2 These lands are suitable for timber production.

8.B.2. Woodland and Grassland/ Savanna Habitats

8,320 acres (approximate)

Emphasis: This area emphasizes providing optimal to suitable habitat for a variety of upland game species and plant and animal populations associated with early successional habitats. Open park-like woodlands and savannas with herbaceous ground cover are found. Management activities are designed to (1) sustain a distribution of early successional habitat conditions interspersed throughout a forested landscape, (2) restore areas of native warm season grasses and maintain open, forb and grass-dominated groundcover, (3) optimize hard and soft mast production, and (4) control access to protect habitat when necessary.

Desired Condition: Create and maintain woodland habitats (very open forests with low tree densities) and grassland/savanna habitat. Improve, restore, and maintain habitats for fire-adapted communities and species.

Fire-adapted species are common in groundcover and the overstory.

Grassland and savanna to woodland conditions are common in small to large patches in this area and collectively dominate the landscape. Annual and perennial herbaceous plants dominate ground cover. Habitats for sun-loving species such as smooth coneflower, sun-facing coneflower, and others are improved and expanded to their natural extent.

Woodland conditions are characteristically found on areas that are frequently maintained with prescribed fire. Woodlands have relatively low tree densities of 25 to 60 percent forest cover. Young forests are likely to have higher densities. Trees in the overstory will vary in age, diameter, and species composition. Scattered clumps of mast producing hardwoods occur throughout. Shortleaf pine is desirable in places where littleleaf disease is not likely to adversely affect it.

A mix of forest successional stages characterizes these areas, with an emphasis on early-successional forests. Mid- and late-successional forests are common, but in stands not managed as woodland, grassland or savanna habitats 10 to 17 percent of the remaining forested land is in early-successional forest conditions. A flow of wood products is provided to local economies.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Prescribed fire is an essential feature of this management prescription. It creates, shapes, and maintains the desired herbaceous understory and the remaining overstory in upland stands. It limits the establishment of woody stems in the understory. Fire frequency is 1 to 3 years in the uplands.

The emphasis on developing and maintaining open forest woodland to savanna and grassland habitats with scattered trees produces ideal habitats for northern Bobwhite quail, cottontail rabbit, bluebird, turkey, deer, sparrows, rodents, raptors, and bats. The combination of open conditions on suitable sites, forested draws, and moist slopes not responsive to burning produce unique habitat conditions particularly suited for animals such as Indigo bunting, blue-grosbeak, orioles, American kestrel, fox, and mourning dove. Existing old fields and openings for wildlife may be present and maintained. Expansion of existing openings and linear strips or creation of new ones may occur to improve habitat conditions or views in the area. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife.

Sweetgum will be discouraged to provide additional diversity for current and future production of hard and soft mast and den trees. In addition, existing patches dominated by mast producing hardwoods, or scattered hard and soft mast or fruit producers, will be retained across the landscape to the extent compatible with achieving desired conditions of open pine forests.

Retain soft mast-producing species (dogwood, black gum, hawthorn, grapes, serviceberry, etc.) during vegetative treatments to the extent compatible with meeting treatment objectives.

The landscape character appears natural.These areas provide a variety of recreational opportunities, especially hunting. Hunting opportunities are some of the best available on the Sumter National Forest, most notably for upland game. Wildlife viewing opportunities are plentiful. The recreational opportunities are in roaded natural and rural settings.

Open road density may decrease over the planning period. Roads that are unneeded or are causing undesirable resource impacts are closed.

Standards

8.B.2.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic class 2 and low for inventoried scenic classes 3 through 5.

8.B.2.-2 OHVs are not permitted.

8.B.2.-3 These lands are suitable for timber production.

9.A.3. Watershed Restoration Areas

11,360 acres (approximate)

Emphasis: Management emphasis is on improving conditions where past land uses have degraded water quality or soil productivity. The long-term goal of these watersheds is to showcase restored and resilient watersheds where proper multiple use management practices are applied. When this goal is achieved, these watersheds are allocated to a different management prescription.

Desired Condition: These areas have experienced severe erosion in past years. Steep side slopes are allowed to continue healing. Areas with active erosion are restored with soil and water rehabilitation work to improve soil productivity and water quality.

Soil productivity and cover are satisfactory, and erosion is limited. Barren areas (galls) or actively eroding gullies and stream banks are stabilized or restored whenever possible. Some of the methods used to stabilize and restore these areas may involve intense ground disturbing activities with temporary to short-term effects. Exposed soil is seldom seen. The forested drains would remain essentially intact over time unless gully restoration activities require reshaping the land to stop unacceptable erosion.

Upland forest canopies are maintained at moderate to low densities to encourage a dense understory of shrubs, warm season grasses, and other herbaceous species. Over time there is an increased oak/hickory component. Permanent openings are retained and occupy 1 to 2 percent of the area. An intermediate mix of forest successional stages characterizes these areas. Mid- and late-successional forests are common, but 4 to 10 percent of the forested land is in early-successional forest conditions. Fifty percent of the forest is in mid- to late- successional forest conditions and within this 50 percent, at least 10 percent is in late successional or old growth conditions. Pine stands are maintained at moderate to low densities (less than 100 square feet/acre basal area) to reduce susceptibility to southern pine beetle attack and promote understory development. A flow of wood products is provided to local economies.

The emphasis of this prescription would create two distinct combinations of habitat conditions interlaced across the landscape. Most forest dwelling species are found in this prescription. The shrubby and herbaceous ground cover encourages eastern bluebird *(Sialia sialis)* red-bellied woodpecker *(Melanerpes carolinus)*, brown-headed nuthatch *(Sitta pusilla)* Carolina wren *(Thryothorus ludovicianus)*, eastern wild turkey *(Melearia gallopavo)*, white-tailed deer *(Odocoileus virginianus)*, and white-eyed vireo *(Vireo griseus)*. The closed canopy forested portions of this area support varying densities of red-eyed vireo, great crested flycatcher, pileated woodpecker, gray squirrel, a variety of migratory birds, and small mammals. As consistent with watershed protection goals, existing openings and linear strips may be expanded or new ones created to improve habitat conditions or views in the area. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Sweetgum is discouraged to provide for future production of hard and soft mast and den trees. In addition, existing patches dominated by mast producing hardwoods, or scattered hard and soft mast or fruit producers, are retained across the stand to the extent compatible with achieving desired conditions of open pine forests.

Soft mast producing species (dogwood, black gum, hawthorn, grapes, serviceberry, persimmon, etc.) are retained during vegetative treatments to the extent compatible with meeting treatment objectives

Prescribed fire is used to maintain PETS habitats.

Open road densities may decrease over the planning period. Roads that are unneeded or are causing undesirable resource impacts may be closed.

People use these areas for hunting or other dispersed recreational activities. Recreational opportunities in this area include, but are not limited to, driving for pleasure, day hiking, dispersed camping, backpacking, hunting, fishing, nature study, mountain biking, viewing and photographing scenery. The landscape character of the area appears natural.

The recreational opportunities are in roaded natural and rural settings.

Standards

9.A.3.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic classes 2 through 5.

9.A.3.-2 No new OHV routes.

9.A.3.-3 These lands are suitable for timber production.

9.F. Rare Communities

916 acres (approximate)

Emphasis: Rare communities are assemblages of plants and animals that occupy a small portion of the landscape, but contribute significantly to plant and animal diversity. They generally are limited in number of occurrences, are small in size, and have relatively discrete boundaries. Rare communities, wherever they occur on the Sumter, will be managed under this prescription to ensure their contribution to meeting goals for community diversity, endangered and threatened species recovery, and species viability. All known rare community sites are allocated to this prescription. As new rare community sites are found, they will be added to this prescription without Forest Plan amendment, unless such additions would result in large shifts in land allocation or expected benefits and outputs.

Desired Condition: Rare communities exhibit the composition, structure, and function necessary to support vigorous populations of species characteristic of the community, including relevant federally-listed threatened and endangered species, and species at risk of losing viability. Ecological disturbances are at the frequency and intensity needed to maintain desired composition, structure, and function. Generally, natural forces are sufficient to maintain these conditions; however, in some cases environmental factors have changed to the extent that natural processes are prevented or hindered from maintaining the community. In these cases management activities used to restore or maintain desired conditions, such as prescribed burning or vegetation management, may be evident.

Beyond restoration and maintenance activities, human-caused alteration of rare communities is not evident. Signs and barriers may limit recreational access where necessary to protect community integrity. Interpretive signs or other information may be made available where it is likely to promote public knowledge of rare communities and improve community protection.

These naturally evolving or natural-appearing communities are characterized by a variety of forested and nonforested communities, ranging from granitic domes, to table mountain pine woodlands and ephemeral wetlands. (See description of communities.) Old growth forest conditions will often develop within many of the communities in future years; however, some of the rare communities may require active restoration and maintenance using prescribed fire and/or mid-story removal.

This prescription area encompasses a wide variety of habitat conditions, from deep rich coves, to natural barrens and glades, to caves and rock cliffs. Wildlife and plants found in these areas are a combination of species commonly found across the forest (warblers, vireos,

squirrels, bats, etc.) and species that are almost always found in or near these specialized habitats (wood rat, coneflower, etc.). Existing old fields and wildlife openings are not maintained but are allowed to succeed to forest. In some cases, tree planting and elimination of non-native species may obliterate existing openings. New permanent wildlife openings are not created.

Aquatic and riparian protection measuresfound in Riparian Prescription 11 apply to this prescription.

Access is primarily by a non-motorized trail system. Interpretive signs or other information may be available to promote public knowledge of rare communities and improve community protection.The recreational opportunities are in roaded natural and rural settings. Motorized access is limited to existing roads and open road density is likely to decrease in the future. The landscape character of the area is natural evolving to natural appearing.

The following rare communities are covered by this prescription:

Wetland Communities

Appalachian Highlands Bogs, Fens, Seeps, and Ponds—These rare communities are characterized by 1) soils that are semi-permanently to permanently saturated as a result of groundwater seepage, perched water tables, rainfall, or beaver activity, but otherwise are generally nonalluvial, and 2) presence of wetland-associated species such as sphagnum, ferns, and sedges. Dominant vegetation may be herbs, shrubs, trees, or some complex of the three. Ponds in this group include lime sink, karst, and depression ponds, which may hold areas of shallow open water for significant portions of the year. Also included are some impoundments and associated wetlands resulting from beaver activity. Artificial impoundments are not included, unless they support significant populations or associations of species at risk. These communities may be found in both the Appalachian and piedmont regions. Primary management needs are protection from non-target management disturbance and resource impacts, particularly to local hydrology. Periodic vegetation management may be necessary to maintain desired herbaceous and/or shrubby composition at some sites. These communities include mafic and calcareous fens, sphagnum and shrub bogs, swamp forest-bog complexes, mountain ponds, seasonally dry sinkhole ponds, and beaver pond and wetland complexes as defined in the *Southern Appalachian Assessment* and rare associations within the following ecological groups defined by NatureServe (2001a):

458-15	Appalachian Highlands Wooded Depression Ponds
470-10	Appalachian Highlands Forested Bogs
470-20	Appalachian Highlands Forested Acid Seeps
475-10	Appalachian Highlands Acid Herbaceous Seeps
475-30	Appalachian and Interior Highlands Herbaceous Depression Ponds and Pondshores

Appalachian Highlands Riverine Vegetation—These rare communities are characterized by 1) sites adjacent to or within stream channels that are exposed to periodic flooding and scour, and 2) presence of significant populations or associations of species at risk. These communities may be found in both Appalachian and piedmont regions. Primary management needs are protection from disturbance during development of road crossings, and maintaining desirable in-stream flows. These communities include river gravel-cobble bars as defined in the *Southern Appalachian Assessment*, and the rare associations within the following ecological groups defined by NatureServe (2001a):

457-10	Appalachian Highlands Riverine Vegetation
457-30	Rocky Riverbeds
40-40	Appalachian Highlands Riverscour Vegetation

20-20 Appalachian Highlands Small Stream and Lower Slope Forest

420-xx Appalachian Highlands Large River Floodplain Forest

Forest Communities

Table Mountain Pine Forest and Woodland—This community is characterized by a dominant or significant component of table mountain pine (*Pinus pungens*) in the overstory often in combination with pitch pine (*Pinus rigida*). It is found in the Appalachian region. Primary management needs are maintaining and expanding existing occurrences, using thinning and prescribed fire. This community corresponds to table mountain pine/pitch pine woodlands as defined in the *Southern Appalachian Assessment*, and all associations within the following ecological group defined by NatureServe (2001a):

401-80 Appalachian Highlands Pitch and Table Mountain Pine Woodlands

Basic Mesic Forests—These communities are characterized by complex multi-storied canopies comprised of deciduous overstories and rich and diverse understories of calciphilic herbs, underlain by high-base geological substrates. On moderate to high elevation sites, these communities are typically found in protected coves, and can be distinguished from more acidic mesic cove forests by the abundance of species such as white basswood (*Tilia americana*), yellow buckeye (*Aesculus flava*), black walnut (*Juglans nigra*), faded trillium (*Trillium discolor*), sweet white trillium (*Trillium simile*), black cohosh (*Cimicifuga racemosa*), blue cohosh (*Caulophyllum thalictroides*), whorled horsebalm (*Collinsonia verticillata*), mock orange (*Philadelphus inodorus*), sweet shrub (*Calycanthus floridus*), sweet cicely (*Ozmorhiza* spp.), doll's eyes (*Actaea racemosa*), maidenhair fern (*Adiantum pedatum*), and plantain-leaved sedge (*Carex plantaginea*). Good examples of moderate and high elevation basic mesic forests have a low incidence of white pine (*Pinus strobus*), eastern hemlock (*Tsuga canadensis*), rhododendron (*Rhododendron* spp.), and Christmas fern (*Polystichum acrostichoides*). An oak-dominated variant of moderate to high elevation basic mesic forest occurs over limestone on upper to mid slopes of the Interior Plateau of Tennessee, the Cumberlands of Alabama, and the Ridge and Valley of Georgia. This basic mesic community is dominated or co dominated by shumard oak (*Quercus shumardii*) or chinquapin oak (*Quercus muehlenbergii*), in combination with various species of oaks and hickories and either sugar maple (*Acer saccharum*), chalk maple (*Acer leucoderme*), or southern sugar maple (*Acer barbatum*). Typical calciphilic understory species also are present. On lower elevation sites, these communities are more typically found on north slopes, where dominant and characteristic overstory species are American beech (*Fagus grandifolia*) and northern red oak (*Quercus rubra*), with tulip poplar (*Liriodendron tulipifera*), white oak (*Quercus alba*), shagbark hickory *(Carya ovata)*, or white ash *(Fraxinus americana)*, with southern sugar maple, chalk maple, painted buckeye (*Aesculus sylvatica*), and pawpaw (*Asimina triloba*) in the midstory and shrub layers, and understories that include faded trillium, nodding trillium (*Trillium rugelii*), black cohosh, doll's eyes, foam flower (*Tiarella cordifolia var. collina*), bloodroot (*Sanguinaria canadensis*), bellworts (*Uvularia sp.*) and trout lilies (*Erythronium spp.*). Good examples of low elevation basic mesic forests have a low incidence of sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), and non-natives such as Japanese honeysuckle (*Lonicera japonica*) or Chinese privet *(Lingustrum vulgare)*. Basic mesic forest communities are found in both the Appalachian and piedmont regions. Provisions of the rare community prescription apply only to prime examples of this community that support significant populations or associations of species of viability concern. Primary management needs are protection from non-target management disturbance. This community includes the

following associations defined by NatureServe (2001a, 2001b):

CEGL007711	Southern Appalachian Cove Forest (Rich Foothills Type),
CEGL007695	Southern Appalachian Cove Forest (Rich Montane Type),
CEGL008466	Basic Piedmont Mesic Mixed Hardwood Forest
CEGL004542	Piedmont Rocky Mesic Mafic Forest.

Cliffs and Rock Outcrops

Cliffs and Bluffs—Steep, rocky, sparsely vegetated slopes, usually above streams or rivers, characterize these communities. Cliff communities may be dry or wet, and include communities associated with waterfalls, such as spray cliffs and rock houses. These communities are found in the Appalachian region. Primary management needs are protection from management disturbance and maintenance of hydrology near wet cliffs. This community includes calcareous cliffs, mafic cliffs, sandstone cliffs, and spray cliffs as defined in the *Southern Appalachian Assessment*, and all associations within the following ecological groups as defined by NatureServe (2001a):

430-40	Eastern Dry Acid Cliffs
430-45	Eastern Moist Acid Cliffs
430-50	Eastern Dry Alkaline Cliffs

Rock Outcrops—Significant areas of exposed, usually smooth, exfoliating granite or related rocks, with scattered vegetation mats and abundant lichens characterize these communities. These communities are found in both the Appalachian and piedmont regions. Primary management needs are protection from nontarget management disturbance and recreational impacts. This community includes granitic dome and granitic flatrock as defined in the *Southern Appalachian Assessment*, and all associations within the following ecological groups defined by NatureServe (2001a):

435-10	Appalachian Highlands Granitic Domes
435-20	Appalachian Highlands Grantic Flatrock

Other Communities

Glades, Barrens, and Associated Woodlands—These communities are characterized by thin soils and exposed parent material that result in localized complexes of bare soil and rock, herbaceous and/or shrubby vegetation, and thin, often stunted woods. During wet periods, they may include scattered shallow pools or areas of seepage. They vary widely in species composition depending on the type of underlying parent material. They differ from rock outcrop communities by exhibiting some level of soil and vegetation over most of the site. Field delineations should include the entire complex of characteristic vegetation composition and structure. These communities may be found in both Appalachian and piedmont regions. Primary management needs are protection from nontarget management disturbance and recreational impacts. Periodic vegetation management, especially prescribed fire, may be necessary to maintain or restore desired herbaceous and/or shrubby composition. These communities include calcareous woodlands and glades, mafic woodlands and glades, serpentine woodlands and glades, and shale barrens as defined in the *Southern Appalachian Assessment*, and the rare associations within the following ecological groups as defined by NatureServe (2001a):

401-17	Appalachian Highlands Calcareous/Circumneutral Dry-Mesic Hardwood Forests and Woodlands
440-40	Appalachian Shale Glades and Barrens
80-80	Appalachian Mafic Igneous/ Metamorphic Glades and Barrens

12-12 Appalachian Highlands Xeric Hardpan Forests and Woodlands
12-13 Appalachian Highlands Dry Mesic Oak Forests and Woodlands
401-xx Appalachian Highlands Unstable Substrate Woodlands

Canebrakes—This community is characterized by almost monotypic stands of giant or switch cane (*Arundinaria gigantea*), usually with no or low densities of overstory tree canopy. It is typically found in bottomlands or stream terraces. Although cane is found commonly as an understory component on these sites, provisions of the Rare Community Prescription apply only to larger patches (generally greater than 0.25 acres) exhibiting high densities that result in nearly monotypic conditions, or to areas selected for restoration of such conditions. This community is found in the Appalachian, piedmont, and coastal plain regions. Primary management needs are restoration and maintenance through overstory reduction and periodic prescribed fire. Although several associations described by NatureServe (2001a, 2001b) include cane as a major component, this community most closely corresponds to:

CEGL003836 Floodplain Canebrake

Mines—This community is characterized by natural and human-made openings in the ground that extend beyond the zone of light, creating sites buffered in relation to the outside environment. Included are karst and sinkhole features that lead to such subterranean environments. Provisions of the Rare Community Prescription apply only to those sites supporting cave-associated species. This community is found in the Appalachian region. Primary management needs are protection from non-target management disturbance and recreational impacts, and maintaining quality of water flowing into underground streams.

Standards

9.F.-1 The scenic integrity objective is very high to high for inventoried scenic class 1 and high for inventoried scenic class 2 and moderate for scenic classes 3 through 5.

9.F.-2 Rare communities are protected from detrimental effects caused by management actions. An exception may be made for beaver ponds on a case-by-case basis where conflicts with aquatic PETS, trout or safety, health, and infrastructure (roads, buildings, culverts, developed sites) are known to occur. Management activities occur within rare communities only where maintenance or restoration of rare community composition, structure, or function is needed.

9.F.-3 Where recreational or other uses are negatively affecting rare communities, sites are modified to reduce or eliminate negative effects. New recreational developments are designed to avoid adverse effects to rare communities

9.F.-4 Management actions that may adversely alter the hydrologic conditions of wetland rare communities are prohibited. Such actions include construction of roads, plowed or bladed firelines, and impoundments in or near these communities. Exceptions are made for actions designed to control impacts caused by beavers, activities designed to manage water levels to expand or maintain wetland communities, or where needed to control fires to provide for public and employee safety and to protect private land resources.

9.F.-5 Introducing fish into wetland rare communities is prohibited. An exception may be made for beaver ponds on a case-by-case basis.

9.F.-6 New federal mineral leases will contain a no surface occupancy (NSO) stipulation.

9.F.-7 No mineral material operations are allowed.

9.F.-8 Non-native invasive species are controlled where they are causing adverse effects to rare communities. Non-native invasive species are not introduced in or near rare communities.

9.F.-9 In proximity to rich cove communities (basic mesic), limit the direct application of fire on north- and east-facing slopes, allowing low intensity fires only. Avoid the use of fire on these sites when conditions are droughty.

9.F.-10 These lands are unsuitable for timber production.

9.F.-11. OHVs, mountain bikes and horses are not permitted.

9.G.2 Restoration of Upland Oak-Hickory and Mixed Pine-Oak-Hickory Forests

43,080 acres (approximate)

Emphasis: Restore and maintain upland oak-hickory and mixed oak-hickory-pine forest.

Desired Condition: These areas contain primarily oak-hickory and oak-hickory-pine forests. Fire-maintained woodlands and savannas, and mixed mesophytic forests occur as a minor component of the landscape.

Short-term. Advanced oak and/or hickory regeneration occurs as seedlings or saplings in the understory of loblolly pine stands. Loblolly pine stands are manipulated to encourage oaks and hickory, yet suppress loblolly pine growth and regeneration. Stand densities are moderate to low (60 to 80 square feet/acre basal area) to encourage oak and hickory seedling development, to maintain larger crowns for mast production, to reduce susceptibility to southern pine beetle attack and to promote understory development. The trees will be larger and more widely spaced, and understory hardwoods will be more developed. In the short-term, oak and hickory may comprise a minor component of the forest composition, accompanied by loblolly pine, sweetgum, red maple, yellow poplar, and dogwood. An intermediate mix of forest successional stages characterizes these areas. Mid-and late-successional forests are common, but 4 to 10 percent of the forested land is in early-successional forest conditions. Fifty percent of the forest acres are in mid-to late-successional forests conditions and within this 50 percent, at least 20 percent are in late successional or old growth conditions. Where compatible with other multiple-use objectives, early-successional forest created by management actions is clustered on the landscape to maintain blocks of mid- and late- successional forest.

In the long-term, oaks, hickories, and pines dominate most sites. Sweetgum, red maple, and yellow poplar comprise a minor component.

Management activities in this prescription provide a flow of wood products to local economies.

This management approach would favor species such as pileated woodpecker, red-eyed vireo, and Eastern wood peewee. With the emphasis on hard mast, this approach will also favor all species that consume acorns and hickory nuts (squirrels, turkey, deer, raccoon, etc.). Well-developed crowns and multi-layered canopies within mature forest stands would be most beneficial to most breeding forest-dwelling birds, i.e., black-and-white warbler, wood thrush, vireos, flycatchers, and flicker. Existing openings and linear strips may be expanded or new ones created to improve habitat conditions or views in the area. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Prescribed fire will be used periodically to maintain or to restore the desired composition.

Density of open roads remains near the current level throughout the planning area.

The landscape character is generally natural appearing. The sights and sounds of human activities, especially motorized uses along main

travel corridors, are evident in many parts of these areas. Visitors frequently see other people in some parts of these areas. Motorized access is available to many places. Non-motorized trails are also available, and in some cases, motorized trails are available. Hunting and wildlife and plant viewing are common activities. The recreational opportunities are in roaded natural and rural settings.

Standards

9.G.2.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic class 2 and low for scenic classes 3 through 5.

9.G.2.-2 Only use site preparation methods that promote oak/hickory regeneration.

9.G.2.-3 These lands are suitable for timber production.

10.B. High Quality Forest Products (Piedmont Only)

139,528 acres (approximate)

Emphasis: This prescription is applied to lands capable of producing high quality, valuable sawtimber. Timber stand improvement and regeneration harvest methods that best provide for the growth and harvest of high quality, valuable sawtimber that is most in demand in the marketplace are applied. Opportunities are also provided for other high value forest products.

Desired Condition: Grow and sell saw log size timber (pine and hardwood) in a sustained manner on upland sites. Where opportunities exist, the oak and hickory component is expanded.

The predominant species are loblolly pine and mixtures of loblolly pine and hardwoods. Encourage mast-producing species as a component of pine stands. Shortleaf pine *(Pinus echinata)* is desirable in places where littleleaf disease is not likely to adversely affect it. Across the landscape one sees trees of various ages and sizes. Individual stands are likely to have somewhat uniform heights and diameters. As markets allow, pine stands are maintained at moderate densities (less than 100 square feet/acre basal area) to reduce susceptibility to southern pine beetle attack, and to encourage development of larger diameter trees. Pulpwood, fuelwood, and other low value forest products are produced to maintain moderate densities and as secondary products in sawtimber harvests.

A mix of forest successional stages characterizes these areas, with an emphasis on early-successional forests. Mid- and late-successional forests are common, but 10 to 17 percent of forested land is in early-successional forest conditions. Twenty percent of the forest is in mid-to late-successional forest conditions and within this 20 percent at least 10 percent is in late successional or old growth conditions. Relatively equal areas are in each 10-year age class. Where opportunities exist, the oak and hickory component is expanded. Additional open, park-like woodland conditions may be developed to improve habitat conditions in the area. Existing openings and linear strips may be expanded or new ones created to improve habitat conditions or views in the area. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife.

Sweetgum will be discriminated against in order to provide for additional tree diversity for current and future production of hard and soft mast and den trees. In addition, existing patches dominated by mast producing hardwoods, or scattered hard and soft mast or fruit producers, will be retained across the stand to the extent compatible with achieving desired conditions of open pine forests.

Soft mast producing species (dogwood, black gum, hawthorn, grapes, serviceberry, etc.) are retained during vegetative treatments to the extent compatible with meeting treatment objectives.

For wildlife, this prescription balances objectives for providing a range of habitat conditions. Animals that use a variety of habitats (white-tailed deer, wild turkey, gray squirrel, woodpeckers, and migrating neotropical birds) benefit and are found in high densities in this prescription. Species that prefer more mature forest conditions and species that prefer more grassland/shrubland habitats would also be found in noticeable numbers throughout this area.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.

Prescribed fire is likely to be used for fuel reduction, wildlife habitat objectives, and PETS habitat improvement in the uplands.

The landscape character generally appears natural. The recreational opportunities are in roaded natural and rural settings. These areas are very accessible and provide a variety of recreational opportunities, foremost of which is hunting.

Density of open roads remains near the current level throughout the planning period, with only small increases and decreases. Additional roads may be needed to provide environmentally suitable access for management activities, but may be closed to public use.

Objectives

10.B-OBJ-1 Provide local economies with 47–74 MMCF of wood products annually.

Standards

10.B.-1 The scenic integrity objective is high for inventoried scenic class 1 and moderate for inventoried scenic class 2 and low for scenic classes 3 through 5.

10.B.-2 These lands are suitable for timber production.

11. Riparian Corridors

(62,524 acres embedded in adjoining prescriptions)

Emphasis: Riparian corridors will be managed to retain, restore and/or enhance the inherent ecological processes and functions of the associated aquatic, riparian, and upland components within the corridor.

Desired Conditions for the Riparian Corridor: Riparian corridors reflect the physical structure, biological components, and ecological processes that sustain aquatic, riparian, and associated upland functions and values.

Primarily, natural processes (floods, erosion, seasonal water table fluctuations, etc.) will modify most of the areas within the riparian corridor. However, management activities may be used to provide terrestrial or aquatic habitat improvement, favor recovery of native vegetation, control insect infestation and disease, comply with legal requirements (e.g., Endangered Species Act, Clean Water Act), provide for recreation and public safety, and meet other riparian functions and values. (See Appendix C for a graphical representation of a Riparian Corridor and an operational definition of a riparian area.)

Riparian corridors occur along all defined perennial and intermittent stream channels that show signs of scour, and around natural ponds, lakeshores, wetlands, springs, and seeps. Portions of the corridor may extend into upland areas, especially within steep-sided stream valleys and headwater reaches. The riparian corridor management direction and these minimum distances (See Tables 3-9 and 3-10.) do not apply to constructed ponds, reservoirs, ditches, or terraces. For these areas, site-specific analysis will determine the appropriate protective measures.

Streams are in dynamic equilibrium; that is, stream systems normally function within natural ranges of flow, sediment movement, temperature,

and other variables. The geomorphic condition of some channels may reflect the process of long-term adjustment from historical watershed disturbances (e.g., past intensive farming practices within the piedmont). The combination of geomorphic and hydrologic processes creates a diverse physical environment, which, in turn, fosters biological diversity. The physical integrity of aquatic systems, stream banks and substrate, including shorelines and other components of habitat is intact and stable.

The natural range of in-stream flows is maintained to support channel function, aquatic biota and wildlife habitat, floodplain function, and aesthetic values.

Water quality remains within a range that ensures survival, growth, reproduction, and migration of aquatic and riparian-dependent species, and contributes to the biological, physical, and chemical integrity of aquatic ecosystems. Water quality meets or exceeds state and federal standards. Water quality (e.g., water temperatures, reducing sediment, dissolved oxygen, and pH) will be improved where necessary to benefit aquatic communities.

The soils of riparian corridors have an organic layer (including litter, duff, and/or humus) of sufficient depth and composition to maintain the natural infiltration capacity, moisture regime, and productivity of the soil (recognizing that floods may periodically sweep some areas within the floodplain of soil and vegetation). Exposed mineral soil and soil compaction from human activity may be present but are dispersed and do not impair the productivity and fertility of the soil. Any human-caused disturbances or modifications that cause environmental degradation through concentrated runoff, soil erosion, or sediment transport to the channel or water body are promptly rehabilitated or mitigated to reduce or eliminate impacts.

Floodplains properly function as detention/ retention storage areas for floodwaters, sources of organic matter to the water column, and habitat for aquatic and riparian-dependent species. Modification of the floodplain is infrequent but may be undertaken to protect human life and property or to meet other appropriate management goals (e.g., restoration). There may be evidence of some roads, trails, and recreational developments. Some wetland habitats may show signs of restoration.

Silvicultural treatments including timber and vegetation removal may occur to restore and/or enhance riparian resources such as soil, water, wildlife and natural communities. Prescribed fire can be used within the corridor to create or maintain the composition and vitality of fire-dependent vegetative communities (e.g., canebrakes). Low intensity fire may occur when streams are used as natural firebreaks in association with landscape-level burning.

Vegetative communities within the riparian corridor are diverse and productive, providing for a rich variety of organisms and habitat types. The vegetative community within the riparian corridor is predominantly forested; however, some natural non-forested habitats such as wet meadows, grasses or shrub dominated plant communities may occur. Many canebrake communities may be restored. Existing old fields and openings for wildlife may be present and maintained. Native species are preferred but non-invasive non-native species may be used when establishing food plants for wildlife. Some agricultural plantings of non-invasive non-natives may occur to augment stopover and wintering habitat for migratory species.

The forest contains multiple canopy layers, which provide a variety of habitat niches, and thermal and protective cover for wildlife. Snags used by birds, bats, and small animals are abundant. Dying and down trees are common, often in natural patches. Suitable habitat is provided in riparian areas, and where applicable in the associated uplands, for riparian-dependent flora and fauna; including migratory species. High canopy species such as red-eyed vireo and yellow-throated warbler as well as species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities. Species associated with habitat conditions found in riparian areas and wetland habitats, (i.e., Acadian flycatcher

(Epidonax viresens), parula *(Parula Americana)* Louisiana waterthrush *(Seiurus motacilla)*, prothonotary warbler *(Protonotaria chrea)*, wood duck *(Aix sponsa)*, egrets and great blue heron *(Aroea herodias)* could potentially be found in high densities in localized areas.

Trees within the corridors are managed to provide sufficient amounts and sizes of woody debris to maintain habitat complexity and diversity for aquatic and riparian-dependent species. Recruitment of woody debris typically occurs naturally; however, woody debris may be purposefully introduced to enhance aquatic and terrestrial habitat. Both in-stream and terrestrial woody debris are regarded as essential and generally left undisturbed.

The biological integrity of aquatic communities is maintained, restored or enhanced. Aquatic species distributions are maintained or expanded into previously occupied habitat. The amount, distribution and characteristics of aquatic habitat for all life stages are present to maintain populations of indigenous and desired nonnative species. Habitat conditions contribute to the recovery of species under the Endangered Species Act. Species composition, distribution and relative abundance in managed habitats are comparable to that of natural habitats of the same region or reference stream. Streams and water bodies are periodically inventoried and monitored on a sample basis to characterize larger scale conditions or trends. Streams and water bodies are protected from adverse effects and managed to restore native species as appropriate. Management activities are allowed to restore, enhance, and manage aquatic communities of native and demand species. Management activities will be coordinated with the South Carolina Department of Natural Resources.

Perennial and intermittent streams are managed in a manner that emphasizes and recruits large woody debris. The desired condition is approximately 200 pieces of large woody debris (LWD) per stream mile.

The landscape character is naturally evolving or natural appearing, but occasional enclaves of a rural landscape character may occur with pastoral settings and recreational developments (such as a swim beach at a campground). However, due to the high value that these areas have for many uses, evidence of human activity (developed recreation areas, roads and trails, dams and reservoirs, and pastoral areas) may be present.

The recreational opportunities are in roaded natural and rural settings. Both dispersed and developed recreational opportunities may be present within these corridors. Hiking, nature viewing, camping, canoeing, hunting, and fishing are activities available within the corridor. Visitors may encounter developed camping areas, boat launches, and fishing piers. Current recreation areas and facilities are maintained or upgraded to minimize impacts on stream banks, shorelines, and water quality. Environmental education and interpretation about the aquatic component and riparian corridor may be provided to increase awareness of the value of riparian dependent resources.

Density of open roads and/or motorized trails may decrease over time as roads and/or trails that are unneeded or are causing undesirable resource impacts are closed.

Determination of Riparian Corridors

Due to their spatial extent, riparian corridors are not identified on the Forest Plan map of prescription allocations.

Riparian corridor widths are designed to encompass the riparian area when defined on the basis of soils, vegetation and hydrology as described in Appendix C, and the ecological functions and values associated with the riparian area to include distinctive landscape features such as alluvial terraces, floodplains, bottomland hardwoods, and wetlands.

For project planning and implementation, the following process will be used to determine the extent of site-specific riparian corridors:

The widths in Tables 3-9 and3-10 shall be used to define the riparian corridor along streams, lakes and other water bodies if the corridor is not site-specifically determined as described below.

If a site-specific field investigation determines the need to vary the widths in Table3-9 and 2 to better address desired riparian, aquatic or resource health conditions, that width shall become the project level riparian corridor. This corridor ensures that riparian values and functions are maintained.

The slope-dependent riparian corridor widths are measured in on-the-ground surface feet perpendicular from the edge of the channel or bank (stream, water body, etc.) and extend out from each side of a stream.

For ponds, lakes, sloughs, and wetlands (including seeps or springs associated with wetlands) the measurement would start at the ordinary high water mark and go around the perimeter. For braided streams, the outermost braid will be used as the water's edge. Entrenched streams do not have banks along a floodplain and will typically be measured from the terrace along the bank. An interrupted stream (a watercourse that goes underground and then reappears) will be treated as if the stream were above ground. (An acceptable level of error for on-the-ground measurements of these widths is + 10 percent.) The riparian corridor includes human-created reservoirs, wildlife ponds, wetlands, and waterholes connected to or associated with natural water features. In addition, those areas not associated with natural water features, but support riparian-associated flora or fauna, will have a riparian corridor designation. The riparian corridor management direction does not apply to constructed ponds developed for recreational uses; or to human-made ditches, gullies, or other features that are maintained or in the process of restoration. For these areas, site-specific analysis will determine appropriate protective measures.

Relationship with Ephemeral Streams

Ephemeral streams do not have riparian areas, but are hydrologically connected to perennial and intermittent streams downstream. They flow only in direct response to precipitation, normally lack defined channels and are above the water table. Some ephemeral streams exhibit evidence of scouring from storm events.

Standards for the Ephemeral Stream Zone are found in Chapter 2, Forest-wide Standards, of this Forest Plan.

Objectives

11-OBJ-1 Improve structural diversity and composition within the riparian corridor on 2,000 acres on the piedmont as canebrake habitat restoration.

11-OBJ-2 Restore and enhance stream habitat and aquatic communities in 50 miles of streams. This includes woody debris, stream bank stabilization, brook trout restoration, and in stream habitat improvement.

Relationship with Other Management Prescriptions

The riparian corridors overlap with other management prescription allocations. In order to establish precedence, the following rules apply.

- Where the riparian corridor management prescription area overlaps with lands that have been allocated to Management Prescriptions 1A/1B—Wilderness and Recommended Wilderness, 2A—Existing Wild/Scenic/Recreational Rivers, 4D and 4F—Special Areas, and 9F—Rare Communities; then whichever management direction is the most restrictive will apply.

- For lands allocated to any of the other management prescriptions, where the riparian corridor overlaps with these allocations, the direction in the Riparian Corridor Management Prescription will take precedence.

Standards

11.-1 The scenic integrity objective is high for inventoried scenic classes 1 through 5.

11.-2 The removal of large woody debris (pieces greater than 4 feet long and 4 inches in diameter on the small end) is allowed if it poses a risk to water quality, degrades habitat for riparian-dependent species, for recreational access, or when it poses a threat to private property or National Forest infrastructures (i.e., culverts, bridges). The need for removal must be determined on a case-by-case basis. Except in unusual circumstances, woody debris embedded within the channel materials will not be removed.

11.-3 Stocking of new nonnative species and stocking of previously unstocked areas is discouraged where it will adversely impact native aquatic species or communities. Before any stocking, coordinate with South Carolina Department of Natural Resources to ensure that populations and habitats of native species are maintained.

11.-4 Existing wildlife openings are allowed within the riparian corridor. However, wildlife openings identified as causing environmental degradation through concentrated runoff, soil erosion, sediment transport to the channel or water body, loss of thermal shading, stream bank support and aquatic or riparian habitats will be mitigated or closed and restored. New wildlife openings within the riparian corridor are permitted where needed to provide habitat for migratory or riparian-dependent species.

11.-5 New non-motorized trail construction is allowed to improve existing trail configuration and to improve access to specific locations along streams, lakes, and the riparian corridor.

11.-6 New motorized trails are prohibited within the riparian corridor except at designated crossings or where the trail location requires some encroachment, for example, to accommodate steep terrain.

11.-7 Motorized and non-motorized trail reconstruction and relocation within the riparian corridor are allowed to reduce impacts to riparian and aquatic resources.

11.-8 New stream crossings will be evaluated and where necessary constructed so that they do not adversely impact the passage of aquatic organisms. Exceptions may be allowed to prevent the upstream migration of undesired species.

11.-9 Alternative locations must be considered for all new facilities. Where none exist, potential impacts must be minimized or mitigated to moderate the severity of those impacts.

11.-10 Camping trailers and vehicles are not allowed within 100 feet of perennial streams, lakes or other water bodies, except at designated areas.

11.-11 Tethering or corralling of horses or other livestock is not allowed within 100 feet of stream courses or lakes.

11.-12 New federal mineral leases will contain a no surface occupancy stipulation or controlled-surface-use stipulation for the riparian corridor.

11.-13 Federal mineral material (36 CFR 228(c)) authorizations are only allowed to restore riparian areas and aquatic habitat, control erosion and sedimentation, and repair flood damage.

11.-14 Gold panning and other related activities are only authorized where they do not adversely affect stream channel stability, substrate, aquatic species, or their habitats.

11.-15 Commercial collection of botanical products will not be allowed in the riparian corridor if it would adversely affect the functions and values of the riparian area.

11.-16 Tree removals may only take place if needed to enhance the recovery of the health, diversity and/or complexity of vegetation, rehabilitate both natural and human-caused disturbances, provide habitat improvements for PETS or riparian-dependent species, suppress pest insect populations, reduce hazardous fuel buildup, provide for visitor safety, and for approved facility construction/renovation.

11.-17 Permitted firewood cutting within the riparian corridor must take into consideration the large woody debris requirements.

11.-18 Alternative measures for insect and disease control will be determined on the basis of risk to adjacent resources, long-term sustainability, and appropriate needs for the function and condition of the riparian area.

11.-19 Except for wildfire or escaped prescribed fire, construction of firelines with heavy mechanized equipment (e.g., bulldozers) in wetlands or riparian corridors is prohibited.

11.-20 Except for wildfire or escaped prescribed fire, hand lines will be used for fire line construction and water diversions will be used to deter sediments from streams. Fire lines are not constructed in stream channels, but streams may be used as firelines.

11.-21 Where risks of resource damage are high, each road segment will be constructed and stabilized before starting another segment. High-risk areas include landslide prone areas such as certain colluvial slopes, steep slopes and highly erosive soils. High-risk streams include streams containing sensitive aquatic species such as trout and mussels, or any threatened or endangered species, Wild and Scenic Rivers, Outstanding Resource Waters, those listed with sediment, turbidity or aquatic habitat problems on state 303d or 305b water quality reports.

11.-22 To minimize the length of streamside disturbance, ensure that approach sections are aligned with the stream channel at as near a right angle as possible. Locate riparian corridor crossings to minimize the amount of fill material needed and minimize channel impacts.

11.-23 If culverts are removed, stream banks and channels must be restored to a natural size and shape. All disturbed soil must be removed from the active channel and floodplain, and stabilized.

11.-24 These lands are unsuitable for timber production.

12.A. Remote Backcountry Recreation—Few Open Roads

Andrew Pickens Ranger District, 4,929 acres (approximate)

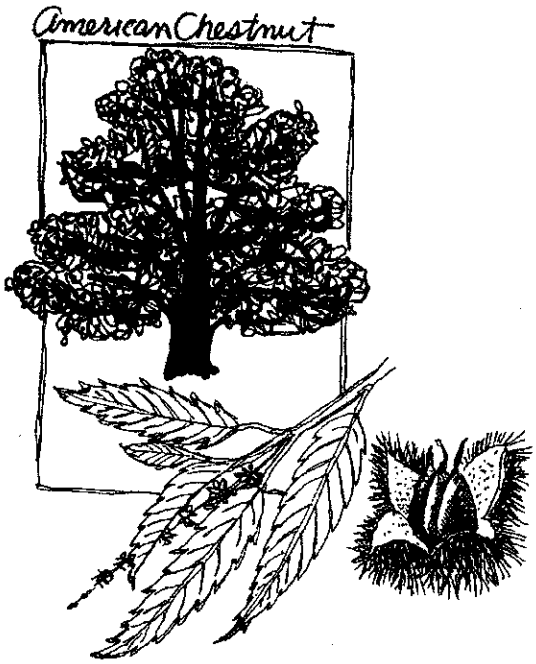
Emphasis: These lands are managed to provide users with a degree of solitude and a semi-primitive experience in large remote areas that still allow the use of limited public motorized access on existing, open motorized roads. Areas will be 2,500 acres or greater in size unless adjacent to a prescription that also provides a semi-primitive experience (1.A., 1.B., 4.A., 6.A., 12.B., 12.C., etc.).

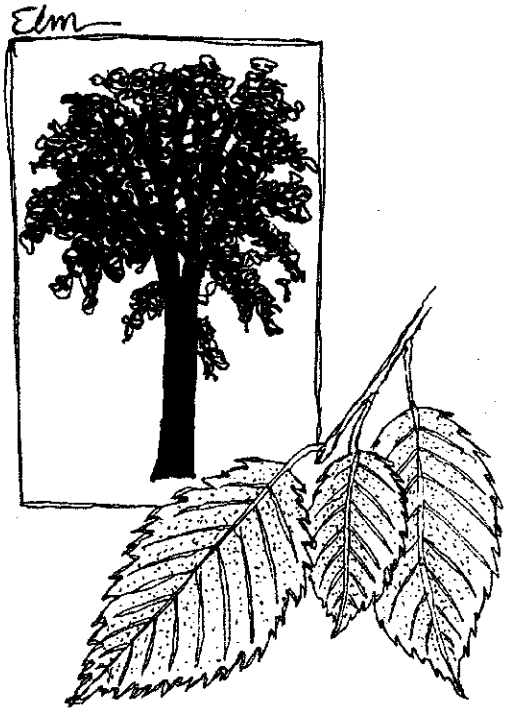
Desired Condition: Provide users with solitude and a semi-primitive experience in large remote areas. These areas provide large tracts of backcountry recreational opportunities with a semi-primitive non-motorized emphasis that allows some existing vehicular access. Human activities may be evident in some places. Visitors occasionally see other people especially near the few open roads in these areas. A non-motorized trail system provides the predominant means of access. Closed roads are available for non-motorized uses. Outdoor skills are important for visitors in the more remote portions of these areas. Hiking, horseback riding, mountain biking, backpacking, dispersed camping, hunting, and fishing are typical activities available in this area.

The landscape character appears natural with ecological processes, rather than management activities, being the primary forces shaping the landscape. Vegetative management activities, including prescribed fire, are for the purposes of threatened, endangered, sensitive and locally rare species habitat improvements; forest health considerations; to restore native vegetative communities; and to restore riparian ecosystems. Older forest communities predominate and increase over time

Habitat conditions provided though this prescription are dominated by climax canopy development and decline. Wildlife that responds to large diameter standing snags and living den trees (raccoon, barred owl, great-crested flycatcher, chickadee, etc.) would be expected here in high densities if adequate food supplies were available. High canopy species such as red-eyed vireo and species that use mid-story and well developed shrub layers in understory (thrushes, ovenbird, etc.) would also be expected in high densities. The limited supply of open shrubland habitats (openings, rights-of way, road corridors) would provide foraging habitat for some species (black and white warbler, towhee, cardinal, etc.) in portions of this prescription.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this prescription.





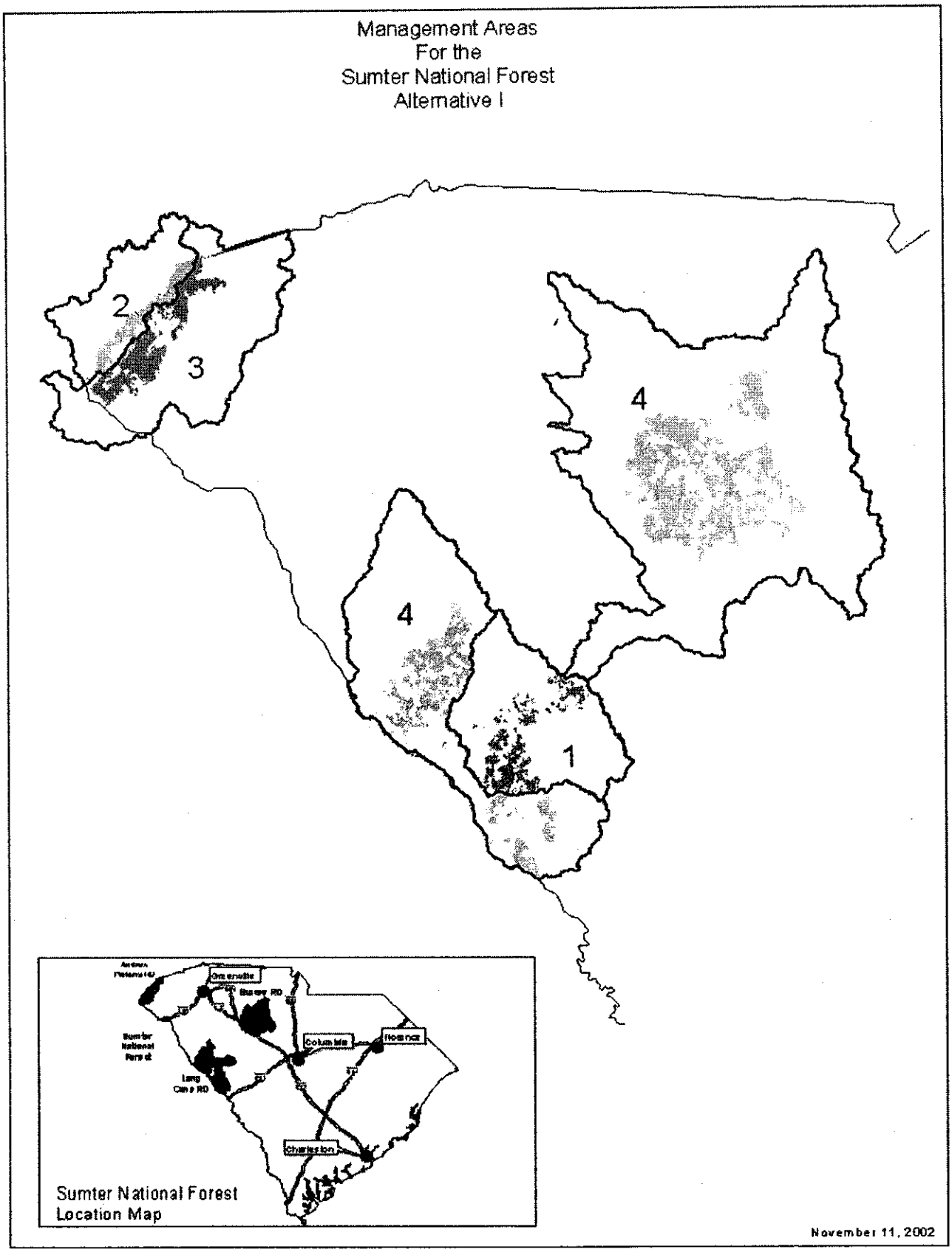
Standards

12.A.-1 The scenic integrity objective is high for inventoried scenic classes 1 through 5.

12.A.-2 New road and motorized trail construction is prohibited, subject to valid existing rights or leases.

12.A.-3 New federal mineral leases will contain a no surface occupancy stipulation or controlled surface use stipulation.

12.A.-4 These lands are unsuitable for timber production.


Management Areas
For the
Sumter National Forest
Alternative I
2
3
4
4
1
Columbia
Charleston
Sumter National Forest
Location Map
November 11, 2002

Chapter 4
Management Areas

Management Areas are assigned on all acres of the Sumter. There are two types of management areas. One type will have unique management direction that is not covered in either forest-wide goals, objectives, standards, or management prescription desired conditions, objectives and standards. These management areas will be based on watersheds and are described below as Turkey Creek and Upper Stevens Creek Management Area and Chattooga River Management Area.

The second type of management area contains no unique direction. The direction is already available in the Forest Plan. These management areas are presented here to provide a "sense of place" as well as to present additional information related to objectives and management prescription allocations.These management arears are defined on the remaining forest acres outside the Turkey Creek and Upper Stevens Creek Management Area and Chattooga River Management Area. They are described below as Blue Ridge Mountains and Foothills Management Area (Andrew Pickens District) and the Piedmont Management Area (Enoree and Long Cane Districts).

Management Area 1—Turkey Creek and Upper Stevens Creek, Long Cane Ranger District

Existing Conditions

This 41,653-acre management area includes Turkey Creek and Upper Stevens Creek watershed areas above the confluence of Turkey and Stevens Creeks. This area contains approximately 238.4 miles of moderate to large perennial streams, all classified as freshwater by the state. Turkey and Upper Stevens Creek watersheds contain critical habitat for the federally-endangered Carolina Heelsplitter, (*Lasmigona decorata)*. Occurring along with the Carolina heelsplitter is the brook floater (*Alasmidonta varicosa*), a sensitive species. According to several state and federal authorities, the Stevens Creek/Turkey Creek watershed is "...one of the most biologically diverse aquatic systems in all of South Carolina and appears to be the most biologically significant tributary of the entire Savannah River Basin in North Carolina, South Carolina, and Georgia." (Alderman, 1998) The Nature Conservancy has identified Stevens Creek watershed as one of national significance for conservation of aquatic biodiversity (Master, et al, 1998). It ranks in the top 15 percent of the entire nation's watersheds for its significance in biodiversity.

The management area is underlain by several complex sequences of crystalline, mixed acid, micaceous rocks and Carolina slates. Soils surfaces are generally thin with sandy clay loam surfaces. Carolina slate surfaces consist of silt loams and subsurfaces consist of silty clay loams. Annual precipitation averages about 45 inches of which 17 inches is water yield. Vegetation is primarily loblolly pine *(Pinus taeda)*. Secondary vegetation includes red oak *(Quercus falcata)*, white oak (*Quercus alba*), hickory *(Carya spp.)*, sweetgum (*Liquidambar styraciflua*), yellow polar (*Liriodendron tulipifera*), water oak (*Quercus nigra*), willow oak (*Quercus phellos*), river birch (*Betula nigra*), sycamore *(Platanus occidentalis)*, cottonwood *(Populus deltoides)*, elm *(Mlmus spp.)*, ash (*Fraxinus sp.*), and red maple (*Acer rubrum*). Some areas contain invasive non-native species such as kudzu *(Pueraria lobata)*, privet *(Ligustrum spp.)*, autumn olive *(Elaeagnus*

4

umbellate), and Chinese wisteria *(Wisteria sinenis).*

Turkey Creek was evaluated by outside agencies and found to have elevated levels of suspended solids and turbidity resulting from agricultural activities, with fecal coliform, dissolved oxygen and phosphorus levels also problematic for some sections. Upper Stevens Creek is listed in the Nonpoint Source Management Program as needing water quality and macroinvertebrate community improvement, with Cuffytown and Hard Labor Creeks also mentioned for elevated turbidity and suspended solids. About 3 percent is urban land, 83 percent forested land, and 14 percent agricultural land. National Forest land comprises 15 percent of the Turkey Creek and 9 percent of Upper Stevens Creek watersheds.

Municipal water uses in the vicinity include McCormick, SC, from Lake Thurmond and North Augusta, SC, and Edgefield County from the Savannah River. Due to the size of the Savannah River, the amount of private land involved and distance from both the Long Cane and Andrew Pickens Ranger Districts, forest management activities have little or no influence on these public water sources.

A variety of wildlife species occur within the area including Bachman's sparrow (*Aimophila aestivalis*), brown-headed nuthatch (*Sitta pusilla*), white tail deer (*Odocoileus virginianus*), quail (*Colinus virginianus*), Webster's salamander (*Plethodon websteri*) and red fox (*Vulpes fulva*). A diversity of significant plant life occurs in this area: faded trillium (*Trillium discolor*), Oglethorpe oak (*Quercus oglethorpensis*), Shoal's spider lily (*Hymenocallis coronaria*), and others. The fire maintained woodland/savanna habitat, known for its 300-year-old post oak trees located near Little Mountain Creek in the northern portion of this management area also is significant.

This area also contains one of the original wild turkey releases and turkey management sites in the state of South Carolina.

Desired Conditions

Habitat for Carolina heelsplitter (*Lasmigona decorata*) is maintained or improved, and populations are increasing toward recovery. The movement of aquatic species is unhindered by migration barriers. Habitats for the diversity of freshwater mussels and other aquatic sensitive species are stable or increasing. The dominant land use is forestry. This low frequency use pattern is the best land cover to conserve most Atlantic slope freshwater mussels, reptiles, and amphibians. Mid- and late- successional forests dominate this management area; however, some scattered early successional habitat is evident. In the long-term, pines, oak, and hickory dominate most of the sites.

There are a variety of high-quality well maintained developed and dispersed recreational opportunities including camping, shooting ranges, day hiking, mountain biking, canoeing and kayaking, fishing, hunting, dispersed camping and nature study. Visitors frequently see other people in parts of the management area. Outdoor skills are of moderate importance. The recreational opportunities are in roaded natural and rural settings.

Old growth communities, especially mixed mesophytic forests, dry-mesic oak forests, and dry-mesic oak-pine and pine-oak forests, are found along the riparian corridors within this management area. Small or medium-sized patches of dry-xeric pine and oak old growth woodlands and savannas, and dry-mesic oak forests, are scattered throughout. In the short-term, the results of loblolly pine removal may be observed as old growth communities more native to the area are restored.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this management area.

Wooded riparian corridors are maintained to prevent stream isolation; to provide large woody debris, stream bank stability and morphology, allochthonous material, stable microclimate (including stream temperature); and to control sedimentation, erosion, and toxic material

movement. Mature hardwoods dominate the historic floodplain of the creeks within these riparian corridors in the long-term, and advanced oak and/or hickory regeneration occurs as seedlings or saplings in the pine understories. Some natural non-forested habitats such as wet meadows, grasses or shrub dominated plant communities may occur. Vegetative communities within the riparian corridor are diverse and productive, providing a rich variety of organisms and habitat types.

Due to the heavily mixed ownership pattern, addressing water quality and aquatic habitat concerns will require cooperating with private landowners and conservation agencies.

The acres of management prescription allocations are displayed in Table 4-1.

Table 4-1. Management Prescription Allocations for Management Area 1

Management Prescription	Description	Acres
4D	Botanical/Zoological Areas	1,415
5C	Designated Utility Corridors	412
7D	Concentrated Recreation Zones	32
9F	Rare Communities*	6
9G2	Restoration of Upland Oak-Hickory and Mixed Pine-Oak-Hickory Forests	13,537
10B	High Quality Forest Products	26,403
11	Riparian Corridors**	-----
Total		41,804

* An increase in rare communities is predicted as a result of more site-specific inventories.

** Approximately 4,588 acres are embedded in adjoining prescriptions.

Management Area Standards

MA 1-1 Create a secondary zone from the established riparian corridor to include 200 feet on either side of perennial streams and 100 feet on either side of intermittent streams.

MA 1-2 In the secondary zone maintain an average of 70 percent canopy cover, and allow only natural regeneration can occur, unless hardwood planting is necessary to achieve the desired future condition (or no artificial regeneration of pine is allowed).

MA 1-3 No cutting within the natural floodplain except, as a last resort, for the control of pest.

MA 1-4 No new roads are built within the secondary zone as defined in MA1-1 except where needed to cross streams.

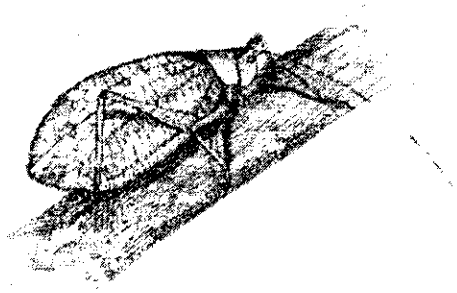
MA 1-5 Commercial mining permits contain no surface occupancy or controlled surface use stipulations.

MA 1-6 No new OHV trails are allowed.

MA 1-7 Within 50 feet of sites known to support Webster's salamander, maintain canopy cover and ground litter. Low intensity fires are allowed within these areas.

MA 1-8 No motorized boats or craft are allowed on Turkey or Stevens Creeks.

MA 1-9 No road construction is allowed in the Turkey/Stevens Creek Botanical Area (4D).



Management Area 2—Chattooga River

Existing Conditions

This 180,000-acre watershed includes the 122,192-acre management area comprised of public lands in National Forest management located within the Blue Ridge Mountains and upper piedmont of Georgia, South Carolina, and North Carolina.The Chattahoochee-Oconee National Forests in Georgia, Nantahala National Forest in North Carolina and the Sumter National Forest in South Carolina share management of the watershed, with the Sumter National Forest in charge of administering the river uses associated with the Chattooga Wild and Scenic River Corridor.

The dominant forest types in upland areas are Virginia and shortleaf pine (*Pinus virginiana and P. echinata*) and chestnut and scarlet oak (*Quercus prinus and Q. coccinea*) species, while eastern hemlock (*Tsuga canadensis*), yellow poplar (*Liriodendron tulipfera*) and white pine (*P. strobus*) often dominate moist areas as coves and streamsides with dense understories of rhododendron (*Rhododendron sp.*) and mountain laurel (*Kalmia latifolia*) (Van Lear et al., 1995).

Rainfall is well distributed throughout the year. The 50-year annual precipitation averages from 167 cm at the Long Creek, South Carolina, site in the lower portion of the watershed to 216 cm at the Highlands, North Carolina, rain gauge near the headwaters (NOAA, 1999). About ½ of the rainfall is returned to streamflow as water yield. Elevation ranges from about 300 m to 1,500 m.

The primary rock types include graywacke, mica schist, amphibolite, aluminous schist, granite, mica gneiss, gneiss, and granite gneiss. The rock types are highly weathered, increasing their erodibility. The primary soil types are Evard and Brevard series with Toccoa soil series in the floodplains. Most of the perennial and intermittent streams are entrenched to moderately entrenched, with low to high width to depth ratios.

A variety of wildlife can be found in the watershed including black bear (*Ursus americanus*), white tail deer (*Odocoileus virginianus*), red squirrel, black-throated green warbler, star-nosed mole, Eastern small-footed bat (*Myotis leibii*), and ruffed grouse (*Bonasa umbellus*). Fish species include rainbow, brown and brook trout, as well as a diverse cool water fish community, including darters, shiners, madtoms and chubs. The sensitive Oconee stream crayfish (*Cambarus chaugaensis*) and the sensitive brook floater (*Alasmidonta varicosa*) are present.

Water quality is a special concern for suspended sediment and/or fecal coliform on some Chattooga River tributaries resulting in streams being water quality impaired or on the watch list. Impaired streams are because of excessive sedimentation, aquatic biological community or habitat impairment or poor biological community rating. Watch list streams show signs of impact and may need added protection from sedimentation and increased monitoring of point and non-point source pollutants. This management area includes the following impaired (I) and watch list (W) streams: sections of Stekoa Creek (I) including tributaries Scott Creek (I), Pool Creek (I), Chechero Creek (I), Saddle Gap Creek (I) and Cutting Bone Creek (W); Warwoman Creek (I) including Morsingills (I), Goldmine Creeks (I), Martin/Finney (W), and Tuckaluge (W); West Fork Chattooga River including tributaries Law Ground (I), Laurel (I), Clear (I), Reed Mill (I), and Big Creeks (W); and various tributaries of North Fork Chattooga River including Ammons Branch (I), Norton Mill (I), and Fowler Creeks (I), Scottsman Branch (W), East Fork Chattooga River (W), Ridley Creek (W), Hedden Creek (W) and King Creek (W) and middle to lower Chattooga River tributaries including Whetstone Creek (I); Adline Creek (I), Fall Creek (I), Pole Creek (I), Licklog Creek (I), Reedy Creek (I), Buckeye Branch (W), Long Creek (I), and Camp Creek (W). Fecal coliform levels within Stekoa

Creek often exceed swimming standards by several orders of magnitude during storm events and remain an intermittent problem even during non-storm periods. Many of the tributary areas have temporary elevation of fecal coliforms during storm events, but typically these levels decline to safe levels during non-storm periods.

The states and EPA are currently working on Best Management Practices (BMP) to help reduce impacts. The Chattooga River Ecosystem Demonstration Project (1993-1995) and the Chattooga River Large Scale Watershed Project increased the information known about the watershed and help to focus resources toward improving conditions.

Congress designated 57 miles of the Chattooga River corridor as a component of the National Wild and Scenic River System on May 10, 1974. The headwaters of the river begin in North Carolina and continue downriver along the South Carolina and Georgia border. The river corridor and its immediate surroundings offer many recreational uses including boating, fishing, swimming, floating, hiking, horseback riding, and sightseeing in remote and occasionally in roaded settings. The river provides premier trout fishing opportunities for anglers across the Southeast. Recreational boating (including kayaking, canoeing, and rafting) has been a very popular use of the river and includes both guided and self-guided users. Water quality declines on some sections, especially below the confluence with Stekoa Creek or in relation to storm events in other ar

Desired Conditions

There are no longer any water quality impaired or watch list streams. Water quality concerns have diminished and excessive sediments, fecal coliform concentrations, and/or impacts to aquatic habitats have been removed.

Proactive measures are taken to help evaluate and prioritize pollutant sources and work with communities, agencies, neighbors, industry, developers, farmers, ranchers, and foresters on water quality issues within the watershed. Currently the means is through the efforts of various groups concerned about the Chattooga River water quality, state water and environmental agencies, EPA, Forest Service Large Scale Chattooga Watershed Project and NRCS personnel and programs. Efforts to develop partnerships and seek internal and external sources of funding to improve water quality will be undertaken.

Fecal coliform levels do not exceed water quality standards, even during storm events. Until standards can be met, official notice to river companies and private boaters will be made that health concerns during river uses and water contact sports are much higher than normal below Stekoa Creek and for most areas during heavy storm events. See Appendix E for water quality monitoring.

Outstandingly remarkable values and free-flowing conditions are not impaired by forest management actions.See Appendix E for monitoring of these values and conditions.

There are a variety of high-quality well maintained developed and dispersed recreational opportunities including camping, backpacking, day hiking, horseback riding, fishing (warm, cool and cold waters), hunting, dispersed camping, photography and nature study. Visitors frequently see other people in some parts of the management area in other parts the area people are rarely seen. The recreational opportunities include the full range from the most primitive in Ellicott Rock Wilderness to more developed in roaded natural and rural settings and therefore outdoor skills are of moderate importance in some parts and very important in others. The Chattooga River is a popular place for recreational activities that center around the Chattooga River including whitewater boating for both guided and self-guided boaters, swimming, tubing, fishing, hiking and sightseeing.

The loblolly pine is reduced to a minor component within this area. Early successional native forest and openings are present where loblolly pine forest previously stood. Some of

these stands and openings are larger than 80 acres.

Medium to large patches of old growth, especially mixed mesophytic forests, dry-mesic oak forests, and dry-mesic oak-pine and pine-oak forests occur along the Chattooga river, and at higher elevations in the Ellicott Wilderness and associated Extension area. Small or medium-sized patches of old growth are scattered throughout the uplands, and along riparian corridors.

Habitat for sensitive species such a brook floater *(Alasmidonta varicosa)*, a freshwater mussel and Oconee stream crayfish *(Cambarus chaugaensis),* is protected, maintained, and monitored to help prevent listing. Brook trout are restored to suitable streams within their range.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this management area.

Management prescription allocations for the Sumter National Forest are shown in Table 4-2. Table 4-3 shows the management prescription allocations for the Chattahoochee-Oconee National Forests in Georgia. Table 4-3 is provided for information only. For information about management preciptions on the Nantahala National Forest in North Carolina, please refer to the *Land and Resource Management Plan* for the Nantahala National Forest.

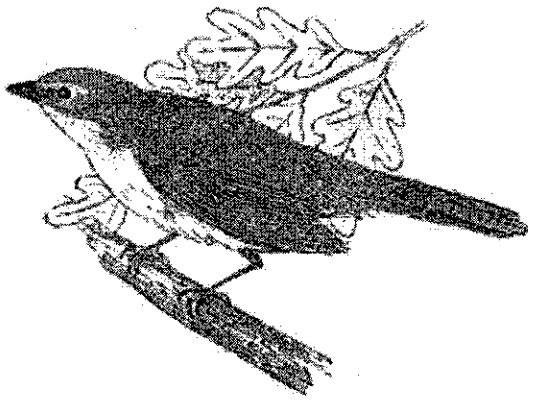


Table 4-2. Management Prescription Allocations Management Area 2, Andrew Pickens Ranger District, Sumter National Forest

Management Prescriptions	Description	Acres
1A	Designated Wilderness	2,855
1B	Recommended Wilderness	1,970
2A1	Designated Wild River	3,290
2A2	Designated Scenic River	224
2A3	Designated Recreational River	1,026
4D	Botanical/Zoological Areas	78
4F	Scenic Areas	15
7A	Scenic Byway	719
7D	Concentrated Recreation Zone	36
7E2	Dispersed Recreation Area	12,169
8A1	Mix of Successional Forest Habitats	284
8B2	Woodlands/Grasslands/Savannas	357
9F	Rare Communities*	0
11	Riparian Corridors**	------
12A	Remote Backcountry Recreation	1,321
Total		24,343

* An increase in rare communities is predicted as a result of more site-specific inventories.

** Approximately 3,342 acres are embedded in adjoining prescriptions.

Table 4-3. Management Prescription Allocations, Management Area 2, Chattahoochee and Oconee National Forests (Georgia).*		
Management Prescriptions	**Description**	**Acres**
0	Custodial Management	459
1A	Designated Wilderness	2,023
1B	Recommended Wilderness	562
2A1	Designated Wild River	5,998
2A2	Designated Scenic River	468
2A3	Designated Recreational River	1,551
2B1	Eligible Wild River	137
2B2	Eligible Scenic River	180
4I	Natural Area	6,280
4I	Natural Area	6,193
5A	Administrative Sites	3
6B	Old Growth	10
8A1	Mix of Successional Forest Habitats	13,611
8E3	High Elevation Early Successional Habitat	6
9A3	Watershed Restoration	16,299
9H	Restoration of Plant Associations	24,466
11	Riparian Corridors**	------
12A	Remote Backcountry Recreation	1,788
Total		76,901
*For more information refer to the *Revised Land and Resource Management Plan* for the Chattahoochee-Oconee National Forests.		
** Embedded in adjoining prescriptions		

Management Area 3—Blue Ridge Mountains and Foothills, Andrew Pickens District—outside the Chattooga Watershed

Existing Conditions

The 59,975-acre management area is located in the mountains and upper piedmont of South Carolina within Oconee County.

The dominant forest types in upland areas are Virginia and shortleaf pine (*Pinus virginiana and P. echinata*) and chestnut and scarlet oak species, (*Quercus prinus and Q. coccinea*) while eastern hemlock (*Tsuga canadensis*), yellow poplar (*Liriodendron tulipfera*) and white pine (*P. strobus*) often dominate moist areas as coves and streamsides with dense understories of rhododendron (*Rhododendron sp.*) and mountain laurel (*Kalmia latifolia*) (Van Lear et al., 1995).

Rainfall is well distributed throughout the year averaging somewhat less than found within the Chattooga Watershed. About ½ of the rainfall is returned to streamflow as water yield.

The primary rock types include graywacke, mica schist, amphibolite, aluminous schist, granite, mica gneiss, gneiss, and granite gneiss. The rocks are highly weathered. The primary soil types are Evard and Brevard Series with Toccoa Series in the floodplains. Most of the perennial and intermittent streams are entrenched to moderately entrenched, with low to high width to depth ratios.

A variety of wildlife can be found in the watershed including black bear (*Ursus americanus*), white tail deer (*Odocoileus virginianus*), red squirrel, black-throated green warbler, star-nosed mole, Eastern small-footed bat (*Myotis leibii*), and ruffed grouse (*Bonasa umbellus*). Fish species include rainbow, brown and brook trout, as well as a diverse cool water community, which includes dartes, shiners, madtoms and chubs.

Watersheds

This management area includes portions of six watersheds including Chauga River, Coneross Creek, Upper Lake Keowee Composite, Little River Composite, Tugaloo River Composite, and the Whitewater River Composite. The Chauga River has about 50 percent of its land base in National Forest System land with each of the other watersheds composed of 14 percent or less.

The Chauga is the most noted of the watersheds within this management area. Just below the forest boundary, the community of Westminster, SC, uses the river as its municipal water supply, with the Ramsey Creek tributary as its backup water source. Most of the watershed is presently in good condition and many of the streams listed as Outstanding Resource Waters by South Carolina. There are some concerns about the existing and potential impacts to aquatic life from nonpoint pollutant sources such as roads, timber harvest, rural development, poultry producers and agriculture uses including pastureland. A rare crayfish, *Cambarus chaugaensis*, is found within the Chauga watershed. A variety of rare plants are found, especially within the calcareous soil area associated with the Brevard fault zone.

In the sediment analysis conducted, Coneross Creek was identified as having below average conditions. The state has listed Coneross as impaired for elevated fecal coliform, which can impact recreational uses, and increasing nitrogen and declining dissolved oxygen are added trends. Other streams mentioned by the state include Battle and Brasstown Creeks that have suspended solids and sediment concerns.

Some of the watersheds north of Coneross Creek contribute to Lake Keowee, which is the municipal water source for Greenville and Seneca, SC and the Oconee Nuclear station. Due to the distance from the forest, amount of private lands involved and size of Lake Keowee, there are few concerns relative to National Forest management for these public sources of water.

Table 4-4 shows the management prescription allocations.

Table 4-4. Management Prescription Allocations, Management Area 3

Management Prescriptions	Descriptions	Acres
1B	Recommended Wilderness	12
2A3	Designated Recreational River	4
4D	Botanical/Zoological Areas	1,797
4F	Scenic Areas	8,720
5C	Designated Utility Corridors	144
6C	Old Growth	1,023
7A	Scenic Byway	2,325
7D	Concentrated Recreation Zones	69
7E2	Dispersed Recreation Areas	341
8A1	Mix of Successional Forest Habitats	41,261
8B2	Woodlands/Grassland Savanna Habitats	4
9F	Rare Communities*	545
11	Riparian Corridors**	-------
12A	Remote Backcountry Recreation	3,608
Total		59,854

*An increase in rare communities is predicted as a result of more site-specific inventories.

** Approximately 9,630 acres are embedded in adjoining prescriptions.

Desired Conditions

Elevated levels of suspended sediment, fecal coliform and other water quality factors beyond existing water quality standards are infrequent. No streams are listed as being water quality impaired or on the watch list due to excessive pollutants, decline in aquatic biological community or habitat impairment. Biological community ratings are excellent to good, with

strong viable populations of native aquatic species. Instream flow needs are met to maintain aquatic species, channel conditions, administrative needs, recreation, scenic, research and other needs on the forest. Sand and smaller particles seldom dominate channel substrates, and ample amount of large woody debris is within streams and being retained for future stream and habitat needs. Waters within the forest boundaries are of suitable quality and quantity to meet beneficial water uses including municipal, indigenous aquatic habitat, channel, recreational, administrative, research, fire, scenic, wildlife and other resource needs.

There are a variety of high-quality well maintained developed and dispersed recreation opportunities including camping, backpacking, day hiking, horseback riding, mountain biking, shooting ranges, fishing (warm, cool and cold waters), hunting, dispersed camping, photography and nature study. Visitors frequently see other people in some parts of the management area in other parts the area people are rarely seen. The recreational opportunities range from the more remote in Bee Cove Roadless Area to more developed in roaded natural and rural settings and therefore outdoor skills are of moderate importance in some parts and very important in others.

The loblolly pine is reduced to a minor component within this area. Early successional native forest and openings are present where loblolly pine forest previously stood. Some of these stands and openings are larger than 80 acres.

Medium to large patches of old growth, especially mixed mesophytic forests, dry-mesic oak forests, and dry-mesic oak-pine and pine-oak forests occur throughout the management area, especially along the Chauga River, the White Rock Scenic Area, various botanical/zoological areas, and along riparian corridors. Small or medium-sized patches of old growth are scattered throughout the uplands.

Habitat for sensitive species such as Oconee stream crayfish (*Cambarus chaugaensis*), is protected, maintained, and monitored. Historic native trout are maintained and/or restored where suitable.

Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this management area.

Management Area 4—Piedmont, Enoree and Long Cane Districts, outside of the Turkey Creek and Upper Stevens Creek Watersheds

Existing Conditions

The 236,113-acre management area is located in the piedmont of South Carolina within Abbeville, Edgefield, Greenwood, McCormick and Saluda counties for the Long Cane Ranger District and within Chester, Fairfield, Laurens, Newberry, and Union counties for the Enoree Ranger District.

The piedmont is underlain by several complex sequences of crystalline, mixed acid, micaceous rocks and Carolina slates. Soils surfaces are generally thin with sandy clay loam surfaces. Carolina slate surfaces consist of silt loams and subsurfaces consist of silty clay loams. Annual precipitation averages about 45 inches of which 17 inches are water yield. Past agricultural uses have left portions of the area with little or no topsoil and active and inactive gullies.

Vegetation is primarily loblolly pine with some shortleaf and Virginia pine. Secondary vegetation includes red oak, white oak, hickory, sweetgum, yellow polar, water oak, willow oak, river birch, sycamore, cottonwood, elm, ash, and red maple. Some areas contain invasive non-native species such as kudzu, privet, autumn olive, mimosa, sericea lespedeza, and tree of heaven that may be addressed for containment or eradication activities.

Watersheds

Watersheds on the Long Cane Ranger District with substantial portions of national forest include Little River, Long Cane Creek and Lower Savannah River composite areas. Some streams segments are listed as impaired from excessive levels of fecal coliform, turbidity or suspended solids. Abnormal levels or declining conditions for nutrients and ammonium toxicity are local problems. Most of the problems are associated with non-forest land uses. Small portions of the Long Cane district have been severely eroded and lost over a foot of topsoil from past agricultural activities. Many other areas of past agricultural uses were only moderately eroded due to more gentle slopes. Therefore, most of these areas still contain a thin soil A horizon with well developed B horizon that is somewhat resistant to erosion. Extensive efforts to recover soil and water conditions on severely eroded or barren lands have been ongoing since the lands were acquired.

Municipal water uses in the vicinity include McCormick, SC from Lake Thurmond and North Augusta, SC and Edgefield County from the Savannah River. Due to the size of the Savannah River, the amount of private land involved and distance from both the Long Cane and Andrew Pickens Ranger Districts, forest management activities have little or no influence on these public water sources.

Watersheds on the Enoree Ranger District with substantial portions of national forest include Duncan Creek, Indian Creek, Lower Enoree River Composite, and the Upper Broad River Composite. Duncan Creek is a backup water source for the community of Whitmire, South Carolina. Most of the watersheds within this area contain streams which are listed as impaired from excessive levels of fecal coliform, high turbidity and/or suspended solids. Specific river or stream segments have abnormal levels or declining conditions for zinc, pesticides, pH, dissolved oxygen and/or phosphorus. In some instances, mercury accumulation in certain fish species is also a concern. The water quality problems are primarily linked to past and present activities outside of National Forest control and residual air pollutants.

Much of the Enoree district has been severely eroded and lost more than a foot of topsoil from past agricultural activities. Many areas have eroded into the B horizon, which has higher clay content and somewhat restricts erosion. The most severe erosion occur as gullies, where the B horizon has been breached and the extremely erosive C horizon is exposed, causing rapid gully development and expansion. This area is generally more eroded from past activities than the Long Cane Ranger District. Extensive efforts to recover soil and water conditions have been ongoing since the lands were acquired. Table 4-5 shows the management prescription allocations for this management area.

Municipal uses of water associated with the streams within or adjacent to the Enoree Ranger District include the Enoree River with Duncan Creek as a backup source of water for Whitmire, SC; and the Broad River supplies municipal needs for Union, SC, Lockhart Mills and Carlisle Cone Mills, with the source for Columbia, SC a substantial distance downstream. Due to the size of the Broad River sub-basin and flow, forest management activities have little or no influence on these public water sources.

Desired Conditions

Elevated levels of suspended sediment, fecal coliform and other water quality factors beyond existing water quality standards are infrequent. No streams are listed as being water quality impaired or on the watch list due to excessive pollutants, decline in aquatic biological community or habitat impairment. Biological community ratings are excellent to good, with strong viable populations of native aquatic species. In-stream flow needs are met to maintain aquatic species, channel conditions, administrative needs, recreation, scenic, research and other needs on the forest. Sand and smaller particles seldom dominate channel substrates,

and ample amount of large woody debris is within streams and being retained for future stream and habitat needs. Waters within the forest boundaries are of suitable quality and quantity to meet beneficial water uses including municipal, indigenous aquatic habitat, channel, recreational, administrative, research, fire, scenic, wildlife and other resource needs.

There are a variety of high-quality well maintained developed and dispersed recreation opportunities including camping, shooting ranges, day hiking, OHV riding, mountain biking, canoeing and kayaking, fishing, hunting, dispersed camping and nature study. Visitors frequently see other people in parts of the management area. Outdoor skills are of moderate importance. The recreational opportunities are in roaded natural and rural settings.

Old growth communities, especially mixed mesophytic forests, dry-mesic oak forests, and dry-mesic oak-pine and pine-oak forests, dominate the riparian corridors within this management area, and occur more extensively along the Broad, Tyger, and Enoree Rivers. Small to medium-sized patches of dry-xeric pine and oak old growth woodlands and savannas, and dry-mesic oak old growth forests, are scattered throughout the uplands. In the short-term, the results of loblolly pine removal may be observed as old growth communities more native to the area are restored.

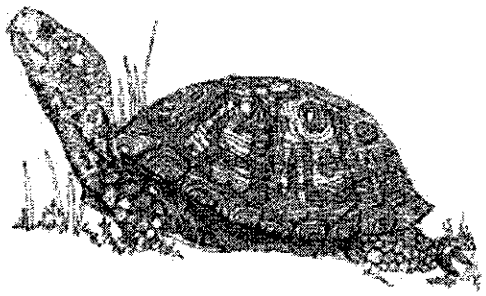
Aquatic and riparian protection measures found in Riparian Prescription 11 apply to this management area.

Table 4-5. Management Prescription Allocations, Management Area 4

Management Prescriptions	Descriptions	Acres
4D	Botanical/Zoological Areas	1,109
4F	Scenic Areas	1,286
4G1	Calhoun Experimental Forest	4,862
5C	Designated Utility Corridors	2,392
6C	Old Growth	617
7D	Concentrated Recreation Zone	468
7E1	Dispersed Recreation Area	12,575
7E2	Dispersed Recreation Area	49,428
8B2	Woodlands/Grasslan-ds/ Savannas	7,958
9A3	Watershed Restoration	11,360
9F	Rare Communities*	364
9G2	Restoration of Upland Oak-Hickory and Mixed Pine-Oak-Hickory Forests	29,543
10B	High Quality Forest Products	92,509
11	Riparian Corridors**	-------
Total		113,125

*An increase in rare communities is predicted as a result of more site-specific inventories.

** Approximately 44,964 acres are embedded in adjoining prescriptions.



Chapter 5
Implementation

Interpretation of Desired Condition Percentages of Successional Habitat

The desired conditions by management prescription are described in part, in terms of the percentage of forested land desired in early and late-successional forest. To be meaningful, percentage recommendations must also come with a geographic scale at which the percentage should be calculated. Some previous discussion has focused on setting successional stage objectives at the forest-level. In South Carolina, this scale is not particularly meaningful from a wildlife perspective, because most species will select habitat at a smaller scale—that of the immediate stand and/or the surrounding landscape. The scale of the relevant surrounding landscape will vary with species, but will rarely if ever reach the scale of the entire Sumter National Forest, particularly because of the geographically separated units of the Sumter.

Given the incomplete ownership patterns within each ranger district on the Sumter, the appropriate scale for successional stage objectives is landscape-level blocks of the same prescription in relative proximity to each other. Prescription allocations are the management unit closest to this scale. Forest Plan compliance during project planning should be done on the basis of geographically contiguous prescription allocation blocks. Relatively small prescription allocation blocks may be lumped with nearby prescriptions having the same successional stage objectives. Grouping of blocks for analysis purposes should be responsive to project level issues and at an appropriate scale for project level analysis.

With this process, forest-wide or management area objectives for each successional stage can be determined by summing allocations of prescriptions. Judgments can be made as to whether allocations adequately provide amounts and distributions of these habitats across the forest. Related discussions will be productive, because they can be made within the context of Interdisciplinary Team decisions specific to conditions and considerations of particular pieces of the landscape.

Percentages of various forest successional stages shown in the desired conditions of each management prescription include intermingled riparian areas. Acres of non-forest, such as roads, water, and permanent openings, acres to be maintained or restored to woodlands, savannas, and grasslands, which will be managed for an open condition permanently, should be deducted before performing calculations. Patches smaller than 2 acres of either type would not be counted, but would be included with the surrounding type. Conditions of surrounding private lands would not be included in calculations, but should be considered when developing alternatives during project-level planning. For example, high amounts of quality early-successional forest on surrounding private land might result in decisions to provide such habitats on national forest land at the low end of the objective range.

Early successional forest for all forest types is defined as regenerating forest predominantly 0-10 years old. Early-successional forest patches created by natural disturbances would be included in calculations, but we would not attempt to predict amounts of early-successional forest likely to be created by natural events in the future. Even-aged and two-aged regeneration cutting, prescribed burning, or other types of vegetation management treatments, may create

early-successional forest. The desired habitat result we want to achieve is relatively dense regeneration of woody species across patches larger than 2 acres, and the larger the patch the better for many dependent species.

For a complete discussion of the ages within early, mid- and late-successional forests by forest community, refer to the process record entitled "Forest Community Types and Forest Successional Classes for National Forests in the Southern Appalachian Plan Revisions."

Ages of mid- and late-successional forests are defined in the Glossary, Appendix B. To meet objectives for mid- and late-successional forest habitats, managers would ensure that planned forest regeneration would not result in percentages falling below objectives. Management treatments to thin or create small canopy gaps are compatible with maintaining mid- and late-successional forest conditions.

Areas managed under uneven-aged regeneration methods would not be counted as either early- or late-successional, but as a separate successional stage category. Acreage of these areas would be included as part of the forested acreage base for the purpose of successional stage calculations. Based on discussions with forest interdisciplinary teams, we do not expect this acreage to be extensive enough to conflict with meeting successional stage objectives.

Monitoring and Evaluation

Monitoring and evaluation provide information to determine if programs and projects are meeting Forest Plan direction, and if the cost anticipated to implement the Forest Plan coincides with actual costs. Monitoring and evaluation is required by NFMA implementing regulations (36 CFR 219.12(k)) to determine if requirements of the regulations and Forest Plan are being met.

This chapter establishes monitoring questions that are to be answered over the course of Forest Plan implementation. Monitoring questions address if the desired conditions, goals and objectives of the Forest Plan are being met and if Forest Plan standards are effective. Monitoring questions are part of the Forest Plan and are stated in terms that will direct what will be monitored, but are not so specific as to address how monitoring will be accomplished.

Monitoring questions will be further refined during Forest Plan implementation into monitoring elements and task sheets, which are detailed, specific and measurable. Monitoring elements and task sheets may be modified and prioritized to guide monitoring activities over the course of Forest Plan implementation. The monitoring summary table and sample task sheet (Appendix E) demonstrate the relationships between Forest Plan goals, objectives, standards and monitoring questions, and indicate the nature of monitoring elements and monitoring details that are to be further developed during Forest Plan implementation. The monitoring summary table and sample task sheet are presented here only for information and may be modified as needed to address changes in needs, priorities, availability of personnel, and funding.

The concept of adaptive management is foundational for planning and Forest Plan implementation in a dynamic environment. Regulations require that Forest Plans be revised periodically (36 CFR 219.10(g)). However, forest plans may need to be more dynamic to account for changed resource conditions (such as large storms or insect outbreaks), new information or findings of science, or new regulations or policies. An effective monitoring and evaluation program is essential for determining when these needs may exist and leading to quick resolution of a need for change.

The monitoring questions were developed to address three types of monitoring:

- Implementation monitoring–Is the Forest Plan being carried out?
- Effectiveness monitoring–Are desired conditions resulting?

- Validation monitoring--Has the information used in developing the Forest Plan changed?

Monitoring and evaluation provide information that can be used to keep Forest Plans current. Key results and findings will be used to determine if changes are needed in goals, objectives, standards, monitoring questions, or research needs.

Monitoring and evaluation are distinct activities. The monitoring phase usually includes collecting data and information, either by observation, direct measurement, or compiling data from appropriate sources. Evaluation is the analysis of this data and information, and is used to assess if the Forest Plan is being implemented correctly and if it needs to be changed. Forest Plan monitoring and evaluations will be reported annually in the "Sumter National Forest Monitoring and Evaluation Report."

Monitoring and evaluation may lead to adjustments of programs, projects or activities, changes or amendment to the Forest Plan, or to recommend changes in laws, regulations, and policies that affect both the Forest Plan and project implementation (FSM 1922.7).

Forest Plan amendments and revisions should be responsive to changes that affect the Forest Plan, and may be needed at any time if a Forest Plan becomes outdated in some way. Within an adaptive management framework, the need to amend or revise the Forest Plan may result from:

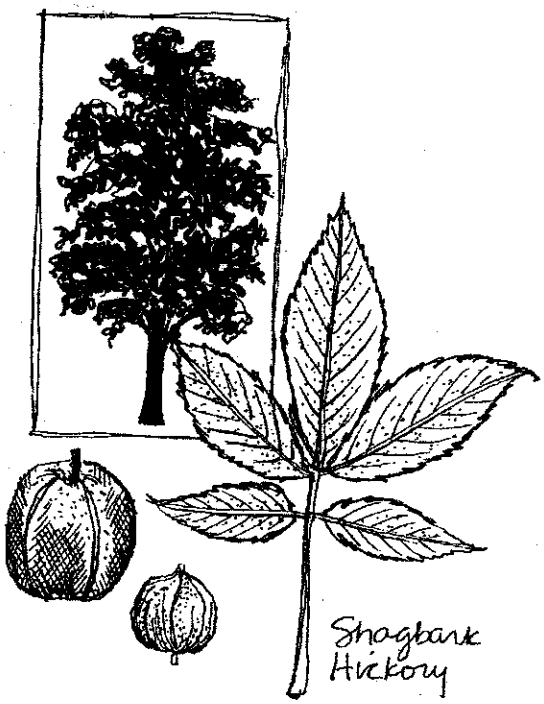
- Recommendations of an interdisciplinary team, based on evaluation and monitoring results
- Changes in agency policy and regulations
- Planning errors found during Forest Plan implementation
- Changes in physical, biological, social, or economic conditions

The evaluation of findings under the following monitoring questions will lead forest managers to these determinations.

Monitoring Questions

1. Are rare ecological communities being protected, maintained, and restored?

A Forest Plan goal, related objectives and standards are designed to maintain and restore rare communities. To monitor accomplishment of these provisions and the effects that overall Forest Plan implementation will have on rare communities, trends in number of occurrences, locations, and conditions, and effects of maintenance and restoration activities will be tracked.



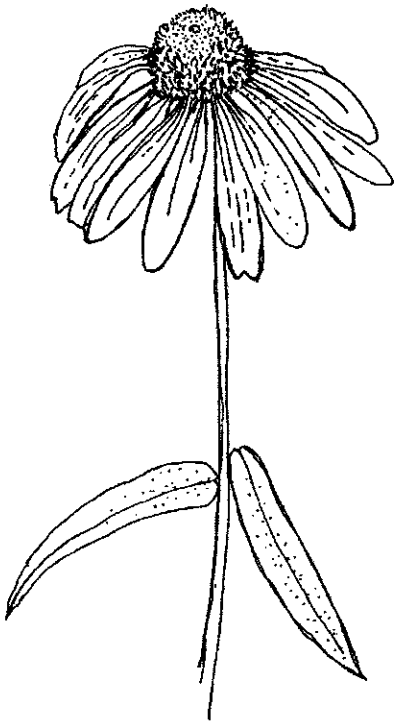
2. Are landscape and stand-level composition, structure, and function of major forest communities within desirable ranges of variability?

Success in maintaining and restoring composition, structure, and function of forest ecosystems within desired ranges of variability is reflected by both changes in forest condition and by levels of management and other effects that are shaping these communities. Monitoring will include tracking the abundance of major forest cover/community types and levels of management activities conducted to maintain and restore desired conditions. Trends in population indices or surveys, and trends in abundance of habitat for species selected as Management Indicator Species will be monitored to help indicate effects of national forest management within selected communities. In addition, presence or absence of a combination of representative species of fire associated plant communities will be used to evaluate effectiveness of management in maintaining desired conditions in *woodland/ grassland/savanna* habitats.

Management Indicator Species	Reasons for Selection/ Associated Forest Community	Related Objectives
Hooded Warbler *(Wilsonia citrina)*	Presence, and trends in frequency of occurrence of hooded warblers in mesic deciduous forests will be used to help indicate the effectiveness of management for providing dense understory and midstory structure within these forest communities.	8.03 8.05
Scarlet Tanager *(Piranga olivacea)*	Presence, and trends in frequency of occurrence of this species will be used to help indicate the effectiveness of management for maintaining oak forests (See also Monitoring Question 7.)	8.03 8.04
Pine Warbler *(Dendroica pinus)*	Presence, and trends in frequency of occurrence of these species in pine/pine-oak forests will be used to help indicate effectiveness of management in restoring and maintaining pine dominated types.	8.04 17.01
Acadian Flycatcher *(Epidonax virescens)*	Presence, and trends in frequency of occurrence of these species in riparian forests will be used to help indicate effectiveness of management in maintaining these conditions.	4.01
Brown-headed nuthatch *(Sitta pusilla)*	Presence, and trends in frequency of occurrence of these species in mid and late successional pine and pine/oak forest will be used to help indicate effectiveness of management in maintaining these communities.	8.04 17.01

3. Are key successional stage habitats being provided?

Forest goals, objectives, and standards have been established for maintaining a balance between the early, mid-, and late-successional habitat conditions. Some wildlife species depend on early- successional forests, while others depend on late-successional forests. Trends in successional conditions and abundance of key successional habitats, such as old growth and permanent wildlife openings, will be monitored. Population trends of Management Indicator Species selected to help indicate effects of management on successional habitats will be monitored.



Management Indicator Species	Reasons for Selection/Associated Forest Community	Related Objectives
Prairie warbler *(Dendroica discolor)*	Presence, and trends in frequency of occurrence of this species in early-successional forests will be used to help indicate the effectiveness of management in achieving desired conditions within these habitats.	8.01 8.06
Swainson's warbler *(Limnothlypis swainsonii)*	Presence and trends in frequency of occurrence of this species in canebrakes and other early-successional riparian habitats will be used to help indicate the effectiveness of management in achieving desired conditions.	4.01
Field sparrow *(Spizella pusilla)*	Presence and trends in frequency of occurrence of this species in woodland/grassland/ savanna habitats will be used to help indicate the effectiveness of management in achieving desired conditions.	8.02 8.03
American woodcock (*Scolopax minor*)	Presence and trends in frequency of occurrence of this species in early successional riparian habitats will be used to help indicte the effectiveness of management in achieving desired conditions	4.01

4. How well are key terrestrial habitat attributes being provided?

Special habitat attributes such as hard and soft mast, den trees, snags, and downed wood are necessary elements for certain species. A variety of Forest Plan goals, objectives, and standards protect, restore, and maintain these elements. Trends in the abundance and condition of key terrestrial habitat attributes and associated Management Indicator Species will be monitored.

Management Indicator Species	Reasons for Selection/Associated Habitat Attribute	Related Objectives
Pileated woodpecker *(Dryocopus pileatus)*	Presence, and trends in frequency of occurrence of this species across the forest will be used to help indicate the effectiveness of management in maintaining desired condition relative to abundance of snags.	See standard FW-18

5. What is the status and trend in aquatic habitat conditions in relationship to aquatic communities?

The Forest Plan protects and restores riparian ecosystems, wetlands, and aquatic systems and assures that aquatic habitat conditions are suitable to maintain native aquatic communities. Water and habitat quantity and quality, in-stream large woody debris, and aquatic species passage will be monitored. Population trends for aquatic management indicators in relation to the habitat conditions they are selected to represent will be monitored. These indicators are the presence and abundance of fish and aquatic macroinvertebrates in cool water, cold water, and warm water aquatic communities.

6. What are status and trends of forest health threats on the Sumter?

Measures designed to control or mitigate negative effects of insects, disease, non-native invasive species, air pollution, and high fuel levels are important aspects of this Forest Plan. Trends in occurrence and effects of air pollutants, wildland fire, insects and diseases, and non-native invasive species will be monitored.

7. What are the status and trends of federally listed species and populations or habitats for species with viability concerns on the Sumter?

Contribution to conservation and recovery of federally listed threatened and endangered species, and federal candidates for listing, is an important goal of this Forest Plan. Trends in occurrence or abundance of these species will be monitored along with levels of management activities implemented for the purpose of achieving recovery.

Maintaining habitat capable of supporting viable populations of native and desired non-native species is also an important goal of the Forest Plan. Many objectives and standards are designed to meet this goal. Monitoring will focus on trends for populations and/or habitats of species of viability concern. Where feasible, species monitoring will often be accomplished by monitoring communities of species (i.e., fish, bats, birds).

8. What are the trends for demand species and their use?

The Sumter National Forest provides large public ownership with opportunities for hunting, fishing, wildlife viewing, and collection of special forest products. Monitoring of some game species populations and/or harvest levels will be done in coordination with the South Carolina Department of Natural Resources (DNR). Some of these species are selected as Management Indicator Species where effects of national forest management are important to meeting public demand, and monitoring assistance from the SCDNR is available. Some species that are collected as special forest products will be monitored through management of the permitting process. In addition, trends in harvest levels, other population indices, license sales, and Wildlife Management Area (WMA) permit sales will be used to indicate effectiveness of management of habitat, as well as meeting public demand for deer, turkey, and bear hunting.

9. Are high quality, nature-based recreational experiences being provided and what are the trends?

The Sumter National Forest offers a unique combination of nature based dispersed recreation, including undeveloped settings, built environments reinforcing natural character, and wildland settings that complement enjoyment of special places. This Forest Plan aims to provide for safe, natural, well-designed, accessible, and well-maintained recreational opportunities for all visitors. Monitoring visitor experiences and the condition of facilities will help gage the effectiveness in meeting this commitment.

10. What are the status and trends of recreational use impacts on the environment?

This Forest Plan is committed to providing recreational opportunities that are compatible with stewardship of forest resources. Impacts of motorized uses, site occupancy, and large volumes of users on riparian, stream and aquatic resources, vegetation, and soils will be monitored.

Management Indicator Species	Reason for Selection	Related Objectives
Bobwhite quail *(Colinus virginianus)*	Trends in population indices will be used to help indicate effectiveness of management in meeting public demand for this species.	8.08 8.09
Eastern wild turkey *(Meleagris gallopavo)*	Trends in population indices and harvest levels will be used to help evaluate result of management activities on this high demand species.	8.02, 8.03, 8.04, 8.06, 8.07, 8.08, 8.09
Black bear *(Ursus americanus)*	Trends in population indices and harvest levels will be used to help evaluate result of management activities on this high profile species.	8.02 8.05 8.06

11. What are the status and trend of wilderness character?

Wilderness character is comprised of both human and biophysical elements. Monitoring the human elements requires monitoring trends in the human experiences, i.e., solitude, crowding, etc., as well as trends in the use patterns and visitor impacts. User monitoring and surveys will allow for tracking trends among visitors to wilderness, while trailhead use and identification of sites with impacts will allow us to track movement and activities within wilderness and relationships to biophysical effects. Monitoring biophysical elements is important for tracking changes to the natural systems because of natural and human influences within and outside the wilderness. Although there are many components to the biophysical element, air quality is viewed as a basic indicator of wilderness health. Additionally, changes that are occurring in wilderness due to the fire regime, especially in fire dependent communities, will be monitored.

12. What are the status and trend of Wild and Scenic River conditions?

A free-flowing condition and the presence of Outstandingly Remarkable Values are the two main elements in determining the eligibility and suitability of a river to be included in the National Wild and Scenic Rivers System. Rivers determined to be eligible, or eligible and suitable that have not yet been designated by Congress must have those elements protected until a further designation is assigned. Monitoring changes to these elements will help us evaluate our management of these rivers on the Sumter.

13. Are the scenery and recreational settings changing and why?

Scenery and recreational settings are managed by establishing Scenic Integrity Objectives (SIO) and Recreation Opportunity Spectrum (ROS) class management direction. Management of scenery and settings is essential in managing recreational experiences and the quality of the environment. Changes in scenic quality of the forest and the recreational settings will be monitored.

14. Are heritage sites being protected?

Heritage resources listed or eligible for listing on the *National Register of Historic Places* along with other designated properties (including World Heritage Sites, National Historic Landmarks, and National Historic Trails) are preserved and protected from both natural forces and vandalism. Heritage resources at risk are monitored on a regular schedule in accordance with general preservation plans, site-specific plans, and other treatments specified by agreements. Heritage Preservation Plans (HPP) are developed and implemented, either on an individual basis or by heritage resource site type, for at risk properties. HPP are designed to protect those qualities and values that contribute to the property's significance.

Prehistoric and historic artifacts, investigation field records, and historic archival data, including photographs, maps, and information sources, are maintained to national curatorial and/or archival standards (36 CFR 79 Curation of Federally Owned Collections).

Archaeological Resource Protection Act (ARPA) investigations are completed in a timely manner at properties that have been damaged by illegal activities. Damage assessments are developed in accordance with ARPA and agency guidelines.

15. Are watersheds maintained (and where necessary restored) to provide resilient and stable conditions to support the quality and quantity of water necessary to protect ecological functions and support intended beneficial uses?

This Forest Plan provides for management of watersheds to provide resilient and stable

conditions to protect soil productivity and support the quality and quantity of water necessary to protect ecological functions and support intended beneficial water uses. Numerous best management practices are established as standards or where appropriate part of the implementation guidelines for practices to carry out during implementation of the Forest Plan. Watershed condition, improvement needs, water quality, soil productivity and implementation of best management practices and forest standards will be monitored. Procedures for estimating effects will be periodically checked or validated to be sure they are meeting their intent.

16. What are the conditions and trends of riparian area, wetland and floodplain functions and values?

Riparian ecosystems restoration and management is important to maintain aquatic resources and values. Desired conditions, including the composition and structure of vegetation, equipment limitations, maintaining ground cover and stable stream-banks are established in the Forest Plan. Floodplains and wetlands are to be protected when possible and activities minimized or mitigated when they impact these areas. Consistency with direction including Executive Orders 11988 concerning floodplains and 11990 concerning wetlands need to be evaluated. Riparian management practices and standards, ground cover, stream bank stability, wetland and floodplain status will be monitored.

17. How do actual outputs and services compare with projected? [36 CFR 219.12(k)1]

The 1982 NFMA implementing regulations require that outputs and services be monitored and compared to those projected in the Forest Plan. Trends in forest product, mineral leasing and surface rights, access and road conditions, and Forest Plan implementation costs will be tracked and compared to projections made at the time the Forest Plan was developed.

18. Are silvicultural requirements of the Forest Plan being met?

The 1982 NFMA implementing regulations also require monitoring of specific silvicultural requirements. Silvicultural practices, harvest methods, harvest unit size, regeneration establishment, and land suitability for timber productions will be monitored and evaluated to determine if and when changes may be needed.

19. Are Forest Plan objectives and standards being applied and accomplishing their intended purpose?

Periodic review of objectives and standards established in the Forest Plan is required to assure desired condition are being achieved and that these requirements will stay current given Forest Plan modifications, changed conditions and new information that accumulate over time. Implementation and effectiveness of best management practices and other standards will be tracked and periodically evaluated.

Research Needs

A key element of adaptive management is monitoring. Another is research. Ongoing monitoring will identify needs for further research as the plan is implemented. At its inception; however, the plan can identify areas of concern that can be the subject of "research needs."

Riparian

There is a need for more information on the appropriate corridor for a physiographic area or zone given the goals and objectives of managing riparian areas. We need to know more about how we can best determine the effectiveness of

riparian corridors to meet riparian area functions and values. Research is extant relative to hydrology, vegetation, sediment, nutrient loading, and water temperature, but some functions and values in the riparian area are not as well studied. Recreation impacts on water quality and riparian areas, specifically OHVs and equestrian use, are topics for which more information is needed.

Conduct inventory and compile an assessment of proper functioning condition of streams in the piedmont.

Conduct an inventory and compile an assessment of riparian conditions for water quality protection, restoration of hydrologic function, vegetative composition, and wildlife habitat.

Vegetation

Determine appropriate methods for restoring and maintaining understories in fire-associated communities (i.e., shortleaf pine-oak and table mountain pine woodlands and savannas) on the Sumter National Forest.

Determine appropriate methods for managing sustainable populations of the small whorled pogonia on the Sumter National Forest.

Determine appropriate methods for restoring oak, longleaf pine, shortleaf pine and associated species on sites dominated by loblolly pine on the Sumter National Forest.

Identify and classify physical (soil, water, air, geology, etc.) characteristics on the Sumter National Forest where habitats are suitable for recruitment and/or management of rare, threatened or endangered flora.

Wildlife

Determine feasible and efficient methods for monitoring trends of amphibian populations on the Sumter National Forest.

Determine feasible and efficient methods for monitoring trends of bat populations on the Sumter National Forest.

Determine feasible and efficient methods for monitoring trends of winter resident land bird populations on the Sumter National Forest.

Determine feasible and efficient methods for monitoring trends and relationships between distribution and abundance of crayfish populations.

Determine feasible and efficient methods for monitoring tends and relationships between distribution and abundance of mollusk populations.

Prescribed Fire

Determine the effects of growing season and frequent burning on soil productivity, water quality, mast-producing species, invertebrate diversity and abundance, and other effects on wildlife.

Cultural Resources

Complete a cultural resources overview and determine the numbers and types of sites needed to model prehistoric and historic land use on the forest.

Archaeological site on the Enoree Ranger District.