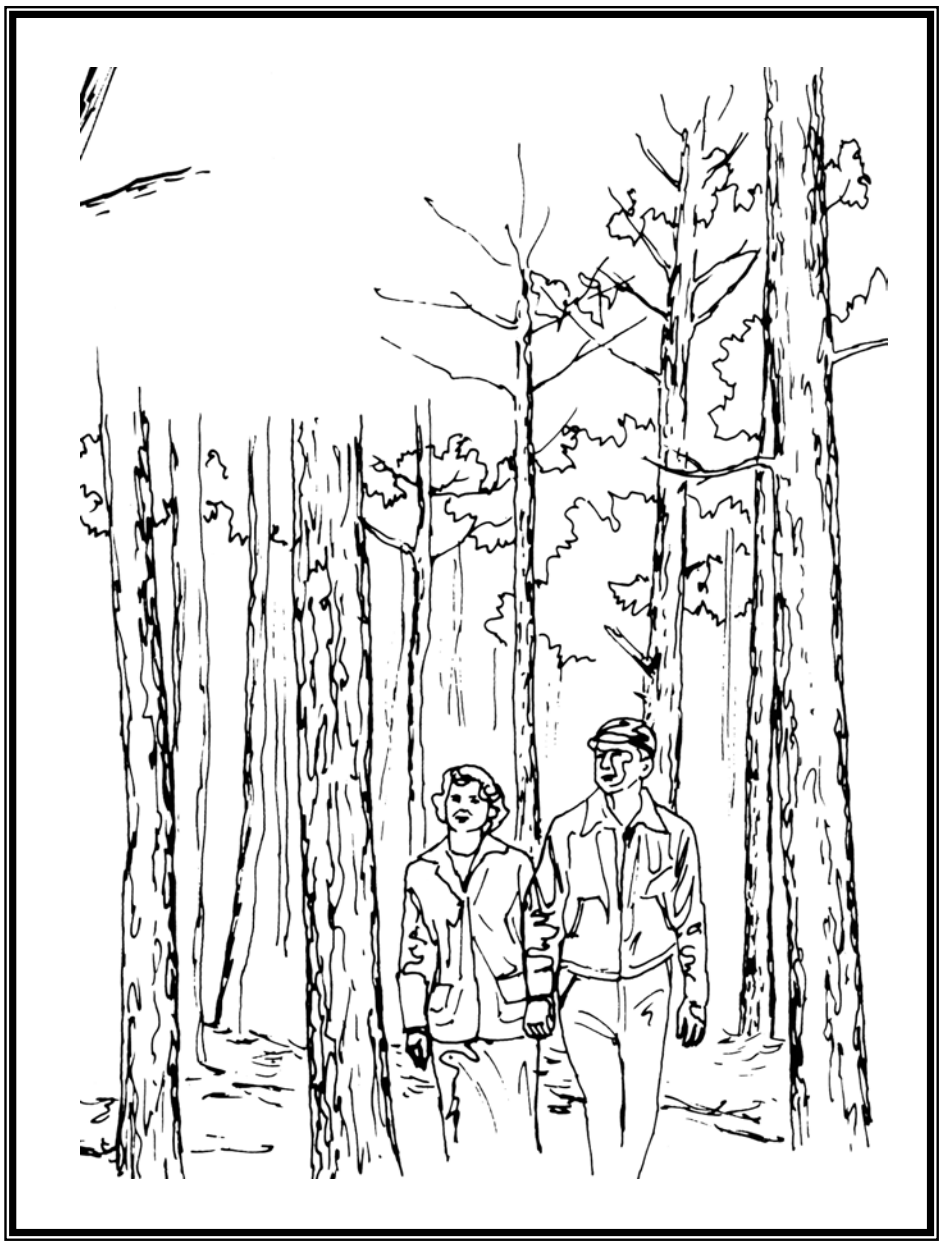
United States
Department of
Agriculture

Forest Service
Southern Region

Proposed Revised Land and Resource Management Plan

National Forests in Alabama



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CHAPTER 1

INTRODUCTION

The Revised Land and Resource Management Plan guides all natural resource management activities and sets management standards for the National Forests in Alabama for the next 10 to 15 years.

The National Forest Management Act (NFMA), implementing regulations, and other documents guided the preparation of this Forest Plan. Land-use determinations, management practices, goals, objectives, and standards are statements of the Forest Plan's management direction. Projected yields, services, and rate of implementation are dependent on the annual budgeting process.

This Forest Plan provides broad program-level direction for management of the land and its resources. Future projects carry out the direction in this Forest Plan. This Forest Plan does not contain a commitment to select any specific project. An environmental analysis is conducted, when required, on these projects as they are proposed. This analysis may tier to the data and evaluations in other environmental impact statements.

In addition to direction found in this Forest Plan, projects also are implemented through direction found in the Forest Service directive system (manuals and handbooks) and other guides (see Chapter 5, ``Monitoring, Evaluation, Research, and Implementation'').

Purpose of the Forest Plan

The revised Forest Plan will decide and establish the following:

1. Determining the Forest-wide multiple-use goals, objectives, and standards for the Forest, including estimates of the goods and services expected.

2. Determining multiple-use management prescriptions and management areas containing desired conditions, objectives and standards.

3. Identifying land that is suitable for timber production.

4. Determining the allowable sale quantity for timber and the associated sale schedule.

5. Recommending wilderness areas.

6. Recommending wild and scenic river status.

7. Determining monitoring and evaluation requirements.

8. Identify the lands that are administratively available for mineral development (including oil and gas).

RELATIONSHIP OF THE FOREST PLAN TO OTHER DOCUMENTS

This Forest Plan is the preferred alternative for managing the land and resources on the National Forests in Alabama that are analyzed and described in the Final Environmental Impact Statement. The Forest Plan is consistent with direction found in laws, rules, regulations, the directive system (Forest Service Manuals and Handbooks) and other implementation guides.

This Forest Plan used information from four other environmental impact statements to aid in the development of management direction and implementation guidelines.

- Record of Decision, Final Environmental Impact Statement for Suppression of Southern Pine Beetles (R8-SPB) (USDA Forest Service-Southern Region, April 1987)

- Record of Decision, Final Environmental Impact Statement – Vegetation Management in the Coastal Plain/Piedmont (VMCP) (USDA Forest Service-Southern Region, January 1989

- Record of Decision, Final Environmental Impact Statement – Vegetation Management in the Appalachian Mountains (VMA) (USDA Forest Service-Southern Region, July 1989

- Record of Decision, Final Environmental Impact Statement for the Management of the Red-cockaded Woodpecker and its Habitat on National Forests in the Southern Region (RCWEIS) (USDA Forest Service, Southern Region, June 1995)

PLAN STRUCTURE

The Forest Plan consists of five chapters, a glossary, and several appendixes.

Chapter 1 introduces the Forest Plan; explains its purpose, structure, and relationship to other documents; includes a brief description of the forest; and summarizes the issues and analysis of the management situation for the revision.

Chapter 2 contains the Forestwide management direction, including, desired future conditions, goals, objectives, and standards.

Chapter 3 contains the management prescriptions and the specific management direction applied at that level, including, desired future conditions, goals, objectives, and standards.

Chapter 4 contains the management area direction, including, desired future conditions, goals, objectives, and standards.

Chapter 5 gives direction on Forest Plan implementation, monitoring, and evaluation. Appendices provide supplemental information about the Forest Plan.

FOREST DESCRIPTION

The National Forests in Alabama includes approximately 665,700 acres of National Forest System land in the Southern Appalachian Mountains, Cumberland Plateau, Piedmont and Coastal Plain areas of the state. There are four National Forests, divided into six ranger districts. The Bankhead National Forest is located in the northwestern part of the state in Lawrence, Winston and Franklin Counties. The Conecuh National Forest is located in the southern part of the state along the Alabama/Florida line in Covington and Escambia Counties. The Talladega National Forest is divided into three Ranger Districts. The Oakmulgee District lies in the central part of the state, east of Tuscaloosa in Hale, Tuscaloosa, Bibb, Perry, Chilton and Dallas Counties. The Shoal Creek and Talladega Districts are located in the northeastern part of the state in Cherokee, Calhoun, Cleburne, Talladega, Clay and Coosa Counties. The Tuskegee National Forest in east central part of the state west of Auburn, in Macon County.

SUMMARY OF THE AMS

The analysis of the management situation (AMS) for the National Forests is a determination of the forests' ability to supply goods and services in response to society's demand. The AMS provides a basis for determining the need for change in the existing Forest Plan direction and formulating a broad range of reasonable alternatives. The draft AMS was completed in August 1996, and a few of the important findings are:

- Land Allocations; allocate lands into Land Type Associations (LTA) and identify forest alliances, revise acreage of steep slopes to reflect land adjustments, correct acreage of aquatic habitat, evaluate areas for special designations (RNA, botanical area, Demonstration Forest, wild & scenic river), complete oil & gas leasing re-analysis, complete analysis of land suitable for timber production, and identify communication sites where needed

- Desired Future Conditions (DFC): write DFC for each LTA & management area to include: increasing recreation use and need to provide for a quality experience; future desired level for range program on the Conecuh; riparian areas and aquatic habitat; TES species by communities; more emphasis on scenic quality around trails, special areas and special routes; reduction of user conflicts; consider maintaining current semi-primitive areas to protect integrity of Sipsey wilderness area; provide for a wide variety of resource

opportunities; better describe the DFC of soil, water and air resources; need higher maintenance levels to reduce future road reconstruct needs; determine desired level for restoration and maintenance of longleaf pine/wiregrass community, and other longleaf pine communities; and determine desired level of prescribe burning to maintain fire dependent communities.

- Goals and Objectives: complete mapping and inventory of land type (LT) and land type phase (LTP); consider longleaf pine restoration; incorporate goals from the RCW EIS; consider old growth communities; consider diversity, viability, and management indicator species; analyze prescribe burning rotations, summer burning, prescribed natural fire in wilderness & associated air quality objectives; consider increasing the fisheries program while re-evaluating pond and lake fertilization needs; incorporate recovery plans and conservation agreements; determine Red-cockaded Woodpecker (RCW) habitat management areas and incorporate the RCW EIS; update goals & objectives for soil and water inventories and watershed restoration; evaluate the need to establish water rights; develop management strategies for over used areas especially trails and wilderness areas; upgrade existing developed recreation sites as needed; develop access for fishing opportunities; evaluate management of trails; increase interpretive services for trails and wilderness; develop goals & objectives for transportation system based on demand, and road density standards; address noxious weeds and management objectives; re-examine land exchange program and land adjustment boundaries and update objectives for land acquisition, provide for aggressive SPB control and prevention options; more emphasis on management of mixed pine-hardwood and hardwood- pine types, need to harvest off-site loblolly and slash pines and replace stands with trees suited to those sites; need to re-evaluate allowable sale quantity; need to accelerate harvesting within 50 to 80 year old stands; and address the need for and role of outfitters and guides

- Standards; re-evaluate fire suppression strategy to allow prescribed natural fires in wilderness areas; re-evaluate prescribed burning rotations to consider sandy soils and ecosystem/community needs; provide for protection of TES species by community or habitat grouping (i.e. bogs, bluff faces, streamside management areas…); develop additional soil and water standards to address unique or special ground water resources and system road construction or reconstruction; develop standards for areas unsuitable for timber production where management activities are still needed for maintenance or restoration, develop standards to address problems with off-site loblolly and associated annosus root disease problems; manage more acres in mixed stands and re-evaluate conversion percentages, consider age class imbalance and young overstocked stands; re-vegetate roads and do wildlife plantings with native species or non-natives that do not spread outside the intended area; increase commercial thinning in young pine-hardwood stands; develop water quality standards

for trail maintenance and construction; address heavy use in Turnipseed Camp; re-evaluate rotation ages for pine and hardwood; develop specific standards to address use of National Forest lands for military training; and develop standards for uneven-aged management, management of mixed types and old growth.

- Monitoring, complete a new monitoring plan with emphasis on DFC to see if it is being met, implementation and effectiveness of standards, goals and objectives.

- Wilderness Recommendation, consider and evaluate inventoried roadless areas for possible wilderness recommendation

SUMMARY OF ISSUES

Public involvement is a key part of the planning process. Our goals for public involvement associated with this planning process were: to ensure that all individuals and groups interested in or affected by the management of the National Forests in Alabama have the opportunity to be informed and participate in the revision process; and to reach an informed understanding with the public of the varying interests and to consider these interests in developing this revised plan.

Public comments were used to identify what direction management of the forest should take in the future, including what goods and services would be provided and what the environmental conditions should be. Many opportunities are provided for people to get involved in the planning process and to provide comments. Issues submitted by the public, as well as from within the Forest Service, guided the need to change current management strategies.

Public Involvement began in January 1995, with the first edition of the Alabama Treasures Newsletter. The newsletter informed the public that we were beginning to gather information and organizing to begin the process. A variety of public meetings, open houses and listening sessions were held over the next year. The Notice of Intent to prepare an environmental impact statement was published on August 1, 1996, and on September 10, 1996, scoping notification was sent to interested and affected public announcing the 120 day comment period and associated listening sessions, as well as asking for comments on the draft Analysis of the Management Situation (AMS).

A four-phase process was used to develop alternatives. Based on the issues and public comments, four preliminary alternatives were developed. Public meetings were held throughout the state, and comments were solicited on the preliminary alternatives. Based on these comments, the five Southern Appalachian forests met and developed four additional alternatives. Finally, a “Rolling Alternative” was created based on criteria that addressed the Natural Resource Agenda (Watershed Health, Recreation, Sustainable Forest Ecosystem Management, and Forest Roads), Regional Forester’s Emphasis Areas (Watershed Health/Water Quality, Habitat for Wide-Ranging Species, T&E Recovery Plans, Old Growth, Semi-Primitive Recreation Opportunities, Roadless Areas, Special Areas, and

a consistent approach to determining lands suitable for timber production), issues common to all five National Forests, and the issues unique to each of the forests.

The issues developed for the National Forests in Alabama are:

1. Terrestrial Plants and Animals and their Associated Habitats: How should the national forest retain/restore a diverse mix of terrestrial plant and animal habitat conditions while meeting public demands for a variety of wildlife values and uses?

2. Threatened, Endangered, and Sensitive/Locally Rare Species: What levels of management are needed to protect and recover the populations of federally listed threatened, endangered, and proposed species? What level of management is needed for Forest Service sensitive and locally rare species?

3. Old Growth: The issue surrounding old growth has several facets, including: (1) how much old growth is desired, (2) where should old growth occur, and (3) how should old growth be managed?

4. Riparian Area Management, Water Quality, and Aquatic Habitats: What are the desired riparian ecosystem conditions within national forests, and how will they be identified, maintained, and/or restored? What management direction is needed to help ensure that the hydrologic conditions needed for the beneficial uses of water yielded by and flowing through national forest system lands are attained? What management is needed for the maintenance, enhancement, or restoration of aquatic habitats?

5. Wood Products: The issue surrounding the sustained yield production of wood products from national forest has several facets, including: what are the appropriate objectives for wood product management? Where should removal of products occur, given that this production is part of a set of multiple-use objectives and considering cost effectiveness? What should be the level of outputs of wood products? What management activities associated with the production of wood products are appropriate?

6. Aesthetic/Scenery Management: The issue surrounding the management of visual quality has two facets. One is, what are the appropriate landscape character goals for the national forests? The other is, what should be the scenic integrity objectives for the national forests?

7. Recreation Opportunities/Experiences: How should the increasing demand for recreational opportunities and experiences be addressed on the national forests while protecting forest resources? This includes considering a full range of opportunities for developed and dispersed recreation activities (such as nature study, hunting and fishing activities, and trail uses).

8. Roadless Areas/Wilderness Management: Should any of the roadless areas on national forest system lands be recommended for wilderness designation? For

any roadless areas not recommended for wilderness, how should they be managed? How should areas recommended for wilderness designation be managed? How should the patterns and intensity of use, fire, and insects and diseases be managed in the existing wilderness areas?

9. Forest Health: What conditions are needed to maintain the ability of the forest to function in a sustainable manner as expected or desired? Of particular concern are the impacts of exotic or non-native species and the presence of ecological conditions with a higher level of insect and disease susceptibility.

10. Special Areas and Rare Communities: What special area should be designated, and how should they be managed? How should rare communities, such as those identified in the Southern Appalachian Assessment, be managed?

11. Wild and Scenic Rivers: Which rivers are suitable for designation into the National Wild and Scenic River System, and how should rivers that are eligible, but not suitable, be managed?

12. Access/Road Management: How do we balance the rights of citizens to access their national forests with our responsibilities to protect and manage the soil and water resources, wildlife populations and habitat, aesthetics, forest health, and desired vegetative conditions?

13. Role of Fire/Air Quality: How will air quality be sustained while carrying out needed management activities, such as prescribed fire, and what role will fire play in the ecosystems on each major division of land?

14. Fixed Communication Sites: What should be the location and size of fixed communication sites necessary to provide adequate protection and service delivery for communities of interest, resources, and facilities?

15. Tuskegee National Forest as a Demonstration Forest: Should the Tuskegee National Forest be designated as a demonstration forest, and what ecosystem management principles and/or research should be emphasized?

16. Bankhead National Forest as a National Recreation Area: Should the Bankhead National Forest be recommended as a National Recreation Area? (A National Recreation Area is set aside by Congress to showcase and provide for outdoor recreation opportunities).

17. Red-cockaded Woodpecker Habitat Management Areas: What is the appropriate size and location for habitat management areas for red-cockaded woodpeckers on each major division of land?

18. Land Exchange and Land Acquisition: Under what conditions should land exchange and land acquisition programs be conducted on each major division of land?

19. Minerals: How will the mineral resources of the national forest be managed considering public demand for a wide variety of minerals? What areas will be made available for the exploration and development of Federal leasable minerals and mineral materials?

Chapter 2

FOREST-WIDE DIRECTION

Introduction

A portion of the National Forests in Alabama, specifically the Talladega Division, is part of the Southern Appalachian ecosystem. The rest of the National Forests in Alabama is within the Cumberland Plateau and Coastal Plain ecoregions. The goals for management of the National Forests in Alabama were developed in consideration of the other national forests within the Southern Appalachian region. This chapter outlines the overall management direction for the National Forests in Alabama. This direction is organized around the physical, biological, and social resources of the Forest, as well as the major issues identified by the groups and individuals who helped develop this Forest Plan.

Each resource includes broad goal statements, which describe desired conditions to maintain, restore or achieve in the future. Objectives express measurable steps needed during the next ten to fifteen years in order to achieve the forest goals. Objectives are also linked to the Forest Monitoring Plan.

Goals and objectives define the general direction for management for the Forest and standards define the rules applied during implementation of activities associated with this plan. Standards are the specific technical resource management directions and often preclude or impose limitations on management activities or resource uses, generally for environmental protection, public safety, or to resolve an issue. Deviation from a standard requires a Forest Plan amendment. Adherence to Forest Plan standards will be monitored during project implementation.

Forestwide goals, objectives, and standards apply to the entire forest unless superseded by specific management area or management prescription direction. Projects will be evaluated to determine if they are consistent with the management direction in this Revised Plan. The evaluation is documented in a project-level environmental document with a finding of consistency with the forest plan, incorporated into the decision document.

The Plan is a strategic document providing land allocations, goals, desired conditions, and standards that must be met. During the plan revision process the interdisciplinary team developed this direction and it is contained in this document. While this direction was being developed, the Forest identified some additional items which would not quality as Plan direction, but which are important for later plan implementation. In the future, when the new Plan has been adopted, these items will either be incorporated into Forest and/or Regional supplements to the Forest Service directives system or made part of a “desk reference” document.

The following Forestwide Standards Package is designed to be specific to the National Forests in Alabama. Laws, regulations, and Forest Service Directive System direction are not repeated in this package. Some resource areas, such as heritage resources or threatened and endangered species have very specific direction in law, regulation, policy, the Forest Service Directive System, and other sources such as recovery plans. If a particular resource is not addressed in this section, that does not mean the resource is not managed, nor does it mean the Forest Service considers a particular resource less important than those listed. The entire forest plan, including the appendices, must be carefully read to understand how all resources will be managed.

Any decisions on projects to implement the Revised Plan will be based on site-specific analysis in compliance with the National Environmental Policy Act (NEPA). These environmental analyses will be appropriately documented according to direction in the Council on Environmental Quality *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR Parts 1500-1508) and the *Environmental Policy and Procedures Handbook* (FSH 1909.15).

In addition to the management direction provided in this Plan, the Forest is required to follow all laws, regulations, and Forest manual and handbook direction.

FOREST-WIDE GOALS, OBJECTIVES and STANDARDS

FW-1. Riparian and Rare Community prescriptions, and streamside management zones will be applied Forest-wide as defined and described in Chapter 3, and will supercede mapped land allocations.

Restoration and Health of Forest Ecosystems

A pertinent example of the need for emphasizing forest health and restoration of native ecosystems in this revised plan is the loblolly pine growing in longleaf pine ecosystems. During the last 50 years across the southeastern United States, pine plantations have increased in abundance, expanding from 1% of the total pine forest acres to 48% of those acres (USDA Forest Service 2001: 1). At the same time, the 20-year trend reported for the Southern Appalachian Assessment area (SAMAB 1996: 27) shows a downward trend of 16% for southern yellow pine forests. These two facts together suggest that natural yellow pine forests have declined significantly and represent an opportunity for large-scale restoration of this community type.

The National Forests in Alabama have been experiencing a southern pine beetle epidemic since 1999 and currently more than 34,000 acres of southern yellow pine forests have been severely impacted. Many of the sites impacted were densely stocked stands of loblolly pine that had either regenerated naturally in areas that were protected from wildfire or had been planted as pure pine plantations between 1930 and 1980. Beginning in the 1930s, the Civilian Conservation Corp provided the labor needed to reestablish forests on abandoned farmland and previously cutover upland timberland. The primary species used to reestablish forest conditions was loblolly pine. Beginning in the 1960s, the Forest Service began new efforts to improve forest economic yields by

replacing some upland hardwood forests with faster growing loblolly pine. At that time, loblolly pine offered the best chance of high survival and success in reforestation. These efforts, along with some natural establishment of loblolly pine, have resulted in Xeric Pine & Pine-Oak occupying 11.3% of Management Area 1 – Bankhead, 12.6% of Management Area 4 – Talladega Division, and 2.5% of the Total Forest Acres. While loblolly pine is a native tree species, the dominance of pure stands of loblolly pine is not typical of native, fire dependent woodlands that normally occur on the uplands. Historically, natural communities were maintained by low intensity fires originating on ridge tops and southern exposures (NatureServe 2002). With large-scale mortality in these communities due to pine beetle effects, the opportunity now exists to restore these sites.

In this Plan, allocation of the 'Restoration' prescriptions (according to desired restored community type) covers much of the lands where the need for restorations exists. Reference the land allocation maps in the Appendix.

The Forest Service maintains an inventory of forest type, condition and age. This inventory has been cross-walked to the community types described in the *Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests in the Southern Region* (USDA 1997). Table 2.0 also categorizes forest types and old-growth forest communities into habitat groups. Habitat groups represent a niche or condition relevant to wildlife species. An analysis of trends among habitat groups allows the potential effects of management on wildlife to be assessed. The following tables display the composition of each of National Forests in Alabama's management units.

Table 2.1 Relationship of Community to Forest Type and Major Habitat Group and Composition by Management Area

Management Area 1 - Bankhead

Community	% of Forested Acres	Forest Types	% of Community	Major Habitat Group
Dry and Dry-Mesic Oak-Pine Forest	49%	shortleaf/oak (12)	<1	Oak and Oak Pine
		yellow pine (25)	3	
		loblolly pine (31)	80	
		southern red oak/yellow pine (44)	3	
		white oak/black oak/yellow pine (47)	2	
		northern red oak/yellow pine (48)	16	
Dry Mesic Oak Forest	26%	post oak/bear oak (51)	<1	Oak and Oak Pine
		chestnut oak (52)	<1	
		white oak/red oak/hickory (53)	98	
		white oak (54), scarlet oak (59)	<1	
		chestnut oak/scarlet oak (60)	<1	
Xeric Pine and Pine-Oak Forest and Woodland	11%	loblolly pine/hardwood (13)	45	Pine and Pine Oak
		Virginia pine/oak (16)	9	
		shortleaf pine (32)	<1	
		Virginia pine (33)	33	
		chestnut oak/scarlet oak/yellow pine (45)	10	
		bear oak/southern scrub oaks/yellow pine (49)	1	
Mixed Mesophytic Forest	8%	white pine-upland hardwood (10)	<1	Mesic Deciduous
		cove hardwoods-white pine-hemlock (41)	15	
		upland hardwoods-white pines (42)	<1	
		yellow poplar (50)	<1	
		yellow poplar-white oak-Northern Red Oak (56)	82	
		beech-magnolia (69)	<1	
		sycamore-pecan-American elm (75)	<1	
		black birch (83)	<1	
		American chestnut (95)	<1	
		brush species (99)	<1	
River Floodplain Hardwood Forest	2%	bottomland hardwood/yellow pine (46)	86	Mesic Deciduous
		sweet gum/yellow poplar (58)	12	
		sweet gum/nuttall oak/willow oak (62)	2	
		sugarberry/American elm/green ash (63)	<1	
		laurel oak/willow oak (64)	<1	
		sweet bay/swamp tupelo/red maple (68)	<1	
Upland Longleaf Pine Forests and Woodland	1%	longleaf pine (21)	94	Upland Longleaf
		longleaf pine/hardwood (26)	6	
Cedar Woodlands	1%	eastern red cedar/hardwood (11)	66	Cedar Woodlands
		eastern red cedar (35)	11	
		oak/eastern red cedar (43)	23	
Conifer Northern Hardwood Forest	1%	eastern white pine (3)	16	Eastern Hemlock Forests
		hemlock/hardwoods (8)	82	
		white pine/cove hardwood (9)	2	

Management Area 2 – Conecuh

Community	% of Forested Acres	Forest Types	% of community	Major Habitat Group
Upland Longleaf Pine Forests and Woodland	52%	longleaf pine (21) longleaf pine/hardwood (26)	98 2	Upland Longleaf
Wet Pine Forests, Woodlands, and Savannas	21%	slash pine (22) slash pine/hardwood (14)	93 7	Wet Pine Forests
River Floodplain Hardwood Forest	19%	bottomland hardwood/yellow pine (46) sweet gum/yellow poplar (58) sweet gum/nuttall oak/willow oak (62) laurel oak/willow oak (64) sweet bay/swamp tupelo/red maple (68) beech/magnolia (69) undrained flatwoods (98)	9 1 1 21 68 <1 <1	Mesic Deciduous
Dry and Dry-Mesic Oak-Pine Forest	4%	yellow pine (25) loblolly pine (31) sand pine (34) southern red oak/yellow pine (44) white oak/black oak/yellow pine (47)	51 25 1 19 4	Oak and Oak pine
Coastal Plain Upland Mesic Hardwood	2%	loblolly pine/hardwood (13) yellow poplar (50) post oak/black oak (51) white oak/red oak/hickory (53)	15 4 16 65	Mesic Deciduous
Dry and Xeric Oak	<1%	(57) Scrub oak	100	Oak and Oak Pine
Xeric Pine and Pine-Oak Forest and Woodland	<1%	(49) Bear oak/scrub oak/yellow pine	100	Pine and Pine Oak
Cypress Tupelo	<1%	bald cypress (24) bald cypress/water tupelo (67)	33 67	Cypress Tupelo Swamp

Management Area 3 – Oakmulgee Division

Community	% of Forested Acres	Forest Types	% of community	Major Habitat Group
Upland Longleaf Pine Forests and Woodland	40	longleaf pine (21) longleaf pine/hardwood (26)	97 3	Upland Longleaf
Dry and Dry-Mesic Oak-Pine Forest	34	shortleaf pine/oak (12) loblolly pine/hardwood (13) yellow pine (25) loblolly pine (31) shortleaf pine (32) sand pine (34) southern red oak/yellow pine (44) white oak/black oak/yellow pine (47) northern red oak/hickory/yellow pine (48)	3 18 <1 70 <1 <1 5 2 1	Oak and Oak Pine
Dry Mesic Oak Forest	10	post oak/bear oak (51) white oak/red oak/hickory (53)	<1 99	Oak and Oak Pine
River Floodplain Hardwood Forest	9	bottomland hardwood/yellow pine (46) sweet gum/yellow poplar (58) sweet gum/nuttall oak/willow oak (62) laurel oak/willow oak (64)	29 32 39 <1	Mesic Deciduous
Mixed Mesophytic	4	yellow poplar-white oak-northern red oak (56)	100	Mesic Deciduous
Cypress Tupelo	3	sweet bay/swamp tupelo/red maple (68) bald cypress/water tupelo (67)	98 2	Cypress Tupelo Swamp
Xeric Pine and Pine-Oak Forest and Woodland	<1	Virginia pine (33) Bear oak/scrub oak/yellow pine (49)	72 28	Pine and Pine Oak

Management Area 4 – Talladega Division

Community	% of Forested Acres	Forest Types	% of community	Major Habitat Group
Dry and Dry-Mesic Oak-Pine Forest	29%	shortleaf/oak (12) yellow pine (25) loblolly pine (31) shortleaf pine (32) southern red oak/yellow pine (44) white oak/black oak/yellow pine (47) northern red oak/yellow pine (48)	4 5 70 16 4 <1 <1	Oak and Oak Pine
Dry Mesic Oak Forest	29%	post oak/bear oak (51) chestnut oak (52) white oak/red oak/hickory (53) white oak (54), chestnut oak/scarlet oak (60).	<1 17 80 <1 2	Oak and Oak Pine
Mountain Longleaf Pine Forests and Woodland	20%	longleaf pine (21) longleaf pine/hardwood (26)	99 1	Mountain Longleaf
Xeric Pine and Pine-Oak Forest and Woodland	14%	loblolly pine/hardwood (13) Virginia pine/oak (16) Virginia pine (33) chestnut oak/scarlet oak/yellow pine (45) bear oak/southern scrub oaks/and yellow pine (49)	16 4 30 49 1	Pine and Pine Oak Forests
Mixed Mesophytic Forest	6%	yellow poplar (50) yellow poplar/white oak/northern red oak (56)	1 99	Mesic Deciduous
River Floodplain Hardwood Forest	2%	bottomland hardwood/yellow pine (46) sweet gum/yellow poplar (58) willow (74)	28 71 1	Mesic Deciduous

Management Area 5 – Tuskegee

Community	% of Forested Acres	Forest Types	% of community	Major Habitat Group
Dry and Dry-Mesic Oak-Pine Forest	36%	loblolly pine/hardwood (13)	8	Oak and Oak Pine
		loblolly pine (31)	90	
		shortleaf pine (32)	<1	
		southern red oak/yellow pine (44)	1	
		bear oak/southern scrub oaks/yellow pine (49)	1	
River Floodplain Hardwood Forest	34%	bottomland hardwood/yellow pine (46)	24	Mesic Deciduous
		sweet gum/yellow poplar (58)	33	
		Swamp chestnut oak/cherrybark oak (61)	1	
		sweet gum/nuttall oak/willow oak (62)	41	
		sugarberry/American elm/green ash (63)	<1	
		sweet bay/swamp tupelo/red maple (68)	1	
Upland Longleaf Pine Forests and Woodland	20%	longleaf pine (21)	100	Upland Longleaf
Wet Pine Forest, Woodlands, and Savannas	9%	slash pine (22)	100	Wet Pine Forests
Coastal Plain Upland Mesic Hardwood	1%	white oak/red oak/hickory (53)	100	Mesic Deciduous

Goals and Objectives:

GOAL 1 Manage forest and woodland ecosystems in order to restore and/or maintain native communities to provide the desired composition, structure and function. Emphasis will be placed on maintaining forest and plant community types not abundant on private lands.

OBJECTIVES

1.1 Restore and maintain approximately 17,000 acres of ***Mountain Longleaf Pine Forests and Woodland Communities*** (CISC 21 and 26) and associated upland pine (32), pine-hardwood (12), hardwood-pine (44, 45, 47, 48, 49) and hardwood (51, 52, 53, 54, 56, 60) forest types on the Talladega Division over the first ten years of plan implementation, and at similar rates following that period. Restoration of these native communities will reduce loblolly pine (31) and yellow pine (25) forest types, currently represented in the ***Dry and Dry-Mesic Oak Pine Forest Community***.

1.2 Restore and maintain approximately 17,000 acres of ***Upland Longleaf Pine Forests and Woodland Communities*** (CISC 21 and 26) on the Coastal Plain management areas (Oakmulgee division, Conecuh National Forest, and the Tuskegee National Forest) over the first ten years of plan implementation, and at similar rates following that period. Restoration of these native communities will reduce loblolly pine (31), yellow pine (25) and slash (22) pine forest types, currently represented in the ***Dry and Dry-Mesic Oak Pine Forest*** and ***Wet Pine Forest Woodlands, and Savannas Communities***.

1.3 Restore and maintain approximately 10,000 acres of ***Xeric Pine and Pine-Oak Forest and Woodland*** (CISC 32 and 12), ***Upland Longleaf Pine Forest and Woodland*** (21 and 26), and ***Dry Mesic Oak Forest*** (53) ***Communities*** on the Bankhead National Forest over the first ten years of plan implementation, and at similar rates following that period. Restoration of these native communities will reduce loblolly pine (31) and yellow pine (25) forest types, currently represented in the ***Dry and Dry-Mesic Oak-Pine Forest Community***.

1.4 Thin overstocked stands giving priority to first treatments. Thin stands of species not native to their site (usually CISC 22, 25, 31, 32) which cannot be immediately restored, to reduce hazards and sustain the stand until restoration can be accomplished. Thin approximately 30,000 acres on Bankhead National Forest, 24,000 acres on Conecuh National Forest, 12,000 acres on Oakmulgee National Forest, 20,000 acres on Talladega Division, and 500 acres on Tuskegee National Forest.

1.5 Restore and increase, by 30% as a minimum, areas of each management unit managed as ***Mountain Longleaf Forest and Woodland***, ***Upland***

Longleaf Pine Forest and Woodland, *Dry and Dry-Mesic Oak-Pine Forest*, and *Xeric Pine and Pine-Oak Forest and Woodland Community* types (or fire sub-climax, communities of pine (CISC 21, 32, 25, 22), pine/oak (26, 12, 16, 14), oak-pine (44, 45, 47, 48, 49), and oak (51, 52, 53, 54, 60) forest types) in woodland and savanna condition, with reduced tree canopy cover and restored native herbaceous ground cover.

GOAL 2 Minimize adverse effects of invasive non-native species. Control such species where feasible and necessary to protect National Forest resource.

OBJECTIVES

2.1 Inventory and map priority areas with non-native, invasive plant species (noxious weeds).

GOAL 3 Manage existing forest communities to reduce risks from insects and disease.

Standards

FW-2. Unless necessary for insect or disease control or to provide for public and employee safety, standing snags and den trees will not be intentionally felled during vegetation management treatments unrelated to timber salvage. For pine timber salvage treatments, all live den trees, and minimum of 5 snags per acre, if present, from the largest size classes will be retained. Distribution of retained snags may be clumped. (Applies to the Conecuh, Talladega, Oakmulgee & Tuskegee Management Areas)

FW-3. Unless necessary for insect or disease control or to provide for public and employee safety, den trees will not be intentionally felled during vegetation management treatments. . (Applies to the Conecuh, Talladega, Oakmulgee & Tuskegee Management Areas)

FW-4. In even-aged regeneration areas where at least 2 snags per acre are not present or cannot be retained as residuals, at least 2 standing snags/acre will be created from the larger diameter classes within the original stand. In addition, a minimum of 5 of the largest living mature trees per acre will be retained to provide potential future snags during the early and mid-successional stages of stand development. Distribution of snags and live residuals may be scattered or clumped. Live den trees are not to be used for snag creation, but may count toward live residuals. (Applies to the Bankhead Management Area)

FW-5. When seeding temporary openings such a temporary roads, skid trails and log landings, use only native or non-persistent nonnative species.

FW-6. The Integrated Pest Management approach will be used to manage pest populations, such as SPB. IPM is a decision-making and action process that

includes biological, economic, and environmental evaluation of pest/host relationships to manage pest populations. Forest Health Protection Unit will be consulted when significant pest problems occur.

FW-7. Timber harvesting with conventional equipment is limited to slopes $\leq$ 40%.

FW-8. Temporary roads will cross streams only on temporary bridges or low water fords. Fords may be used only when stable channel conditions exist and downstream beneficial uses are not jeopardized. Temporary bridges will be removed upon completion of use.

FW-9. When regenerating forest stands, regenerate to native, on-site tree species that commonly occur naturally on similar sites within the same land type association.

FW-10. Use native species when planting in restoration and reclamation sites

FW-11. Retain soft mast producing species (dogwood, black gum, hawthorn, grapes, serviceberry, etc) during vegetation cutting treatments to the extent compatible with meeting treatment objectives.

Watersheds – Water, Soil, and Air

The National Forests in Alabama lies within six physiographic areas: Cumberland Plateau, Piedmont, Ridge and Valley, Tennessee Valley, Lower Costal Plain and Upper Coastal Plain. Each physiographic area is both distinct and diverse in relation to topography, geology, and soil. Topography of the Bankhead National Forest is moderate to strongly dissected with broad nearly level and narrow strongly sloping ridges leading into steep gorges with rock bluffs. The Talladega Division of the Talladega National Forest topography is comprised of upland hills and low mountains with predominantly moderately steep slopes. Topography of the Coastal Plain forests, Conecuh and Tuskegee National Forest, and the Oakmulgee Division of the Talladega National Forest, consists of level to moderately sloping, broad ridges with stream terraces and broad floodplains. Geology ranges from sandstone, shale, and limestone found on the Bankhead National Forest to slate, shale, sandstone, and schist on the Talladega Division of the Talladega National Forest to coastal plain marine sediments consisting of layers of gravel, coarse and fine sand, and clay found on the Conecuh and Tuskegee National Forests, and the Oakmulgee Division of the Talladega National Forest.

The diverse geology has weathered into a total of ninety-eight soil series that can be found to date on the National Forests in Alabama. An Order 2 soil resource inventory has been conducted on all National Forests except the Oakmulgee Division of the Talladega National Forest, which has an Order 3 soil resource inventory. Currently, an Order 2 soil inventory is being conducted on the Oakmulgee Division. A total of 138 soil map units have been identified through soil resource inventories. Soil interpretations for land management practices have been developed based on each soil map unit. In turn, soil interpretations are used to develop standards to be applied to reduce or mitigate potential impacts to the soil resource.

Most all of the soils on the National Forests are highly weathered, acidic, and have a low nutrient status. Soil productivity from a forest perspective is considered high. Forests use a relatively small nutrient pool compared to agriculture and other propagated crops. In addition, the relatively deep soils, moisture availability, and landscape positions aid in providing a good growing medium for forest vegetation. The relative productivity of a given soil is based on the physical and chemical components. The biological component of a soil is also an important part of soil productivity but is contingent on the physical and chemical component.

The National Forests in Alabama has ownership within 9 major drainage basins, 18 fourth level HUCS and 56 fifth level HUCS. The Bankhead Management area lies with 3 Basins: the Black Warrior, the Tennessee, and the Upper Tombigbee. The Conecuh Management Area lies within the Perdido-Escambia Basin. The Oakmulgee Management Area lies within 3 Basins: the Alabama, the Black Warrior, and the Cahaba. The Tuskegee Management Area lies within the Tallapoosa Basin. The Talladega Management Area lies within 2 Basins: the Coosa and the Tallapoosa.

Alabama is a well-forested state and this is reflected in the land-use patterns of the watersheds. Forest cover is the predominant land use. Agriculture was the next leading land use practice with urbanization (which includes commercial and industrial areas) a distant third. The quality of the waters flowing from National Forests lands is typically high. The state's highest use designations cover many of the streams coming from National Forest lands within many watersheds. The highest state use designation, Outstanding National Resource Waters, was applied to streams entirely on National Forest lands. Point sources of pollution are generally downstream of National Forest lands and are relatively unaffected by Forest Service management. The Middle Choccolocco Watershed seems to be plagued by the most point sources. None of the streams on National Forest lands are listed as impaired and those downstream of National Forest lands are impaired for reasons beyond Forest Service influence (i.e. organic enrichment and pathogens from pastures).

Sedimentation is the leading contributor to water quality degradation within the watersheds with Forest Service ownership. Forestry and agricultural practices are the leading causes for erosion and thereby sedimentation. The Alabama Department of Environmental Management has developed, in cooperation with the Forest Service, Best Management Practices (BMP's) to mitigate the sedimentation caused by these activities. The Forest Service meets or exceeds all of the State's BMP's, through the use of forest wide standards.

The groundwater on the National Forest is found in multiple aquifer systems. The yields of these various aquifers range from poor to high, depending upon the geology of the management area. The water taken from these aquifers is generally safe to drink with little or no treatment.

The groundwater on the Bankhead is contained in the Appalachian Plateaus aquifer system. The majority of the ground water can be found within sandstone and limestone fractures. Yields are generally low (10gpm) with only a few areas of high yields in fracture areas. Sandstone units generally provide adequately for domestic supply. Limestone formations provide sufficiently for some municipal and industrial supplies. Most water is suitable for most uses but is highly mineralized.

The groundwater on the Conecuh is contained in a complex structure of aquifer systems. The Southeastern Coastal Plain aquifer system is the surface aquifer in the northern part of the Conecuh sloping away towards the Gulf of Mexico and becoming the underlying aquifer system for the all other aquifer systems. The next surface aquifer system moving from the north to south across the Conecuh is the Floridan, which also slopes away to the Gulf and overlying the Southeastern Coastal Plain aquifer system. A confinement layer is present at the surface in areas on the Conecuh sloping away to the Gulf and overlying the Floridan and Southeastern Coastal Plain aquifer systems. The Surficial aquifer system and the Sand and Gravel aquifer systems are the surface aquifers across the lower portions of the Conecuh with the Surficial system on the west and the Sand and Gravel system to the east. Both of these systems are over the confinement layer, the Floridan system, and the Southeastern Coastal Plain respectively. There is hydrologic communication between these various systems and the surface, creating bogs, sinkhole

ponds, springs, and perched water tables providing for various water related rare communities. All of these aquifer systems are highly productive and suitable for municipal or industrial development (150gpm).

The groundwater on the Oakmulgee and the Tuskegee is contained in Southeastern Coastal Plain aquifer system. The majority of the ground water can be found within sand and gravel formations. This aquifer system can best be described as extremely stratified by silt and clay confinement layers. This aquifer system has lateral communication with the surface. The productivity of this aquifer system is generally good.

The groundwater on the Talladega is contained in the Piedmont and Blue Ridge aquifer system as well as the Valley and Ridge aquifer system. The majority of the ground water in the Piedmont and Blue Ridge aquifer system can be found in fractures within the metamorphic rock. The majority of the ground water in the Valley and Ridge aquifer system can be found in sandstone, limestone and dolomite formations. Both systems have some lateral communication with the surface. The productivity of the Piedmont and Blue Ridge aquifer system varies with fracture size but is generally inadequate for municipal supply. The productivity of Valley and Ridge aquifer system is generally good.

Alabama is blessed with an abundance of surface-water due to our abundance of annual precipitation. Precipitation averages about 56 inches per year with runoff rates averaging about 22 inches per year. Much of the precipitation flows directly into rivers and streams as overland runoff or indirectly as baseflow from discharging aquifers where the water has been stored for a short time. Some of the precipitation that falls is returned to the atmosphere by means of evapotranspiration and evaporation from surface-water bodies such as lakes and marshes, and transpiration from plants. However, a substantial part of the precipitation is available for aquifer recharge.

The National Forest has approximately 7,700 miles of streams and 3,100 acres of surface water. Stream channels exhibiting evidence of scouring accounted for 4,900 miles of the total streams. Streams that flow only 2 to 3 months a year, usually only during rain events are considered ephemerals and are comprised of order 1 and 2 streams. Streams that flow 6 to 10 months, usually drying during drought events are considered intermittent and are comprised of order 3 streams. Orders 4 and above generally flow continuously year round, except during periods of extended droughts are considered perennial.

The Clean Air Act (CAA) is a major part of the regulatory framework that drives air quality management within/near the National Forests. The CAA created the National Ambient Air Quality Standards (NAAQS), which established regulatory minimums for air quality, and it created a program to prevent significant deterioration (PSD) of air quality in areas in areas where good air quality (not falling below the NAAQS minimums) still existed. While the Environmental Protection Agency (EPA) and the States lead these programs, roles have been identified for industry, commerce, land managers, other levels of government and the public.

With its three classes the PSD program identified three levels of effort that must be expended to maintain good air quality where it already exists. Class I Areas (certain wilderness areas and national parks designated by Congress) can receive only small amounts of additional pollution. Further, where it can be shown that the resources of Class I Areas are already suffering adverse impacts from air pollution, there is a process to make reasonable progress toward returning the Area to its natural condition. Class II Areas can receive moderate increments of additional air pollution, as long as neither a NAAQS violation nor a significant deterioration of resources is anticipated. Class III Areas can receive larger increments of additional pollution, though still subject to NAAQS and resource considerations. Except for the 143 congressionally designated Class I Areas, all of the United States is designated as Class II. The air inventory and monitoring efforts lead by the States and EPA have identified a number of NAAQS non-attainment areas, mostly centered on metropolitan areas.

Sipsey Wilderness is a Class I Area. The balance of the Forest is designated Class II. Except for a persistent non-attainment designation around Birmingham, all of the State is in NAAQS attainment and therefore, Class II. Air pollution control (emission reduction) efforts aimed at bringing the Birmingham area back into attainment have, so far, not required any changes in management of the Forest.

Goals and Objectives

GOAL 4 Watersheds are managed and/or restored to provide resilient and stable conditions to support the quality and quantity of water necessary to protect ecological functions and support intended beneficial water uses.

OBJECTIVES:

4.1 In 5th level watersheds with a high percentage of impaired waters, but a low percentage of National Forest ownership, examine possible partnership opportunities with other interested individuals and entities to address impairment issues.

4.2 Watershed improvement needs are prioritized annually by watershed assessment issues and current inventory.

4.3 Annually coordinate non-point source pollution (NPS) assessments with the Alabama Department of Environmental Management (ADEM).

GOAL 5 Maintain or improve water quality to meet State and Federal standards and to provide for the beneficial uses of water.

OBJECTIVES:

5.1 Establish and maintain baseline water monitoring stations in each physiographic area.

5.2 Base watershed assessments/analysis each year on areas with proposed management activities.

5.3 Determine minimum instream flow rate for order 4 and higher streams with priority for streams with aquatic T&E species.

GOAL 6 Maintain soil (site) productivity and improve, where feasible.

OBJECTIVES

6.1 Each year, obtain soil quality data necessary to provide input into WEPP model for areas with proposed management activities.

6.2 Complete soil resource inventory on the Oakmulgee Division, Talladega National Forest.

6.3 Re-correlate and update as necessary the Bankhead National Forest soil resource inventory.

GOAL 7 Implement the goals of the Federal Clean Air Act, (CAA) along with the goals of other federal legislation aimed at protection and management of the National Forests. The CAA has goals for protection and improvement of: air quality through the National Forest (plus surrounding lands) and, the air quality related values (AQRVs) established for the Sipsey Wilderness (a Class I area). Inventory and management provisions within Renewable Resources Planning Act (RPA) provide goals similar to "AQRV protection " for the general Forest area.

OBJECTIVES

7.1 Forest Service (FS) will review applications to state air regulatory agencies for major new emissions near the Sipsey Wilderness for potential impacts on its air quality related values (AQRVs).

7.2 Forest Service will participate in the State Implementation Plan (SIP) planning process. One objective of the SIP is to regulate atmospheric emissions from many industrial, commercial, land use and other types of activities. Forest Service participation will focus on air pollution impacts on resources throughout the National Forests and on regulation of pollutants that may be generated by land management activities.

7.3 FS will annually review the status of counties near the National Forests regarding their attainment of the National Ambient Air Quality Standards. Where a non-attainment area is formally recognized, FS will participate in

SIP modification, as described above, to bring the area back into attainment status.

7.4 Forest Service will work with state air regulatory agencies and regional planning organizations to reduce visibility impairment at the Sipsey Wilderness Class I area.

Standards

FW-12. Watershed Improvement work that involves restoration of gullies, borrow pits, mines, stream channels or involve the use of specifically appropriated funds will require an approved watershed improvement prescription per individual project and will contain information as outlined in FSH 2509.15, Watershed Improvement Handbook, Chapter 10.

FW-13. All areas requiring re-vegetation for erosion control will be treated during the spring and or fall grass planting seasons or within 6 months following the close out of the ground disturbing activity. The areas will be considered successfully treated when 85% or greater vegetation cover is established within 2 years of the initial treatment (3 years on the Oakmulgee and Tuskegee).

FW-14. Timber Sale Areas and associated reforestation practices will have a minimum 35-foot no equipment zone will be maintained around gully heads and sidewalls. Timber may be selectively removed from within the 35-foot zone thru use of chainsaws and cable.

FW-15. Resource activities that may affect water quality will implement State Best Management Practices as a minimum to meet water quality objectives. FLMP standards that exceed State BMP's will take precedence.

FW-16. All soil disturbing activities (excluding roads and trails) will not take place on water-saturated soils. Standing water and puddling are evidence of a saturated condition. (Soil disturbing activities are not limited to timber harvesting.)

FW-17. Slash burns are done so they do not consume all litter and duff or alter structure and color of mineral soil on more than 20 percent of the area.

FW-18. Water Control structures necessary for the control of surface water movement from disturbed sites will be constructed during or within two weeks following construction for temporary roads and within two weeks following the close out of the disturbing activity for skid trails.

FW-19. Shear and rake site preparation method are to be avoided on sustained slopes exceeding 5%. Proposals for shear and rake site preparation methods on sustained slopes exceeding 5% will be reviewed by the Forest Soil Scientist. Decisions will be based on Forest Soil Scientist recommendations.

FW-20. Water control structures necessary for the control of surface water movement on prescribed fire lines will be installed during fire line construction. Permanent fire lines will have water control structures maintained (refer to re-vegetation standard).

FW-21. All activities will meet the requirements of applicable regulations established in pursuit of state or federal air quality goals. While the Forest Service cannot unilaterally guarantee the quality of air (generally or at a specific point) within an airshed, it does ensure that its management activities will be conducted with full adherence to pollution control methodologies and technologies prescribed by air quality regulatory agencies.

FW-22. Forest Service will monitor relevant aspects of air quality within the Forest, either through its own efforts, in cooperation with other agencies, or by review of the results of other agency monitoring in or near the forest.

FW-23. Timber harvesting activities on the Bankhead, Conecuh and Talladega National Forests are prohibited within sinkholes and within 200 feet of their defined boundary and within 200 feet of cave entrances (for caves not associated with sinkholes). Caves that are occupied by Gray or Rafinesque's big-eared bats should have a 0.25 mile radius buffer and Indiana bat caves should have a 0.50 mile radius buffer. This buffer does not preclude management that would improve conditions for listed or sensitive species, but provides protection for cave integrity

FW-24. Herbicides will not be used within 200 feet of defined sinkhole boundaries.

FW-25. Timber harvesting activities on the Bankhead are prohibited within 100 feet of the top of all rock shelters eligible for or included in the National Register of Historic Places, and 100 feet from cliff lines of greater than 25 feet vertical drop.

FW-26. The maximum size of an opening created by even-aged or two-aged regeneration treatments is 40 acres (80 acres for southern yellow pine types). Exceptions to these acreage limitations may be permitted following review by the Regional Forester. These acreage limits do not apply to areas treated as a result of natural catastrophic conditions such as fire, insect or disease attach, or windstorm. Areas managed as permanent openings (e.g. meadows, pastures, food plots, rights-of-way, woodlands, savannas, and grasslands) are not subject to these standards and are not included in calculations of opening size, even when within or adjacent to created openings.

FW-27. Openings created by even-aged and two-aged regeneration treatments will be separated from each other by a minimum distance of 330 feet. Such openings may be clustered closer than 330 fee as long as their combined acreage does not exceed the maximum opening size. An even-aged regeneration area will no longer be considered an opening when the certified reestablished stand has reached an age of 5 years.

FW-28. Regeneration harvests on lands suitable for timber production must be done under a regeneration harvest method where adequate stocking of desirable species is expected to occur within 5 years after the final harvest cut. (Five years after final harvest means five years after clearcutting, five years after final overstory removal in shelterwood cutting, five years after the see tree removal cut in seed tree cutting, or five years after selection cutting). The new stand must meet the minimum stocking levels as described in Stocking Levels Table below. These standards apply to both artificial and natural means of stand regeneration. Where natural means are used and stand reestablishment has not been accomplished within 3 years after committing the stand to regeneration, the stand is re-examined for further treatment needs.

Stocking Levels

Forest Type	Minimum Level
Loblolly Pine	300
Shortleaf Pine	300
Slash Pine	300
Longleaf Pine	400
Mixed (hardwood/pine)	200
Hardwood (desirable species)	150

Riparian Areas, Riparian Corridors and Streamside Zones Background

Riparian Areas are areas with three dimensional ecotones of interaction that include terrestrial and aquatic ecosystems, that extend down into the groundwater, up above the canopy, outward across the floodplain, up the near-slopes that drain the water, laterally into the terrestrial ecosystem, and along the watercourse at a variable width. A riparian corridor is an administrative zone applied to both sides of a stream or along side a pond, lake, seep or spring. The riparian corridor is a fixed width by stream type that may fall within or beyond the true riparian area. Perhaps one of the best ways of delineating riparian areas is by soils. Soils found in riparian areas are usually associated with the 100-year floodplain. Soils within the 100-year floodplain are relatively young to very recent depending on flooding activity and fluvial deposition. Floodplain soils are diverse and reflect the sediments transported by the river network. Coastal plain sediments

normally produce sandy or loamy soils whereas sediments from Piedmont and Mountain physiographic areas produce loamy to clayey soils. Soils also vary as distance from the river channel increases. Sandy soils are usually found in close proximity to the river channel followed by loamy soils and then silty or clayey soils. The size of the river or stream also factors into the formation of floodplain soils. Narrow floodplains tend to have one to maybe two different soil types compared to large broad floodplains that tend to have multiple soil types with a full range in soil textures. Depth to water table plays an important role in determining whether a soil is aerobic (oxygenated) or anaerobic (de-oxygenated). Anaerobic soils, termed hydric, are considered wetlands. Not all floodplain soils are wetlands just as not all wetlands are associated with floodplains. Although riparian areas are usually associated with rivers, freshwater swamps and bays are also included. Floodplain soils are normally higher in nutrient content and organic matter and are more poorly drained than upland soils. They act as filters and depositories during periods of flooding absorbing and storing nutrients from floodwaters. The Forest uses these soil characteristics as well as a minimum buffering distance of 100 ft to define the riparian corridor. The Forest further provides protection for scoured first order streams and second order streams in the way of streamside management zones (SMZ's). Before the application of riparian corridors Alabama used SMZ's on all order streams and ponds, seeps, bogs and springs. These SMZ's were put into place to protect water quality along with aquatic species. The riparian corridor expanded these areas of protection to include terrestrial and aquatic ecosystems by some 62,000 acres.

Protections under Riparian and SMZ (Acres)

Mgt/area	Riparian	Order 1 w/scour	Order 2	Total
BK	22,062	12360	5804	40226
CN	23,557	1035	1622	26215
OK	39,372	7836	5395	52603
TL	25,337	19930	9710	54976
TK	2,059	422	380	2861
Total	112,387	41583	22911	176881

GOAL 8 Riparian ecosystems, wetlands and aquatic systems are managed and/or restored to protect and maintain soil, water, vegetation, fish and wildlife associated resource values.

OBJECTIVES

8.1 Inventory riparian areas as management activities are proposed.

8.2 Up to 10% of riparian areas may be managed to provide non-forested habitat conditions, such as dense cane thickets, wet meadows, and wet savannas through overstory density reduction to meet habitat needs for birds, as well as meeting the needs of other riparian dependent species or rare habitat that may overlap or be contained within the riparian corridor.

Additionally, maintain a minimum of 1 to 2 percent of the riparian corridor in early successional forest conditions.

8.3 Conduct inventories and establish baselines to determine needs for large woody debris within stream channels and riparian zones.

GOAL 9 Provide riparian and aquatic ecosystem conditions that are suitable to maintain well distributed viable populations of all aquatic species native to the planning area. Manage for diverse, balanced, integrated, and adaptive aquatic/riparian communities, and provide habitat conditions to support desirable population levels and distribution of selected species (e.g. species with special habitat needs such as shoal, cave, or spring obligates; recreationally important species; threatened or endangered species; or species of special interest).

OBJECTIVES

9.1 Conduct aquatic and riparian ecosystem surveys to determine baseline and desired conditions. Collect both species specific and general habitat information to assess progress towards attainment of recovery and conservation objectives.

9.2 Inventory/map invasive non-native species.

GOAL 10 Lakes, ponds, and reservoirs support balanced, productive recreational fisheries to the extent appropriate for native aquatic species viability, threatened and endangered species, State and federal water quality standards, funding, and public demand.

OBJECTIVES

10.1 Develop lake and reservoir management plans and periodically (every 1-5 years) review and update the plans in coordination with State and other agencies and partners.

Standards

FW-29. Collection of plants within 50 feet of a perennial or intermittent stream is subject to permit regulations and the following restrictions:

Scientific collection only

Moss collection is prohibited

Collection within this zone is limited to those species that cannot be feasibly collected on upland sites.

Beaver populations and dams will be managed to prevent adverse effects to public safety, facilities, private land resources and rare communities.

Threatened, Endangered and Sensitive Species

The National Forests in Alabama contain habitat that supports 54 federally listed, 178 Regional Forester's sensitive, and numerous locally rare plant and animal species. For federally listed species, the Forest coordinates closely with the U.S. Fish and Wildlife Service to avoid negative effects and to assist with recovery of these species. Sensitive species have range-wide viability concerns and are designated by the Regional Forester, with the goal of not having them become federally listed. Locally rare species are species that each Forest designates due to concerns about losing representation of that species on the Forest, even though they are secure range-wide. All the lists can and often do change over time as species are added or removed.

Goals and Objectives:

GOAL 11 Substantially contribute to the recovery of federally listed threatened and endangered species, sensitive species and provide for the conservation of other species of concern so as to minimize the need for additional federal listings under the Endangered Species Act.

OBJECTIVES

11.1 Actively participate in the writing and implementation of recovery plans, habitat management plans, and conservation plans. Seek opportunities to expand or re-introduce threatened, endangered and sensitive species.

11.2 In cooperation with partners, conduct surveys of species and habitats to determine baseline and desired conditions during this planning period.

11.3 The following objectives are established to contribute to recovery of threatened, endangered, and candidate plants over the life of the Forest Plan. Forest-wide inventories for these species will be continued to document new or additional occurrences.

Common Name	Scientific Name	Current Number of Populations/ Occurrences	Desired Minimum Population Size (where applicable)	Management Objective*
Georgia aster	*Aster georgianus*	3	250 plants	1,2,3
White-fringeless orchid	*Plantathera integrilabia*	7	250 plants	1,2,3
Green pitcher plant	*Sarracenia oreophila*	0	200 clones or individual plants	3,4
Tennessee yellow-eyed grass	*Xyris tennesseensis*	0	100 plants	3,4
Georgia rockcress	*Arabis Georgiana*	o	100 plants	4
Alabama leather flower	*Clematis socialis*	0	100 plants	4
Leafy prairie clover	*Dalea foliosa*	0	200 plants	3,4
Eggert's sunflower	*Helianthus eggertii*	0	150 plants	3,4
Fleshyfruit gladecress	*Leavenworthia crassa*	0	250 plants	3,4
Lyrate bladderpod	*Lesquerella lyrata*	0	250 plants	3,4
Mohr's Barbara's buttons	*Marshallia mohrii*	0	50 plants	?
Harperella	*Ptilimnium nodosum*	0	500 stems	3,4
Kral's water-plantain	*Sagittaria secundifolia*	3	50 clones or plants	1,2,3
Alabama canebrake pitcherplant	*Sarracenia rubra var. alabamensis*	0	100 clones or plants	2,3,4
Alabama streak-sorus fern	*Thelypteris pilosa var. alabamensis*	15	500 gametophytes or individual plants	1,2,3

* 1 = Maintain current number of populations/occurrences through protection and maintenance of existing sites.
2 = Increase number of populations/occurrences by improving and/or increasing available habitat and relying on natural recruitment rather than reintroduction and propagation.
3 = Increase number of populations/occurrences with the assistance of reintroduction and propagation efforts.
4 = Species is not currently documented from the forest; efforts to document presence will continue.

Standards

FW-30. Protection zones are delineated and maintained around all bald eagle nest and communal roost sites, until they are determined to be no longer suitable through coordination with the US Fish and Wildlife Service. The protection zone extends a minimum of 1500 feet from the nest or roost. Activities that modify the forest canopy within this zone are prohibited. All management activities not associated with bald eagle management and monitoring are prohibited within this zone during periods of use (nesting season is October 1 to June 15; roost use periods are determined through site-specific monitoring). Where controlled by the Forest Service, public access routes into or through this zone are closed during the seasons of use, unless they are major arterial roads

Red-cockaded Woodpecker Management Needs

In 1995 the Regional Red-cockaded Woodpecker ROD provided direction to National Forests in the Southern Region with woodpecker populations and Habitat Management Areas to recover Red-cockaded Woodpeckers through management. In July of 2000, the Technical/Agency Draft Revised Recovery Plan for the Red-cockaded Woodpecker was released for review. The NFAL FLRMP will incorporate these two sources to maximize Red-cockaded Woodpecker opportunities within existing NFAL conditions, current political management realities, and Forest Plan land allocation decisions. When the Final Revised Red-cockaded Woodpecker Recovery Plan is released the management direction of that plan will be adopted. If there are significant differences between the NFAL FLRMP direction and the Final Revised Red-cockaded Woodpecker Recovery Plan, a Forest Plan Amendment may be necessitated.

GOAL 12 Contribute to the conservation and recovery of the Red-cockaded woodpecker (Picoides borealis), a federally listed, endangered species through the implementation of forest and population management practices described in the Revised Recovery Plan and RCW ROD.

OBJECTIVES

12.1 Manage forests to provide a minimum of 125 acres of "good quality foraging habitat," as defined in the Agency/Technical Draft Revised Recovery Plan, for each active and recruitment cluster. Good quality foraging habitat includes tree canopies of approximately 40-60ft^2 average BA and groundcovers that are generally $\geq$ 40% herbaceous, pyrophytic plants.

12.2 Prescribe burn within RCW HMA using both dormant and growing season burns. Average annual fire return interval should be 1-5 years in suitable habitats.

12.3 Manage forest successional stages to maintain a minimum of 50 percent of forested acres in mid to late successional forest, including old growth; a minimum of 20 percent of forested acre as in late-successional or old growth forest; and 4 to 10 percent in early-successional forest. Within the pine and pine-hardwood component, mange forest successional stages to maintain a minimum of 83 percent in mid to late successional forest and old growth (> than 20 years old); a minimum of 50 percent of forested acres in late successional or old growth forest (> 60 years); and 4 to 8.6 percent in early successional forest (≤ 10 years old).

12.4 Management prescriptions for support populations on public lands will be the same as those applied in core populations. Managers should increase their populations to the maximum the habitat base will support, using the level of monitoring recommended based on population size and the recovery standard for foraging habitat. Manage for the following Red-cockaded woodpecker populations:

RCW HMA	2002 Active Clusters	Short Term Population Objective	Long-Term Population Objective	Recovery Designation
Shoal Creek	8	18	125	Essential Support*
Talladega	0	10	110	Essential Support*
Oakmulgee	120	138	394	Secondary Core
Conecuh	19	28	309	Secondary Core

** This represents a change from the Technical/Agency Draft Revised Recovery Plan for Red-cockaded Woodpecker.*

Standards

FW-31. Permits for collection of Regional Foresters sensitive species are not issued, except for approved scientific purposes.

FW-32. Invasive non-native species are controlled where they are causing adverse effects to federally listed species or Regional Forester's sensitive species. Non-native species are not intentionally introduced near these species.

FW-33. Red-cockaded woodpeckers – The following standards apply only to the Conecuh (MA 2), Oakmulgee Division (MA 3), and Talladega Division (MA 4).

FW-34. Populations required for recovery are to be increasing at rates of 5 to 10 percent a year or more. (Rates of increase are calculated by averaging the annual percent change over 5 years.)

FW-35. Monitor populations according to the HMA's population size, role in recovery, and management objective, as outlined in the Draft Recovery Plan.

FW-36. Meet the *Recovery Standard* in the provision of foraging by managing forests to provide a minimum of 125 acres of "good quality foraging habitat," as defined in the Agency/Technical Draft Revised Recovery Plan, for each active and recruitment cluster.

FW-37. Use two-aged, uneven-aged, or low intensity silvicultural systems to manage for RCW habitat, where native pine (not off-site pine species) forests are present.

FW-38. Where two-aged regeneration methods are used, then rotation intervals of 120 years for longleaf and shortleaf pines, and 100 years for loblolly, slash, and pond pines are minimum.

FW-39. Inside RCW sub-HMA's limit regeneration areas in Pine and Pine-Hardwood stands to 25 acres in size.

FW-40. Limit restoration areas in off-site pine and pine-hardwood stands to 80 acres in size.

FW-41. Retain trees of highest importance to RCW's (very old, flat-topped, potential cavity trees, and scarred old pines) regardless of silvicultural system employed

FW-42. Where uneven-aged management is used to manage RCW habitat, 20 or more trees per acre of pines at least 14" dbh and 60 years of age are retained within foraging habitat.

FW-43. Where uneven-aged management is used to manage RCW habitat, in active and recruitment clusters retain 5 or more trees per acre of pines at least 120 years of age for longleaf and shortleaf pine, or 100 years of age for loblolly, slash, or pond pine.

Indiana Bat Management Needs

The following standards are intended to protect Indiana Bats. These standards only apply to the Bankhead Management Area.

FW-44. Watershed boundaries are used to identify primary cave protection zones that extend approximately 0.5 miles surrounding Indiana bat hibernacula,

and secondary cave protection zones that extend approximately 1.5 miles surrounding the primary zone (2 miles total). Management activities within these zones are coordinated with U.S. Fish and Wildlife Service to determine their compatibility with Indiana bat recovery.

FW-45. Within the secondary cave protection zone, a minimum of 60 percent of all forested acreage is maintained at greater than 70 years old, and a minimum of 40 percent of forest types with significant oak and hickory components is maintained at greater than 80 years old. The 0-10 age class does not exceed 10 percent of the forested acreage of the secondary buffer at any time.

FW-46. Trees known to have been used as roosts by Indiana bats are protected from cutting and/or modification until they are no longer suitable as roost trees, unless their cutting or modification is needed to protect public or employee safety. Where roost tree cutting or modification is deemed necessary, it occurs only after consultation with the US Fish and Wildlife Service.

FW-47. Snags are not intentionally felled unless needed to provide for immediate safety of the public, employees, or contractors. Exceptions may be made for projects such as insect and disease control, salvage harvesting, and facility construction, after coordination with the US Fish and Wildlife Service to determine appropriate protective measures for the Indiana bat.

FW-48. No snags or shagbark hickory greater than 6 inches DBH will be cut for fuel wood.

FW-49. During routine salvage harvesting (non-catastrophic events), an average of 6 of the largest suitable snags (snags with exfoliating bark) per acre will be left. All shagbark hickories greater than 6 inches DBH will be left. Salvage harvesting can occur at any season as long as site-specific inventories indicate Indiana bats are not likely to be present. Inventories are good only for the year they are performed. Salvage harvesting can occur between November 15 and April 15 without a site-specific inventory and additional coordination with FWS is not required.

FW-50. Gates or structures that allow for entrance and egress by bats are constructed and maintained at entrances of caves and abandoned mines occupied by significant populations of bats to reduce frequency and degree of human intrusion. Forest Supervisor Closure Orders are acceptable as long as monitoring indicates the Orders are effective. If Orders are ineffective, appropriate physical structures must be constructed. Camping and fire-building at the entrance to caves, abandoned mines, and rock shelters used by these species is prohibited. To discourage human disturbance at these caves, nonessential public access routes within 0.25 miles of cave entrances are closed during periods when bats are present. Human access to caves for educational and recreational use may be

allowed during periods when bats are not present. If damage to caves occurs as a result of human use, the caves may be closed to human uses. Access for activities such as surveys and scientific study during times when bats are present is determined on a case by case basis.

FW-51. When implementing two-aged forest regeneration methods (seedtree with reserves or shelterwood with reserves) in hardwood-dominated forest types, a minimum of 20 square feet of basal area will be retained. The overwood will not be removed. All snags and shagbark hickory over 6 inches DBH will be retained except those that are immediate hazards. All trees are retained within 20 feet of a minimum average of 5 snags per acre to provide potential Indiana bat roost trees with shade and windthrow protection. Where a minimum average of 5 snags per acre is not present, they will be created from the larger diameter classes within the stand. Snags selected for shade tree retention are those most suitable for use by Indiana bats, i.e., hardwood snags of the largest size classes with exfoliating bark.

FW-52. When implementing clearcut, two-aged forest regeneration methods in hardwood-dominated forest types, a minimum average of 15 square feet of basal area per acre is retained throughout the rotation. Residual basal area should be clumped or left in travel corridors. All snags and shagbark hickory over 6 inches DBH are retained except those that are immediate hazards. If additional trees are needed to meet the basal area requirements, priority should be given to hollow/den trees or trees that exhibit characteristics favored by roosting Indiana bats. Snags do not count toward the basal area. In regeneration areas less than 10 acres in size, no residual basal area is required for retention. However, all snags will be retained unless they are immediate hazards. Shagbark hickory greater than 6 inches DBH is retained in regeneration areas less than 10 acres in size.

FW-53. During all silvicultural treatments in hardwood forest types, retention priority is given to the largest available trees that exhibit characteristics favored by roosting Indiana bats.

FW-54. Provide upland water sources approximately every 0.5 miles, to provide an important habitat element for wildlife, including the endangered Indiana bat. Water sources are comprised of both permanent ponds and ephemeral pools and are often located in openings or near road corridors that allow access by bats.

FW-55. To avoid harassment of swarming Indiana bats, tree-cutting and prescribed burning are prohibited between September 1 and December 1 within the primary and secondary zones of hibernacula.

FW-56. To avoid injury to nonvolant young Indiana bats, prescribed burning of potential maternity roosting habitat between May 1 and July 1 is prohibited except where site-specific inventories indicate Indiana bats are not likely to be present.

RARE COMMUNITIES

There are a variety of rare communities found on the National Forests in Alabama.

Rare wetland communities in the Southern Appalachians, Cumberland Plateau, Piedmont and Coastal Plain include bogs, fens, seeps, swamps, ponds, pond margins, wet prairies, bayheads & baygalls, river gravel-cobble bars, and river scour areas. Bogs, fens, seeps, and ponds 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. Wetland rare communities found on the National Forests in Alabama include but may not be limited to: Appalachian swamp forest/bog complex, Appalachian bogs, fens, wet prairie, upland seasonal ponds, forested acid seeps, beaverponds and wetland complex, Atlantic white cedar swamp, alluvial ponds, coastal plain ponds and pond margins, coastal plain baygalls and bayheads, coastal plain seepage bogs, karst-sinkholes, small stream forests. Riverine 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 and include River Gravel-Cobble Bars, and river scours. Ponds in this group include limesink, karst, and depression ponds, which may hold areas of shallow open water for significant portions of the year. Also included are all impoundments and associated wetlands resulting from beaver activity.

Glades and barrens are characterized by thin soils and exposed parent material that result in localized complexes of bare soils 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. Glades, barrens, and associated woodlands differ from rock outcrop communities by exhibiting soils and vegetative cover over the majority of the site, and differ from the more widespread woodland communities in that they occur on geologic substrates that are rare for the region, including limestone, dolomite, amphibolite, greenstone, mafic rock, serpentine, sandstone, or shale. Associated communities include Calcareous Woodlands and Glades, Mafic Woodlands and Glades, Serpentine Woodlands and Glades, and Shale Barrens as defined in the Southern Appalachian Assessment (SAMAB 1996: Appendix C). At a minimum, this rare community complex includes rare associations including but not limited to Limestone or dolomite woodlands and glades, serpentine woodlands and glades, shale glades and barrens, mafic glades and barrens, grassy pine glades and prairies. Complexes of woodlands, savannas, and grasslands were once a frequent occurrence across the southeastern landscape, maintained with frequent fire on xeric ridge-tops and south-facing slopes (DeSelm and Murdock, 1993; Davis et al., 2002). Woodlands are open stands of trees,

generally forming 25 to 60 percent canopy closure (Grossman et al. 1998:21) and may be of pine, hardwood (typically oak), or mixed composition. Savannas are usually defined as having lower tree densities than woodlands; grasslands are mostly devoid of trees. All of these conditions typically occurred in mixed mosaics within a fire-maintained landscape. In all cases, a well-developed grassy or herbaceous understory is present.

Forested rare communities on the National Forests in Alabama include the low elevation basic mesic forests, forested canebrakes and sandhills. The low-elevation basic mesic forest communities are characterized by closed-canopy deciduous overstories and rich and diverse understories of calciphilic herbs, underlain by high-base geologic substrates. On moderate 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). 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 codominated 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. Basic mesic forest communities are found in the Appalachian, Cumberland Plateau, Coastal Plain and Piedmont regions. Canebrakes are characterized by almost monotypic stands of giant or switch cane (Arundinaria gigantea or A. tecta), often with no or low densities of overstory tree canopy. They are typically found in bottomlands or stream terraces. The xeric sandhill community occurs in the east gulf coastal plain, where it is restricted to extrememly deep sandy soils. It is distinctive for it's lack of wiregrass and the extreme edaphic conditions. This association may have sentinel trees of longleaf pine (10-30% canopy) but is dominated by bluejack oak, turkey oak, sand post oak and sand live oak. The structure is highly variable depending on interval, seasonality and intensity of fires, resulting in a range from shrubs to small trees sparsely arranged. Hawthorn and gopher apple are typically present, while little bluestem and several endemic herbs may comprise the herbaceous understory. Xeric sandhills can be *distinguished from surrounding forests and woodlands by an increase in elevation,* extremely deep sandy soils, low overstory density, and the small shrubby growth from of oak species.

Steep, rocky, sparsely vegetated slopes, usually above streams or rivers, characterize Cliff and bluff 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 and Cumberland Plateau regions, including the Bankhead, Shoal Creek, and Talladega. These have also been found along the Cahaba directly north

of the Oakmulgee. This community includes Calcareous Cliffs, Mafic Cliffs, Sandstone Cliffs, and Spray Cliffs

Significant areas of exposed, usually smooth characterize rock outcrop communities, exfoliating granite, sandstone or calcareous rocks, with scattered vegetation mats and abundant lichens. These communities are found in both the Appalachian, Cumberland Plateau and Piedmont regions and include the Bankhead, Oakmulgee, Shoal Creek and Talladega. This community includes sandstone, granite and limestone outcrops. The cave and mine community types are 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 and sinking streams that lead to subterranean environments. Surfaces of karstlands are directly linked to cave water systems and aquifers (Kastning and Kastning 1990).

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 characterized by relatively discrete boundaries and occupy a small area in a limited number of occurrences across the landscape. These communities are importance to diversity therefore; emphasis needs to be placed on inventory and monitoring as well as maintenance and restoration of these areas.

Table of Alabama's Rare Communities
Managed Under Alabama's "9F Rare Community Prescription"
By Unit

SAA RC Code	SAA FWRBE Terrestrial Team Rare Community Type	Southern Cumberland Plateau (Bankhead)	Ridge and Valley (Tall/SC)	Upper Coastal Plain (Oak/Tusk)	Lower Coastal Plain (Conecuh)	Community Occurrence/ Distribution
1	Appalachian Swamp Forest-Bog Complex	No	Possible	No	No	Discrete
2	Appalachian Bogs (sphagnum and shrub)	Possible	Yes	No	No	Discrete
3	Fens	No	Yes	Yes	No	Discrete
4	Wet Prairie	Possible	No	Yes	Yes	Landscape
5	Upland Seasonal Ponds	Yes	Yes	Yes	Yes	Landscape
6	Appalachian Forested Acid Seeps	Yes	Yes	No	No	Discrete
7	Sandstone Woodands and Glades	Yes	Yes	Yes	No	Landscape
11	Limestone or Dolomite Woodlands and Glades	Yes	Possible	Yes	Yes	Landscape
12	Serpentine Woodlands and Glades	No	Possible	No	No	Landscape
13	Shale Glades and Barrens	No	Yes	No	No	Landscape
19	Calcareous Cliffs	Yes	No	No	No	Discrete
21	Mafic Cliffs	Possible	Yes	Possible	No	Discrete
22	Sandstone Cliffs	Yes	Yes	Possible	No	Discrete
23	Forested Boulderfields	NO	NO	NO	NO	Discrete
24	Talus Slope (non-forested)	NO	NO	NO	NO	Discrete
25	Karst/Sinkhole	Yes	Possible	No	Yes	Discrete
26	Atlantic White-cedar Swamp	No	No	No	Possible	Discrete
27	Caves	Yes	Yes	No	Yes	Discrete
28	River Gravel Bar	Yes	Yes	Yes	No	Discrete
30	Mafic Glades and Barrens	No	Yes	No	No	Discrete
31	Springs and Seeps	Yes	Yes	Yes	Yes	Discrete
32	Alluvial Ponds	Yes	Yes	Yes	Yes	Landscape
33	Forested Canebrakes	Yes	Yes	Yes	Yes	Landscape
34	Low Elevation Basic Mesic Forests	Yes	Yes	No	No	Landscape
36	Prairie Grasslands and Woodlands	Yes	Possible	Yes	Possible	Landscape
40	Coastal Plain Ponds, Pond Margins	No	No	Yes	Yes	Discrete
44	Coastal Plain Baygalls and Bayheads	No	No	Yes	Yes	Landscape
45	Coastal Plain Seepage Bogs	No	No	Yes	Yes	Landscape

*Spray Cliffs, Beaver Ponds and Wetland Complex, and Sandstone Rock Houses rare communities are also found on the National Forests in Alabama but will be covered by the Riparian or Canyon Corridor Prescriptions. Forest Communities such as Mountain Longleaf Pine, Xeric Sandhills, Wet Pine Flatwoods, Pine Savannas and Woodlands will be covered by the Restoration Prescriptions.

GOAL 13 Protect or restore the composition, structure, and function rare communities found on National Forest land.

OBJECTIVES

13.1 Inventory/map rare communities and identify and prioritize restoration needs.

GOAL 14 Areas with special geological, paleontological, botanical, zoological, cultural, or heritage characteristics will be managed (or where feasible restored) to protect those characteristics.

Standards

(All standards for rare communities, apply Forest-wide and are listed in Management Prescription 9F.)

Old Growth

The forest service has identified old growth as an important issue both internally and with the public. Old–growth forests are ecosystems distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics which may include tree size, accumulation of large wood material, number of canopy layers, species composition, and ecosystem function.
The age at which old growth develops and the specific structural attributes that characterize old growth will vary widely according to forest type, climate, site conditions and disturbance regime. Old growth in fire-dependent forest types may not differ greatly from young forests in the number of canopy layers of accumulation of downed woody material. However, old growth is typically distinguished from younger growth by several of the following attributes:

- Large trees for the species and site.
- Wide variation in tree sizes and spacing.
- Accumulations of large-sized dead standing and fallen trees that are high relative to earlier stages.
- Decadence in the form of broken or deformed tops or boles and root decay.
- Multiple canopy layers.
- Canopy gaps and understory patchiness.

In June 1997, the Region 8 Old-Growth Team published Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests in the Southern Region. Descriptions of 16 old-growth forest communities are found in this report. The following table shows the current possible old growth by community types for the National Forests in Alabama by Management Area. Total possible old growth includes stands over the minimum age in areas suitable for timber production and all acres in areas unsuitable for timber production.

Approximately 7.7 thousand acres of suitable lands meet the minimum age requirement and approximately 214.8 thousand acres of unsuitable land provide potential old growth. In addition to the acres described above, a portion of the acres designated for Red-cockaded woodpecker management will provide old growth characteristics. The pine and pine-hardwood stands within RCW habitat management areas in Management Areas 2, 3, and 4 are managed on a 120 to 170 -year rotation.

GOAL 15 A variety of large, medium, and small old growth patches will be managed (through restoration, protection, or maintenance activities) to meet biological and social needs. These patches could include stands of either "existing old growth" or "future old growth".

OBJECTIVES

15.1 Complete field verification of possible existing old growth areas in our current inventory, and map small and medium patches.

TERRESTRIAL PLANT and ANIMAL COMMUNITIES

Native and desirable non-native wildlife species, in their broadest sense, including terrestrial animals and plants, occupy an extremely wide array of habitats. Across the diverse landscapes of Alabama, this includes several physiographic regions, many forest types, and countless ecological niches. Some species depend on early successional forests, while others depend on late successional forests. Some depend on mixed landscapes, while others specialize in large, homogenous blocks of habitat. In attempting to provide adequate habitat for such diverse assemblages of animals and plants, many, sometimes contradictory, objectives develop. Prioritization of both the species and the habitats is necessary to develop management priorities. Such a prioritization of federally listed species, regional forester's sensitive species, and other locally important species and their important or limiting habitats lead in part, to the restoration objectives listed under the Restoration and Health of Forest Ecosystems section (page 2-4). The table listed below that section (Table 2-1) shows the current distribution of major habitat groups on National Forests in Alabama management units. The table also shows the relationship of those habitat groups to the community types described in the Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests in the Southern Region (USDA 1997) and the corresponding CISC (Continuous Inventory of Stand Conditions, US Forest Service inventory method) forest type for each major habitat group. Studying this table revealed certain habitat niches in need of restoration or expansion in order to promote native, and desired non-native

animals and plants. The following goals, objectives, and standards are designed to protect, restore, maintain and enhance wildlife and plant populations and communities while restoring native ecosystems.

GOAL 16 Provide habitats to support desirable levels of selected species (e.g., species with special habitat needs such as large, contiguous forested landscapes; species commonly trapped/hunted; or species of special interest).

OBJECTIVES

16.1 Provide upland fire climax communities aimed at producing large trees in the overstory and open park-like understory composition dominated by native grasses and forbs.

16.2 Promote or retain hardwood dominated, hard and soft mast producing riparian areas to benefit hardwood associated Partners in Flight priority species.

16.3 Promote or retain xeric mast producing hardwoods in upland areas to benefit select species. Manage for a diversity of oak species to minimize yearly fluctuations in acorn supplies for wildlife species.

16.4 Provide breeding, wintering, and migration staging and stopover habitat for migratory birds in ways that contribute to their long-term conservation.

16.5 Provide habitats for species needing large blocks of contiguous forests, especially where such conditions are not found on other lands within the landscape.

16.6 Encourage maintenance of forest as a land use on private lands within and surrounding national forests through land acquisition, agreements, and education in order to maximize benefits of national forest lands to area sensitive forest interior species.

Standards

FW-57. Unless necessary for insect or disease control or to provide for public and employee safety, den trees will not be intentionally felled during vegetation management activities.

FW-58. Intentional establishment of invasive non-native plant species, as defined by the Regional Forester's invasive species list, is prohibited.

FW-59. Collection of non-timber forest products is prohibited within 100 feet of roads and trails in order to disperse collection impacts, unless specifically designated on the permit.

FW-60. The following standards are provided for the protection of bats in general:

FW-61. Gates or other structures that allow for entrance and egress by bats are constructed and maintained at entrances of caves and mines occupied by significant populations of bats to reduce frequency and degree of human intrusion. Forest Supervisor Closure Orders are acceptable as long as monitoring indicates the Orders are effective. If Orders are ineffective, appropriate physical structures must be constructed. Camping and fire-building at the entrance to caves, mines, and rock shelters used by these species is prohibited. To discourage human disturbance at these caves, nonessential public access routes within 0.25 miles of cave entrances are closed during periods when bats are present. Human access to caves for educational and recreational use may be allowed during periods when bats are not present. If damage to caves occurs as a result of human use, the caves may be closed to human uses. Access for activities such as surveys and scientific study during times when bats are present is determined on a case-by-case basis.

FW-62. Prescribed burn plans written for areas near caves or mines that contain bats identify these sites as smoke sensitive targets and plan to avoid smoke entering cave or mine openings when bats are present.

FW-63. Before old buildings and other man-made structures are structurally modified or demolished, they are surveyed for bats. If significant bat roosting is found, these structures will be maintained, or alternative roosts suitable for the species and colony size will be provided prior to adverse modification or destruction.

FIRE MANAGEMENT

Prescribed fire is an important ecologically appropriate management tool. Both natural fuels and artificially produced management-activity fuels must be managed over time to meet long-term resource management objectives. Artificially produced fuels have been of little concern, because of the small volume generated, but may have to be managed in the future. The EPA states, in their 1998 policy document entitled Interim Air Quality Policy on Wildland and Prescribed Fires, that while future air quality concerns from prescribed fire may arise, the EPA is on record stating that fire should function, as nearly as possible, in its natural role in maintaining healthy wildland ecosystems and to protect human health and welfare by mitigating the impacts of air pollutant emissions on air quality and visibility.

Appropriate suppression strategies range from direct attack, aimed at minimizing acreage burned and resource value loss, to modified indirect attack where firefighter and public safety is always the primary consideration. Natural barriers are used whenever possible

to construct firelines to mitigate impacts to soil, vegetation and water; reduce costs of line construction and for safety considerations. The Forest Fire Management Plan and Wilderness Fire Plans will provide more detailed direction on the use and management of natural ignitions i.e. lightning caused fires.

Prescribed fire and mechanical fuels treatments are designed to restore fire regimes within or near an historical range. Condition classes are a function of the degree of departure from historical fire regimes resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, and canopy closure. Fire Condition Class is a measure of general wildland fire risk and ecosystem condition defined as follows:

Condition Class 1: For the most part, fire regimes in this Fire Condition Class are within historical ranges. Vegetation composition and structure are intact. Fire dependent ecosystem components are maintained by desired fire regimes. Thus, the risk of losing key ecosystem components from the occurrence of wildland fire remains relatively low.

Condition Class 2: Fire regimes on these lands have been moderately altered from their historical range by either increased or decreased fire frequency. A moderate risk of losing key ecosystem components has been identified on these lands.

Condition Class 3: Fire regimes on these lands have been significantly altered from their historical return interval. The risk of losing key ecosystem components fro fire is high. Fire frequencies have departed from historical ranges by multiple return intervals. Vegetation composition, structure, and diversity have been significantly altered. Consequently, these lands verge on the greatest risk of ecological collapse.

The presence of fire begins long before humans arrived in North America. Fire has no doubt been a major selection force in our forest ecosystems, both lightning and human-caused. This great and persistent selecting force has influenced ecosystem traits and characteristics since fuels and lightning first interacted. Fire is a natural ecological process, but unlike many other natural events (tornadoes, floods, hurricanes), man has the capability to use fire as a tool and, as recent history has shown, to suppress the natural processes of fire. The result is a forest with diversity and flexibility that is well adapted to fire occurrence. Many of the communities and species require fire to sustain populations. Oak and southern yellow pine communities have been major components of these forests for thousands of years. These communities promote and require fire. Reoccurring fire has been a part of the ecosystem for thousands of years. Burning is the oldest sustained land management force on these forests. No other practice can be said to have such a track record with known results.

Fires generally fall into one of two categories; wildland fires or prescribed burns. A wildland fire is a fire resulting from an unplanned ignition; it requires an appropriate management response to control its spread. A prescribed fire is any fire ignited by management actions to meet specific objectives.

Prescribed fire and mechanical fuels treatments are designed to reduce the risk of catastrophic wildfires by decreasing the amount of available fuel that the fire is able to consume and thus carry the fire. Both methods are utilized to restore fire regimes within or near the historical range. Condition classes are a function of the departure from historical fire regimes, resulting in alterations of key ecosystem components such as species composition, stand structure, successional stage, stand age, and canopy closure. Fire Condition Class is a measure of general wildland fire risk and ecosystem condition defined as follows:

Condition Class 1:

- Fire regimes are within or near an historical range.
- The risk of losing key ecosystem components is low.
- Fire frequencies have departed from historical frequencies by no more than one return interval.
- Vegetation attributes (species composition and structure) are intact and functioning within an historical range.

Condition Class 2:

- Fire regimes have been moderately altered from their historical range.
- The risk of losing key ecosystem components has increased to moderate.
- Fire frequencies have departed (either increased or decreased) from historical frequencies by more than one return interval. This results in moderate changes to one or more of the following: fire size, frequency, intensity, severity, or landscape patterns.
- Vegetation attributes have been moderately altered from their historical range.

Condition Class 3:

- Fire regimes have been significantly altered from their historical range.
- The risk of losing key ecosystem components is high.
- Fire frequencies have departed from historical frequencies by multiple return intervals. This results in dramatic changes to one or more of the following: fire size, frequency, intensity, severity, or landscape patterns.
- Vegetation attributes have been significantly altered from their historical range.

GOAL 17 Achieve a balance between suppression, to protect life, property, and resources, and fire use, to regulate fuels and maintain healthy ecosystems. Use wildland fire to protect, maintain, and enhance resources, and, as nearly as possible, allow fire to function in its natural ecological role.

GOAL 18 Use fire to restore and maintain fire dependant and associated communities. Fire regimes are restored within or near the historical range (Condition Class 1).

OBJECTIVES

18.1 Strive to burn, using a combination of growing season and dormant season burning, approximately 55,000 acres annually.

GOAL 19 Reduce hazardous fuels through use of wildland fire, prescribed fire, and mechanical fuels treatment.

OBJECTIVES

19.1 Burn approximately 15,000 acres annually, using both growing and dormant season burning.

GOAL 20 Emissions from prescribed fire will not disproportionately hinder State progress towards attaining air quality standards or visibility goals.

GOAL 21 The Forest Service will annually review the status of counties near the National Forest regarding their attainment of the NAAQS. Where a non-attainment area is formally recognized, the Forest Service will participate in SIP modification to bring the area back into attainment status.

Standards

FW-64. Protection of firefighters and the public is the first priority in all fire management actions.

FW-65. The Fire Management Plan (FMP) will guide and formally document the Fire Management Program for the National Forests in Alabama. The FMP will provide comprehensive guidelines for both the suppression and prescribed fire programs in relation to other management activities.

FW-66. Fire lines used for controlled burning which expose mineral soil greater than the equivalent to a hand line fire break are not permitted in streamside management zones or buffers along lakes, springs, wetlands, water- source seeps, or other designated riparian areas, unless anchoring into the water resources or crossing at a designated point.

FW-67. Water control structures necessary for the control of surface water movement on fire lines will be installed during prescribed fire line construction. Permanent fire lines will have water control structures maintained (refer to re-vegetation standard).

FW-68. Firelines will be re-vegetated when canopy closure is less than 50% or when conditions exist (i.e. steep slopes, entrenched firelines) where water control structures and natural mulch from forest canopy is not sufficient to prevent moderate soil erosion.

FW-69. Burning of material generated by timber activities or mechanical fuel treatments (slash) is done so it does not consume all litter and duff and does not alter the structure and color of mineral soil an more than 20 percent of the area.

FW-70. Firelines will be rehabilitated to blend in with surrounding landscape for at least 50 feet on both sides of trails. Rehabilitation will consist of removing berms and filling ruts and ditches.

FW-71. The response to unplanned ignitions may include fire use (prescribed fire). The fire must be within criteria spelled out in the Fire Management Plan and parameters of an approved Burn Plan for the area. Project funds must be sufficient to cover monitoring and holding costs.

FW-72. Use Minimum Impact Suppression Tactics (MIST) in the Wilderness or other sensitive areas.

FW-73. Utilize backing fires when prescribe burning in riparian areas.

FW-74. Slash burns are done so they do not consume all litter and duff or alter structure and color of mineral soil on more than 20% of the area.

FW-75. All prescribed burning projects or programs will be conducted with full adherence to Forest Service internal guidance and the pollution control methodologies prescribed by air quality regulatory agencies.

FW-76. In addition to part “a”, for prescribed burning projects or programs planned for NAAQS non-attainment areas or maintenance areas, the Forest Service will demonstrate in advance that it can complete the project in conformity with SIP provisions established to return the area to attainment.

Recreation – Developed, Dispersed, and Backcountry

The National Forests in Alabama provides approximately 664,000 acres of public land scattered in five blocks throughout the state. The National Forests in Alabama comprise a highly scarce resource – islands of undeveloped public lands in the midst of agricultural and urban development. The Forests are exceptional because they are scattered across the state in four distinct physiographic regions, resulting in usual ecological diversity and landscapes. They are repositories of numerous rare species and will become even more ecologically significant with the restoration of native forest communities. The National Forests in Alabama will be increasingly important as urban escapes and at the same time, they will continue to be backyard playgrounds for nearby rural residents. Outdoor recreation opportunities on National Forests in Alabama are many and varied. Camping experiences range from highly developed campgrounds with full hookups to spots in the forest utilized by backpackers. Developed day use facilities include picnic sites, playgrounds, constructed swimming beaches, boat ramps, paved bicycle trails, and shooting ranges. Existing trails accommodate long distance hiking, short loop walking, horse, wagon, mountain biking, and OHV use. The Bartrum and Pinhoti are National

Recreation Trails. The National Forests in Alabama provide opportunities for sightseeing, boating, hunting, and fishing. The Talladega Scenic Drive is a national scenic byway. Sightseeing opportunities include enjoying vistas such as those on the scenic drive as well as viewing the complex and varied forestwide flora and fauna. Primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, and rural recreational opportunities are all present. The Cheaha, Dugger, and Sipsey Wildernesses are all managed for a primitive recreation experience

GOAL 20 Provide a spectrum of high quality, nature-based recreation settings and opportunities that reflect the unique or exceptional resources of the Forest and interests of the recreating public on an environmentally sound and financially sustainable basis. Adapt management of recreation facilities and opportunities as needed to shift limited resources to those opportunities.

OBJECTIVES

20.1 Evaluate recreation quality using health, cleanliness, setting, safety, security, and the condition of facilities as rating categories.

20.2 Strive to be responsive to deficiencies.

GOAL 21 Provide a wide variety of dispersed and developed recreation opportunities within the capabilities of the land.

OBJECTIVES

21.1 Annually evaluate existing opportunities to determine if they meet carrying capacity, demand, and financial ability to maintain in the future for maintenance, expansion or closure.

21.2 Conduct annual assessments of existing OHV roads and trail crossings in relation to aquatic ecosystem condition and species of concern. Prioritize road and trail maintenance and reconstruction projects in accordance with threatened, endangered, and sensitive species recovery and conservation efforts.

GOAL 22 The National Forests will manage areas to provide for "backcountry" (semi-primitive/remote) recreation experiences.

Standards

FW-77. Water and sewage systems meet federal and state standards.

FW-78. Recreation induced impacts to highly sensitive components of the ecosystem, such as cultural or biological sites, watersheds, and vegetation will be analyzed and mitigated as needed.

FW-79. Restrooms are functional and in good repair.

FW-80. Recreational uses that are shown to be negatively affecting federally listed or Regional Foresters Sensitive species will be modified to reduce or eliminate negative effects.

FW-81. Horseback riding, mountain biking, OHV use, and camping are prohibited on all permanent wildlife openings, including linear openings, to protect established vegetation.

FW-82. Swimming water will be monitored to ensure State and Federal water quality criteria are met in accordance with the water quality monitoring plan of operation.

FW-83. Recreation Opportunity Spectrum (ROS) direction will govern all new projects (including special uses). Existing conditions may not meet the assigned ROS class.

Trails:

FW-84. Trail bridges are inspected by a qualified bridge inspector at required intervals.

National Recreation Trails:

FW-85. One hundred feet on both sides of these trails shall be designated as trail corridor protection zones.

FW-86. Timber activity shall be allowed for the removal of fallen trees blocking the trails, creating small vistas (1/4 acre maximum), enhancing scenic integrity, or removal of hazard trees.

FW-87. The remainder of the trail foreground (beyond 100 feet) will be managed for a high scenic integrity objective.

Off Highway Vehicles (OHV)

FW-88. OHVs are permitted on designated OHV trails, and OHVs are permitted on open public roads if the OHV meets all state legal requirements for public road use.

FW-89. Public Cross-country OHV use is not allowed.

FW-90. Administrative Cross-country OHV use may be approved for resource protection and public health and safety concerns unless otherwise restricted by statue or regulation.

FW-91. Vehicles falling under the description of an All-Terrain Vehicle (ATV) described in FSH 2309.18 (modified to include vehicles 55" wide or less) and motorcycles are the only type of motorized transport allowed on designated OHV, ORV, or ATV trails.

FW-92. Noise emissions from motorized equipment on trails will not exceed 94 dB for all motorcycles and quadcycles manufactured after January 1, 1986 as measured by the SAE J1287 June 1988 stationary test. (See Technical Report "Correlation of Off-Highway Motorcycle Sound Test Methods: EPA/SAE" for test procedure.)

Horse Trails

FW-93. Equestrian use is permitted on designated horse trails, open public roads, or closed Forest Service Roads if designated open to horse use by the district ranger.

FW-94. Cross-country equestrian use is not allowed except by Special Use permit.

Wilderness and Wild and Scenic Rivers

Congressionally designated wilderness areas are protected by law and valued for their ecological, historical, scientific and experiential resources. National Forests in Alabama currently have 3 designated wilderness areas containing a total of 42,211 acres, or 6 percent of the total forest area. The National Forests in Alabama do not contain any wilderness study areas or recommended wilderness study areas that have not been acted upon by Congress (Table W-1). The existing wilderness areas will be managed to maintain the areas' natural characteristics. Natural occurrences such as outbreaks of insects or disease are allowed as part of the natural cycle. Man caused intrusions is not allowed. Under emergency conditions, mechanical equipment and motorized transport may be approved for use to control fire that threatens life, property, or the wilderness resource.

The Wild and Scenic Rivers Act (Public Law 90-542: 16 USC 1271-1287, October 2, 1968) and its amendments provide for the protection of selected rivers and their immediate environments. To be eligible for designation rivers must possess one or more outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Designation preserves rivers in free-flowing condition, *protects* water quality and protects their immediate environments for the benefit and enjoyment of present and future generations.

The National Forests in Alabama has one designated WSR, the Sipsey Fork, West Fork River and selected tributaries. Congress amended the National Wild and Scenic River Act in 1975 to include a study of Sipsey Fork, West Fork, and the Sipsey was designated

October 28, 1988. Most of the river and its tributaries are located within the Sipsey Wilderness Area. Its 61.4 designated miles, all on the Bankhead National Forest, include approximately 25 miles that are not bounded by wilderness.

GOAL 23 Wilderness, roadless and other unroaded areas are managed to provide their full range of social and ecological benefits.

OBJECTIVES

23.1 Develop a Limits of Acceptable Change inventory and monitoring system for each wilderness. LAC will address invasive species, fire plan, visitor education, and other resource issues.

GOAL 24 Wild, Scenic and Recreation Rivers which are designated by Congress, recommended for designation, or are eligible for designation, will be managed to protect their outstandingly remarkable values.

OBJECTIVES

24.1 Complete the suitability study for Five Runs this plan period.

Scenery

Large portions of the National Forests in Alabama can be seen from adjacent or interior roads, trails or waterways largely due to the density of the various travel routes. The more scenic landscapes (those in Retention and Partial Retention VMS or in High or Moderate SMS) are generally associated with or occur adjacent to important roads, lakes, rivers and streams, or highly developed recreation areas and National Trails. Elevations on the National Forest in Alabama range from a high point at Odum Point (2342') just off Talladega Mountain to lower elevations of less than 150 feet in the Conecuh and Yellow River valleys of the Conecuh Ranger District. Views beyond the immediate foreground are influenced by vegetation type, vegetation density, and terrain. Topography ranges from steep ridges, to relatively flat coastal plains, to deeply dissected dendretic drained landforms. The forest is covered with an almost-continuous canopy of soft- to medium-textured rounded tree forms, creating a natural-appearing landscape character. Since the late 1990s, as a result of the Southern Pine Beetle infestation that killed large numbers of introduced and native pines, part of the canopy has opened. Groups of tall, gray, defoliated stems, generally varying in size from less than an acre to more than 25 acres. A few spots are considerably larger with one being nearly 1000 acres. The openings eventually give way to an emerging deciduous and evergreen understory.

National Forests in Alabama landscapes may be described by referring to descriptions of its physiographic sections. National Forests in Alabama include land in the: 1.Outer Coastal Plain Mixed Forest Province, Coastal Plain and Flatwoods Lower Section; 2.Southeastern Mixed Forest Province, Coastal Plain Middle Section; 3.Southeastern

Mixed Forest Province, Southern Ridge and Valley Section; and 4.Southeastern Mixed Forest Province, Southern Cumberland Plateau Section as described by Bailey and others (1994). These lands provide distinctive, common, and undistinguished examples of these physiographic provinces and sections.

Landscape character is described as the particular attributes, qualities, and traits of a landscape that give it an image and make it identifiable or unique. Landscape themes refer to the general focus or subject of variations on landscape character settings. They may be thought of as detailed description of desired landscape character. Themes range from a natural to an urban landscape. Of the seven Land Use Themes described in the Southern Appalachian Assessment, National Forest in Alabama landscapes can be grouped predominantly into three: Natural Evolving, Natural Appearing, and Rural-Forested.

The vast majority of the Forest is characterized as Natural Appearing. Designated Wilderness (42211 acres or 6%), lands where ecological processes predominate, are characteristically Natural Evolving landscapes. Rural-Forested is a very small category that includes the Forest's most highly developed recreation areas.

Goals and Objectives:

GOAL 25 Protect and enhance the scenic and aesthetic values of National Forest lands through application of the Scenery Management System and assigned Scenic Integrity Objectives.

OBJECTIVES

25.1 Maintain a current inventory of scenic classes and scenic integrity objectives.

GOAL 26 The National Forests will be managed to provide a variety of Landscape Character Themes with the predominant themes being Natural Appearing, Natural Evolving, and variations of these themes.

GOAL 27 In areas where the inventoried existing scenic integrity condition is Low, Very Low or Unacceptably Low, strive to improve the scenic integrity.

Standards

FW-95. The Forest Scenic Integrity Objectives (SIO) maps and the Scenic Integrity Objectives Table will govern all new projects (including special uses). Assigned SIOs are consistent with Recreation Opportunity Spectrum management direction. Existing conditions may not currently meet the assigned SIO.

FW-96. The Scenery Management Systems guides protection and enhancement of scenery on the National Forests in Alabama. The Scenic Class inventory, including Landscape Visibility, Concern Level, and Scenic Attractiveness, is maintained, refined, and updated as a result of site specific project analysis. The standards under each management prescription in Chapter 3 refer to Scenic Class inventory as updated.

Heritage Resources

The Bankhead Management Area has a rich and wide variety of heritage resources. The archeological sites range from prehistoric sites, approximately 9,000 to 10,000 years old, to early 20th historic sites, which include pre- national forest settlement and early national forest sites. The bluff shelters on the forest have been occupied from the earliest periods of prehistory, and occupied again during the Civil War. The bluff shelters contain some of the most fragile of heritage resources, particularly the petroglyphs and other rock art. The bluff shelters have been the targets of illegal digging for artifacts and other vandalism since long before the creation of the national forest. Upland lithic scatters occur along the narrow ridges, particularly on ridge saddles. Prehistoric travel routes, later used historically, are known to have remnants on the forest. Early historic house sites from the early 19th century occur on terraces, close to water sources. Later, the house sites move higher on the ridges and wells were dug to provide water. Historic sites from the first half of the 20th century include bridges, fire towers, and other elements of the infrastructure and are associated with the Civilian Conservation Corps and the early national forest history. There are three study areas on the Bankhead that fall under Prescription 4.E. They are Indian Tomb Hollow, Kinlock, and Hightown Path. These areas contain a high density of archeological sites as well as being the locations of traditional cultural activities for local people of Native-American descent.The Conecuh Management Area has a relatively light scattering of heritage resources. The prehistoric sites, dating back to 8,000 to 10,000 years ago, represent the short-term occupations of small groups of people traveling from the Gulf Coast to the Tallahatta quartzite lithic sources that outcrop north of Andalusia. These sites occur along the first and second terraces overlooking streams and creeks, and on the higher ridges overlooking the larger sinkholes. Historic sites, the earliest being from the mid-19th century, represent the settlement of the area and the logging industry prior to the creation of the national forest. Historic sites from the first half of the 20th century include fire towers, recreational facilities, and other elements of the infrastructure and are associated with the Civilian Conservation Corps and the early national forest history.

The Oakmulgee Management Area has a moderately dense distribution of heritage resources. Prehistoric sites, dating back to 8,000 or more years ago, occur on almost any level landform near water. Sites situated on ridge lines tend to have a higher degree of disturbance due to the severe erosion that occurred across the forest historically, but sites on the first and second terraces tend to be intact if they were not later subjected to farming. Historic sites, representing the 19th century settlement of the area and the logging industry, are scattered over the forest. Sites from the early 20th century include fire towers and other sites associated with the early forest development. The western portion of the Oakmulgee, west of the Cahaba River, was initially acquired into federal

ownership through the West Alabama Resettlement Administration program, a New Deal program. Payne Lake, originally called Lake Margaret, and other infrastructure and administrative sites associated with this program exist.

The Talladega Management Area has a density of heritage resources similar to that of the Oakmulgee. Small prehistoric sites can be located on most level landforms near water sources. Past erosion on the steeper slopes has disturbed most of the upland sites, but some small intact lithic scatters are found on the lower terraces near water sources. Historic sites, representing the 19th century settlement of the area and the logging industry, are scattered over the forest. Sites from the early 20th century include fire towers, recreational areas, and other infrastructure elements associated with the early forest development and the Civilian Conservation Corps. Two known historic transportation routes are of interest on the management area. The McIntosh Trail runs east/west across the management area south of Interstate-20. This is an early historic trade route that connected the Creek Nation to South Carolina Colony. The Oxford-Cheaha CCC Road is an early 20th century road, built by the Civilian Conservation Corps that provided the route from the CCC camp at Oxford to the top of Cheaha Mountain.

The Tuskegee Management Area has a relatively high density of heritage resources. Small lithic scatters, representing various periods of prehistory, can be found on level landforms in the uplands. However, most of the upland settings have been severely disturbed from past erosion and subsequent land management activities. Historic Creek Indian sites, including small villages or extended hamlets, have been located along Choctafaula Creek. Some of these sites may date to the early 19th century, just prior and during the Creek Civil War. Site 1Mc110, is a Creek Indian village site listed on the National Register of Historic Places, and placed in Prescription 4.E. The Tuskegee Management Area was initially acquired into federal ownership through the East Alabama Land Resettlement Administration. Early 20th century infrastructure elements, fire towers, recreational facilities associated with the resettlement administration can be found on the management area.

Goals and Objectives:

GOAL 28 Manage areas with special paleontological, cultural, or heritage characteristics to maintain or restore those characteristics.

GOAL 29 Use a systematic program of heritage resource inventory, evaluation, and preservation aimed at the enhancement and protection of significant heritage resource values in compliance with Sections 106 and 110 of the Historic Preservation Act of 1966 as amended (1980). Emphasize integration of heritage resource management concerns and coordinate with the public, scientific community, appropriate Native American and other ethnic groups.

OBJECTIVES

29.1 Inventory heritage resources with priority given to proposed project areas.

29.2 Develop preservation/maintenance plans for historic properties.

Standards

FW-97. Coordinate inventory, evaluation, nomination, protection, enhancement, and interpretation procedures with the Alabama State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (ACHP), and Tribal Historic Preservation Officer (THPO) as necessary before project decisions.

FW-98. All coordination relating to the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR 800) will also tier to any programmatic agreements, MOU's, MOA's or other agreements between the Forest and SHPO. The Forest Heritage Program manager serves at the SHPO/Forest point of contact.

FW-99. Consultation will include, when necessary, federally recognized Native American tribes with geographic or cultural ties to the Forest, pursuant to provision in the Archeological Resources Protection Act (ARPA), American Indian Religious Freedom Act (AIRFA), Native American Graves Protection and Repatriation Act (NAGPRA), and the Region 8/Region 9 Treatment of Human Remains Policy. Forest Heritage staff will develop mechanisms for consultation. Provide for traditional use or collection of forest resources by Native Americans.

FW-100. Decision documents (Record of Decision, Decision Notice or Decision Memo) will evidence compliance with the NHPA, 36 CFR 800, and other Heritage-related regulations, as appropriate. A project (or undertaking) not in compliance will be suspended by the Forest Supervisor until compliance is documented.

FW-101. Use the Cultural Resources Management Survey Form to request archeological survey or status of compliance with Section 106 of the National Historic Preservation Act (NHPA) and NEPA. For projects known to contain heritage properties, coordinate mitigative or protective procedures with the Forest Heritage Program Manager.

FW-102. Ensure that Section 106 compliance clauses are inserted in contracts and sales documents, and that clauses are discussed in pre-work conferences.

FW-103. If additional evidence or information regarding a "not significant" property becomes available, it will be re-evaluated

Minerals

The United States holds title to approximately 81% of the minerals beneath the Forest. The approximate 19% the government doesn't own is identified as Outstanding - 11.6%, Reserved - 6.5% and 1.5% where the government has a fractional interest. It should be noted that nearly 2% of the lands on this Forest are Public Domain. Outstanding mineral

rights are property rights where the mineral estate was severed prior to the government acquiring title to the surface. Reserved minerals are property rights that were established and separated from the surface when the government acquired the surface estate. Public Domain lands are lands that have never left government ownership. The Bureau of Land Management (BLM) administers or manages the mineral estate where the United States holds title and the Forest Service administers the surface estate. There are approximately 20 Federal oil and gas leases on the Forest with 4 producing oil wells on 3 of the Federal leases on the Forest.

Federal mineral ownership is over 541,000 acres. This acreage falls within 5 categories for mineral leasing purposes. The first category consists of lands that are not available for lease. These lands have either been withdrawn from mineral entry administratively, by law or the Forest has determined that a prescription goal cannot be accomplished if the lands were open to mineral entry. 7% of the Forest falls within this category. The *second category allows leasing only with No Surface Occupancy (NSO), Controlled Surface Use (CSU) or a timing restriction stipulation. Less then 1% of the Forest falls within this category. The third category allows leasing but only with a NSO stipulation. 2.2% of the Forest is within this category. The fourth category allows mineral leasing with either a NSO or CSU lease stipulation. 4.1% of the Forest is in this category. The fifth and final category allows for leasing with standard lease stipulations. A majority of the lands on the Forest, 86.4%, falls in this category.*

GOAL 30 Administer mineral resource program to address demands for energy and non-energy minerals consistent with management prescription, multiple use objectives and in accordance with existing laws.

OBJECTIVES

30.1 Reclaim energy and non-energy mineral sites at the appropriate stage of the mineral operation. Identify opportunities for reclamation to achieve post-mine land uses that complement the Desired Condition of the appropriate management prescription.

Standards

FW-104. Any mineral operation undertaken on National Forest land where minerals have been reserved, will comply with applicable state and federal laws, and the Secretary's rules and regulations.

FW-105. Administer permits in strict accordance with the terms of the deed of separation and appropriate state and federal laws of operations for outstanding rights.

Infrastructure

The transportation system on the National Forests in Alabama serves a variety of resource management and access needs. The management of the transportation system is based on a set of Road Management Objectives (RMOs) that establish the specific intended purpose based on management needs and that contain design, operation and maintenance criteria and standards for each road. The RMOs for the Forest range in purpose from being physically blocked to all traffic awaiting need for entry for various activities on an intermittent basis to being open year round to public traffic in a standard 4-wheel passenger car. The design, operation and maintenance criteria correspondingly vary according to the range of intended purpose. Appendix D describes the five generic RMOs for the Forest.

There are approximately 2,000 miles of inventoried, classified National Forest System Roads (NFSR) on the National Forests in Alabama including approximately 600 miles of Maintenance Level (ML) 3, 4 and 5 roads that are suitable for low-clearance vehicles (passenger cars). The remainder, are ML 1 and 2 roads that are suitable for high clearance vehicles, closed for administrative traffic or blocked to all traffic. These roads are single-purpose, low volume roads normally single-lane and unsurfaced.

NFSR's are maintained to varying standards depending on the level of use and RMO's. There are five maintenance levels used by the Forest Service and described in *FSH 7709.58 Transportation System Maintenance Handbook.* The following is a description of the five levels taken from FSH 7709.58, Section 12.3, Item 2.

> Roads assigned to maintenance levels 2-5 are either constant service roads or intermittent service roads during the time they are open to traffic.
>
> a. Level 1. Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate."
>
> Roads receiving Level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular traffic, but may be open and suitable for nonmotorized uses.
>
> b. Level 2. Assigned to roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic

management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

c. Level 3. Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities.

   Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

d. Level 4. Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.

e. Level 5. Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage."

GOAL 31 Provide a transportation system that supplies safe and efficient access for forest users while protecting forest resources.

OBJECTIVES

31.1 Within 5 years, complete an assessment of existing road crossings in relation to aquatic species passage.

31.2 Prioritize road maintenance and reconstruction projects in accordance with threatened, endangered and sensitive species recovery and conservation efforts.

31.3 Institute seasonal closures on roads and trails over the 10 to 15 year period of the plan to provide additional acreage of remote habitats during spring and summer months.

31.4 Annually complete site safety inspection of all facilities, bridges and open roads. Correct high-risk conditions prior to use.

GOAL 32 Accelerate the pace of decommissioning unneeded roads (classified and unclassified).

GOAL 33 Improve the condition of forest roads/bridges that are adversely effecting surrounding resource values and conditions.

GOAL 34 Identify and acquire easements and/or rights-of-way for existing forest roads and access needs.

Standards

FW-106. Locate proposed facilities (roads, campgrounds, buildings) outside floodplain boundaries of the 100-year flood, unless no practical alternative location exists.

FW-107. Water and sewage treatment systems will meet state and federal standards.

FW-108. Utility systems meet applicable state and local regulations.

FW-109. Communications towers no longer in use or determined to be obsolete are removed.

Land Acquisition

The National Forests in Alabama encompasses 1,276,376 gross acres within the boundary of the four proclaimed National Forests 666,081 acres are in national forest ownership. The majority of National Forests land in Alabama was acquired under the authority of Week Law of 1911.

The National Forests in Alabama, primarily through land purchase and the land exchange programs, increased the total acquired U. S. lands to 666,081 acres as of October 10, 2002. Most of the lands have been acquired on the Talladega Division, Talladega National Forest.

The land ownership pattern still confirms there is still work to be done. Because of lack of land purchase funds, land exchange is the most secure vehicle for meeting the land ownership program objective.

Additional acres within the National Forest Proclamation Boundary are needed to meet expected resource outputs (water, wildlife, threatened and endangered species, timber, recreation wilderness and range). Consolidation is desired end product for improving overall efficiency. Priority for acquisition or exchange for the National Forest is decided on a case-by-case basis. The best opportunity to improve landownership patterns has been to acquire high priority lands within or adjacent to existing National Forest. The best opportunity to improve landownership patterns has been to acquire high priority lands within or adjacent to existing National Forest lands using scattered and or less efficiently managed Forest lands for exchange. Since the implementation of the current Forest

Land and Resource Management Plan (4/86), the forest has acquired 21,658 acres by land exchange, 11,209 acres by purchase and 242 acres by donation. Land exchange is done on a value for value basis. Net gain to the National Forest system through these programs has been 17,494 acres since plan implementation.

GOAL 35 Achieve a consolidated forest ownership pattern that reduces management costs and meets ecosystem management objectives.

GOAL 36 Acquire lands containing sites critical to the conservation of rare communities, federally listed threatened or endangered species, or species deemed at risk of losing viability within the planning area including, but not limited to, riparian areas, wetlands and land to connect large tracts to maintain biological and hydrologic linkages.

GOAL 37 Locate and maintain forest boundaries so that they are visible to forest users and neighbors.

OBJECTIVES

37.1 Maintain boundary lines on an eight-year rotation.

37.2 Achieve 100% establishment of boundary lines by the end of the plan period.

GOAL 38 Identify and resolve illegal trespass and occupancy of National Forest lands.

GOAL 39 Consolidate National Forest ownership along riparian corridors in order to allow greater protection of water quality and provision of habitat for riparian dependent species.

GOAL 40 Public lands are easily accessible.

OBJECTIVES

40.1 Acquire right-of-way or fee simple title in lands, as appropriate, to meet access needs.

GOAL 41 National Forest System (NFS) lands are consolidated to improve management effectiveness and enhance public benefits.

OBJECTIVES

41.1 Through purchase, donation, exchange, rights-of-way acquisition, transfer, interchange, and boundary adjustment; consolidate NFS ownership pattern.

41.2 Acquire lands or interests in lands needed to support specific resource management objectives.

41.3 Exchange or transfer lands or interests in lands that consolidate or provide public benefits.

FW-110. Prepare and maintain a landownership adjustment map based on the goals and objectives for a given area. (NOTE: For this Standard, the Forest Supervisor may approve changes to the map, as long as Forest Plan objectives are met. The Regional Office and Ranger Districts will be notified of any changes.)

Special Uses

All uses of National Forest System lands, improvements, and resources, except those governing the disposal of timber, minerals, and the grazing of livestock are designated "special uses". The predominant use is for public roads and utility rights-of-way. These special uses serve a public benefit by providing public access through the National Forest, and providing for the transmission of electricity, natural gas, water, and various types of communication signals. Authorizations for access to private land are also considered. In addition, recreational activities such as outfitting & guiding and competitive events such as fishing tournaments, foot races, horse endurance races, mountain bike races, etc. also fall into the arena of "special uses". Communication/electronic sites are designated as Prescription Area 5.B. and are usually located on mountain and ridge tops.

GOAL 42 Evaluate special-use applications to determine if they are in the public interest, cannot be accommodated on private land, and comply with the Forest Plan, laws, regulations and statutes. Special uses are administered to compliment other resource values.

Standards

FW-111. Limit new special use permits to those uses that serve the public interest and cannot be met on private land.

FW-112. Charge occupancy and use fees commensurate with charges for similar uses on private lands. Fees should reflect fair market value for the use of National Forest lands and improvements as determined by an appraisal, market survey, or other sound business management principle.

FW-113. Limit special use permits in wilderness areas, wilderness study areas, wild and scenic river study areas, Research Natural Areas, botanical or other special areas to scientific collection or research.

FW-114. Do not issue easements or leases in wilderness areas, wilderness study areas, wild and scenic river study areas, Research Natural Areas, botanical or other special areas.

FW-115. Do not issue new special use permits, or expand existing permits for recreation residences or cemeteries.

FW-116. The use of pesticide by any permittee will be determined by a site-specific environmental analysis.

FW-117. When seeding temporary openings such as driveways and utilities, use only native or non-persistent nonnative species.

FW-118. New communication tower installations and ridge-top recreational developments are designed to mitigate collision impacts to migratory birds through coordination of project planning and implementation with the U.S. Fish and Wildlife Service.

FW-119. New communications equipment is placed on existing towers or other structures where possible. Height of new towers does not exceed 200 feet above ground level.

Natural Resource Interpretation and Education

Natural resource education and public involvement are cornerstones of the Forest Service mission. Based upon a number of policy documents (2390 FSM; NEPA 1969; National Environmental Education Act of 1990), the Forest Service promotes educational activities as a means to involve people in the management of their public lands. Benefits include increased public awareness, knowledge, understanding, and involvement. Knowledgeable public involvement results in more effective and responsive natural resource management. In Alabama, current and ongoing educational activities range from District displays and pamphlets to school presentations, kids fishing days, and cooperative resource improvement programs. In the future, additional interpretive and partnership activities will be integrated into most of our programs, further enhancing our mission of sustainable natural resource management.

GOAL 43 Increase public awareness, knowledge, understanding, appreciation, and involvement in Forest Service natural resource management activities.

OBJECTIVE

43.1 Develop a Forest-wide strategy for interpretive opportunities and facilities within five years.

GOAL 44 Engage the public and other agencies in cooperative, collaborative efforts that win their trust and support while helping to meet desired future conditions.

GOAL 45 Encourage cooperation and partnerships with individuals, non-profit organizations, other agencies, special interest groups, clubs and others to achieve the Forest's interpretive

Chapter 3

MANAGEMENT PRESCRIPTIONS

Introduction

The 1986 Land and Resource Management Plan for the National Forests in Alabama included specific direction on how to manage different land areas. These land areas were called management areas. This revised plan also contains management areas, but the management areas are now related to physiographic regions and the major divisions of land found on the National Forests in Alabama, as described in Chapter 4. Each management area has a certain emphasis that will direct management activities on that piece of land. This emphasis is reflected in the management prescriptions applied. The management prescriptions are grouped in "categories" that have similar management emphases and were developed initially by the Southern Appalachian Planning group. This chapter does not include management area prescriptions considered in other alternatives but not used in the Revised Plan. There are twelve major categories of management emphasis included in the prescriptions.

Each management prescription includes:

Emphasis – a statement of the general management direction for the area.

Desired Condition - how the area will look and the opportunities and/or conditions that will be available in the future.

Standards - management direction that applies to a particular area or activity.

Following are the Management prescriptions applied to the National Forests in Alabama through this Revised Plan.

2.0 Management Prescriptions for the National Forests in Alabama

0. CUSTODIAL MANAGEMENT

Emphasis: These areas are managed at a minimum level prior to disposal or land exchange. No expenditures will be involved except those required by law or to protect human health or safety. No resource is emphasized. These areas are unsuitable for timber production.

Desired Condition: These areas will be characterized by mid- to late-successional forests, with little to no human-caused forest openings. Vegetation is influenced

primarily by natural processes such as flooding, hurricanes, storms, insects and disease, and fires. Lands will be classified as unsuitable for timber production.

These areas are generally surrounded by private lands and not accessible by the general public. There are no developed or dispersed recreation opportunities except for adjacent private landowners. The landscape character will be natural appearing. No habitat associations are emphasized.

Standards:

0-01. **Lands:** Land expenditures are allowed in order to dispose of isolated tracts of land.

0-02. **Special Uses:** Existing uses are allowed to continue and new uses are authorized provided that funding is adequate to cover processing the use.

0-03. **Federal Minerals:** Timing, controlled use, and no surface occupancy stipulations will be used on an as-needed basis. Mineral material authorizations for local, State, and other Federal agencies are permitted for public health, safety, and emergencies. Commercial use of mineral materials is permitted provided that fees for these uses are adequate to recover administration costs.

0-04. **Forest Health:** Insect and disease outbreaks may be controlled where threatened, endangered, proposed, sensitive, or locally rare species and their habitats may be adversely impacted; to prevent damage to resources on adjacent land; or where needed for safety or legal reasons. Eradication of recently established invasive non-native species may be considered. Salvage timber may be removed after catastrophe if needed for safety or legal reasons.

0-05. **Fire:** Prescribed fire will not be used as a management tool. Wildfires will always be suppressed.

0-06. **Roads:** New roads will not be built. Decommission roads that are not needed and are adversely affecting surrounding resource values and conditions, will be decommissioned or closed.

0-07. **OHVs:** This area is closed to OHV use.

0-08. **ROS Settings:** Roaded Natural and Semi-Primitive Motorized.

0-09. **Scenery:** Scenic integrity objectives are high or very high.

1. WILDERNESS AREAS

1.A. DESIGNATED WILDERNESSES/WILDERNESS STUDY AREAS

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 offering opportunities to experience solitude and risk in as primitive surroundings as possible. These areas are unsuitable for timber production.

Desired Condition: As stated eloquently in the Wilderness Act, the 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) has at least five thousand acres of land or 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 naturally-evolving character of the landscape in wilderness is primarily older forests with a continuous canopy, except for occasional gaps created by natural occurrences such as storms, insect or disease outbreak, and fire. Old-growth forest communities will increase over the decades, except where significant natural disturbances occur. Lands are classified as unsuitable for timber production. Vegetation management is limited to trail clearing with hand tools and prescribed fire. Management-ignited prescribed fire may be used to reduce an unnatural buildup of fuels to an acceptable level and reduce the risks and consequences of wildfire within wilderness or escaping from wilderness. Lightning fires are permitted to play a natural role when weather, terrain, and external values at risk permit.

Management of the area is focused on protecting and preserving the natural environment and natural processes from human influences. Recreation management is designed to provide solitude and remoteness in the most primitive and natural recreation setting possible. To this end, access to the area is limited. Trailheads at surrounding roads are designed with sensitivity to scale and character to set the tone for experiencing a primitive recreation experience. Once in the designated wilderness, visitors on foot or horseback must rely, to varying degrees, on their own personal physical abilities and primitive recreation skills. Wilderness recreation includes inherent risks. Visitors are isolated from sights and sounds of other human activity; encounters are rare. Travel and recreation within wilderness are strictly nonmotorized.

Most visitor information is dispensed outside of the wilderness at trailheads and through off-site public information and education efforts. Wilderness visitors are encouraged to "pack-it-in and pack-it-out" and to "leave no trace." Trails are present in wilderness. They lie lightly on the land, are typically narrow footpaths or horse trails, and have minimum directional signing that blends well with the natural surroundings. Visitors will be physically challenged as they ford streams and climb over downed trees.

Very few facilities are provided. Permanent human-made shelters may be present if they existed prior to wilderness designation, particularly along the Appalachian National Scenic Trail. Construction of new shelters on new sites within wilderness is not appropriate, unless there is an obvious and overriding need to protect natural resources from impacts of human visitors. Structures□including signs, bridges, trail waterbars, and improved water sources□for the comfort or convenience of visitors in wilderness are minimal. The few structures appearing in wilderness are generally for the protection of resources or were present prior to wilderness designation. Wilderness acres are managed for Primitive ROS even if area does not meet all inventory criteria except the existing wagon roads will continue in the Sipsey Wilderness.

There will be good to optimal habitat conditions for mid- to late-successional deciduous forest associates; area-sensitive, mid- to late-successional deciduous associates; bottomland hardwood associates; mixed mesic forest associates; and basic mesic forest associates. Rare communities and species associates, along with population occurrences of threatened, endangered, sensitive, and locally rare species that thrive under undisturbed conditions or low levels of natural disturbance will be provided for.

Standards:

1.A-01. **Special Uses:** New utility corridors or communication/electronic sites will not be authorized within these areas. Other special uses may be authorized if consistent and compatible with the goals and objectives of each designated wilderness area.

1.A-02. **Minerals:** Federal mineral leases and mineral material authorizations will not be allowed, unless provided for in the designating legislation. Existing leases and authorizations will not be renewed.

1.A-03. **Forest Health:** Insect and diseases outbreaks will be treated where threatened, endangered, proposed, sensitive, or locally rare species and their habitats will be adversely impacted or to prevent damage to resources on adjacent private lands.

1.A-04. **Fire:** Prescribed fire may be used if approval within wilderness is documented, is preplanned, and specific conditions exist. Management-ignited prescribed fire can be used in wilderness by

qualified Forest Service personnel to reduce an unnatural buildup of fuels to an acceptable level to reduce risks and consequences of wildland fire within wilderness or escaping from wilderness. Wildland fire ignited by lightning may also be managed in wilderness to permit lightning-caused fires to play, as nearly as possible, their natural ecological role, as long as the applicable documentation has been prepared and approved.

1.A-05. **ROS Settings:** Primitive.

1.A-06. **Scenery:** Scenic integrity objective is very high.

1.B. RECOMMENDED WILDERNESS STUDY AREAS

Emphasis: Manage these areas to protect wilderness characteristics pending legislation as to their classification and provide for existing uses where compatible with protecting wilderness character. These areas are unsuitable for timber production.

Desired Condition: Roadless characteristics are enhanced. The desired condition for wilderness resources and recreation opportunities in this area is the same as described in 1.A. This type of management is to continue until Congress decides whether or not to include the area in the National Wilderness Preservation System.

Standards:

Same as 1.A.

2. WILD AND SCENIC RIVERS

2.A.1. WILD RIVERS

Emphasis: Congress designated these wild river segments and their associated corridors as a part of the National Wild and Scenic Rivers System. They are managed to enhance and protect the outstandingly remarkable values and unique qualities 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.

Desired Condition: The primary emphasis for management of the river and river corridor is to protect and enhance the outstandingly remarkable values of that river or river segment. Of all of the river designations, this one offers the most primitive and remote setting. Management of the river corridor is focused on protecting and preserving the natural environment and natural processes from human influences. Recreation management is designed to provide solitude and remoteness in the most primitive and natural recreation setting possible. To this

end, access to the area is limited to roads outside of the corridor. Trailheads at perimeter roads are designed with sensitivity to scale and character to set the tone for a primitive experience. Motorized recreation and mountain bikes are not compatible in this area.

The majority of this prescription area will be managed as semiprimitive nonmotorized, however, roads outside the wild river corridor may occasionally intrude on the sights and sounds within the area providing a less-primitive recreation experience. Once in the designated wild river corridor, visitors hiking, fishing, or floating must rely—to varying degrees—on their own personal physical abilities and primitive recreation skills. Trails are designed to accommodate use and river access while protecting resources and the river's outstanding resource values. Signs are designed to complement the natural environment in scale, character, and color. Most visitor information is provided outside of the wild river corridor at trailheads and through off-site public information and education efforts. Wild river visitors are encouraged to "pack-it-in and pack-it-out" and to "leave no trace."

The landscape character is naturally evolving, only the linear swath of the river breaks the continuous forest canopy, although occasional small gaps may occur in the canopy as the results of natural disturbances. The mature forest is comprised primarily of large hardwoods on slopes and a mixture of hardwoods and hemlocks along the river's banks. Understory plants—particularly rhododendron and edge-favoring, small flowering trees (such as silverbell, dogwood, and redbud)—provide a lush vegetative understory visible from the river and trails. Old-growth forest communities will increase over the decades, except where significant natural disturbances occur. The lands are classified as unsuitable for timber production. Vegetation management is limited to trail clearing and prescribed fire. Management-ignited prescribed fire may be used to reduce an unnatural buildup of fuels to an acceptable level and reduce the risks and consequences of wildfire within the river corridor or escaping from the corridor. Lightning fires are permitted to play a natural role when weather, terrain, and external values at risk allow. Prescribed fire can also be used for control of exotic pests and to create, enhance, or maintain threatened, endangered, sensitive, and locally rare species habitat necessary to perpetuate these flora or fauna.

There will be good to optimal habitat conditions for mid- to late-successional deciduous forest associates; area-sensitive, mid- to late-successional deciduous associates; bottomland hardwood associates; mixed mesic forest associates; and basic mesic forest associates. These linear travelways of relatively remote habitat will also provide safe migration corridors for a wide variety of species. Rare communities and species associates, along with population occurrences of threatened, endangered, sensitive, and locally rare species that thrive under undisturbed conditions or low levels of natural disturbance will be provided for.

Standards:

2.A.1-01. **Lands:** Privately owned surface and subsurface rights within these areas are high priorities for acquisition. Private lands adjacent to the river corridor will be high priority for acquisition when such acquisition would improve the manageability of the corridor.

2.A.1-02. **Special Uses:** New utility corridors or communication/electronic sites will not be authorized within these areas. Existing nonconforming uses will generally not be renewed. Other special uses may be authorized if consistent and compatible with the goals and objectives of these areas.

2.A.1-03. **Federal Minerals:** Federal mineral leases and mineral material authorizations would not be allowed, unless provided for in the designating legislation.

2.A.1-04. **Private Mineral Rights:** The Government will seek to acquire private mineral rights through purchase, exchange, or donation. Until such private rights are acquired, the exercise of reserved and outstanding mineral rights to explore and develop mineral resources will be respected.

2.A.1-05. **Forest Health:** Insect and disease outbreaks will be treated where threatened, endangered, proposed, sensitive, or locally rare species and their habitats will be adversely impacted or to prevent damage to resources on adjacent private lands.

2.A.1-06. **Fire:** Prescribed fire may be used if it is preplanned, and specific conditions exist. Management-ignited prescribed fire can be used by qualified Forest Service personnel to reduce an unnatural buildup of fuels to an acceptable level to reduce risks and consequences of wildland fire within wild river corridor or escaping from the corridor. Wildland fire ignited by lightning may also be managed in this corridor to permit lightning-caused fires to play, as nearly as possible, their natural ecological role, as long as the applicable documentation has been prepared and approved.

2.A.1-07. **ROS Settings:** Semi-Primitive Non-Motorized.

2.A.1-08. **Scenery:** Scenic integrity objective is very high.

2.A.1-09. **OHVs:** This area is closed to OHV use.

2.A.2. SCENIC RIVERS

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 perpetuate 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. Recreation opportunities emphasize relatively low development levels. These areas are unsuitable for timber production.

Desired Condition: The primary emphasis for management of the river and river corridor is to protect and enhance the outstandingly remarkable values of that river or river segment. Scenic rivers and their surroundings are slightly more developed by humans than their "wild" counterparts. The river's shorelines are largely undeveloped; however, occasional roads or railroads may reach or bridge the river, and there may be designated parking areas and trailheads. Trail users may include hikers, mountain bikers, and horseback riders, but not motorized vehicles.

Portions of the river corridor that currently meet the criteria for semiprimitive, nonmotorized recreational opportunities will be maintained; however, the majority of these corridors will be managed as semiprimitive, motorized or roaded natural. Visitors enjoy a natural setting although sights and sounds of human activity and motorized vehicles may be present. Visitors' physical abilities and primitive recreation skills are challenged moderately. The opportunity to encounter other visitors is moderate to high, depending on the location and time of year. Visitors seeking solitude may find it by visiting during nonpeak seasons, midweek, or by hiking some distance from roads and parking areas.

The landscape character is "naturally appearing" or "pastoral" with high scenic integrity. A visitor may see some evidence of human disturbance reminiscent of early America—including rural structures, grazing animals, meadows, fields, rustic campgrounds, and occasional roads. Facilities are minimized and are primarily for visitor safety and access and to protect river resources. Facilities may include parking areas, trailheads, interpretive kiosks, rest rooms, trails, and signs. Facilities are understated in appearance and are designed to complement the natural environment in scale, character, and color. Trails are designed to accommodate use and river access while protecting the resources and the river's outstanding resource values.

Disturbances would be primarily caused by natural processes (floods, windstorms, and fires). Lands are classified as unsuitable for timber production, although management of vegetation is permitted within the river corridor. Prescribed fire, commercial timber harvest, and noncommercial felling of trees may be used for scenic enhancement or rehabilitation to provide watchable wildlife opportunities; maintain developed recreation facilities; improve threatened, endangered, sensitive, and locally rare species habitat; restore native vegetative communities; restore riparian ecosystems; reduce unnatural fuel buildups; or control nonnative

invasive vegetation. Lightning fires are permitted to play a natural role when weather, terrain, and external values at risk allow.

There will be good to optimal habitat conditions for mid- to late-successional deciduous forest associates, bottomland hardwood associates, mixed mesic forest associates, and basic mesic forest associates. (See table xx for list of species within these associations.) These linear travelways of relatively remote habitat will also provide safe migration corridors for a wide variety of species. Where the forested canopy is at least 70 percent closed across the landscape, good to optimal habitat conditions for area-sensitive, mid- to late-successional habitat associates will also be provided. Management and/or protection of rare communities and species associates will be provided, along with management and/or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Standards:

2.A.2-01. Special Uses: New utility corridors or communication/electronic sites will not be authorized within these corridors. Existing nonconforming uses will generally not be renewed. Other special uses may be authorized if consistent and compatible with the goals and objectives of these areas.

2.A.2-02. Federal Minerals: Federal leases are not allowed.

2.A.2-03. Forest Health: Insect and disease outbreaks may be controlled when threatening the outstandingly remarkable values of the river corridor and where needed to protect adjacent private land values, or for safety or legal reasons.

2.A.2-04. ROS Setting: Semi-Primitive Motorized and Roaded Natural.

2.A.2-05. Scenery: Scenic integrity objective is high.

2.A.2-06. Roads: There will be a low open road density (generally <1½ miles/1,000 acres). Roads may be needed to cross the river but should not parallel the river segment.

2.C. RIVERS ELIGIBLE AS WILD AND SCENIC RIVERS

Emphasis: These river segments and their associated corridors are eligible for designation by Congress to be a part of the National Wild and Scenic Rivers System. The suitability analysis has not been completed on these rivers and streams, but they are managed to protect and perpetuate the outstandingly remarkable values that led to their eligibility. These areas are unsuitable for timber production.

Desired Condition: The primary emphasis for management of the river and river corridor is to protect and enhance the outstandingly remarkable values of that river or river segment. The river's shorelines are largely undeveloped; however, occasional roads or railroads may reach or bridge the river, and there may be designated parking areas and trailheads. Trail users may include hikers, mountain bikers, and horseback riders, but not motorized vehicles.

Portions of the river corridor that currently meet the criteria for semiprimitive, nonmotorized recreational opportunities will be maintained; however, the majority of these corridors will be managed as semiprimitive, motorized or roaded natural. Visitors enjoy a natural setting although sights and sounds of human activity and motorized vehicles may be present. Visitors' physical abilities and primitive recreation skills are challenged moderately. The opportunity to encounter other visitors is moderate to high, depending on the location and time of year.

The landscape character is "naturally appearing" or "pastoral" with high scenic integrity. A visitor may see some evidence of human disturbance reminiscent of early America—including rural structures, grazing animals, meadows, fields, rustic campgrounds, and occasional roads. Facilities are minimized and are primarily for visitor safety and access and to protect river resources. Facilities may include parking areas, trailheads, interpretive kiosks, rest rooms, trails, and signs. Facilities are understated in appearance and are designed to complement the natural environment in scale, character, and color. Trails are designed to accommodate use and river access while protecting the resources and the river's outstanding resource values.

Disturbances would be primarily caused by natural processes (floods, windstorms, and fires). Lands are classified as unsuitable for timber production, although management of vegetation is permitted within the river corridor. Prescribed fire, commercial timber harvest, and noncommercial felling of trees may be used for scenic enhancement or rehabilitation to provide watchable wildlife opportunities; maintain developed recreation facilities; improve threatened, endangered, sensitive, and locally rare species habitat; restore native vegetative communities; restore riparian ecosystems; reduce unnatural fuel buildups; or control nonnative invasive vegetation. Lightning fires are permitted to play a natural role when weather, terrain, and external values at risk permit.

There will be good to optimal habitat conditions for mid- to late-successional deciduous forest associates, bottomland hardwood associates, mixed mesic forest associates, and basic mesic forest associates. These linear travelways of relatively remote habitat will also provide safe migration corridors for a wide variety of species. Where the forested canopy is at least 70 percent closed across the landscape, good to optimal habitat conditions for area-sensitive, mid- to late-successional habitat associates will also be provided. Management and/or protection of rare communities and species associates will be provided, along with management and/or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a

high likelihood that species within these associations will continue to persist on National Forest System lands.

Standards:

2.C-01. Special Uses: New utility corridors or communication/electronic sites will not be authorized within these corridors. Other special uses may be authorized if consistent and compatible with the goals and objectives of these areas once.

2.C-02. Forest Health: Insect and disease outbreaks will be treated using Integrated Pest Management techniques, when threatening the outstandingly remarkable values of the river corridor and where needed to protect adjacent private land values, for safety, or legal reasons.

2.C-03. ROS Setting: Semi-Primitive Motorized and Roaded Natural.

2.C-04. Scenery: Scenic integrity objective is high.

2.C-05. Roads: There will be a low open road density (generally <1½ miles/1,000 acres). Roads may be needed to cross the river but should not parallel the river segment.

4. SPECIAL AREAS

4.B. RESEARCH NATURAL AREAS

4.B.1. EXISTING RESEARCH NATURAL AREAS

Emphasis: Manage for scientific research in an undisturbed state as a baseline for comparison with other forest environments. These areas are unsuitable for timber production.

Desired Condition: The research natural area (RNA) and its ecosystems continue to furnish ecological information of value to the Forest Service and society at large. The area continues to be representative of the ecosystems it was established to represent. The landscape character will be natural evolving. Human uses are not causing detectable and significant ecological changes.

Vegetation is entirely influenced by natural processes. Lands are classified as unsuitable for timber production. Predominately old-growth forest communities will develop throughout the area, with small canopy gaps and occasional large openings of early successional habitat created through natural disturbance. Non-native species occur only as transients and are not self-perpetuating. For all data collection, the locations, collectors, methods, tools, and dates are known and the unanalyzed data is available.

The protection of rare communities and species associates will be provided, along with the protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Primary uses of the area during this time will be information collection for scientific research, graduate student theses, and supervised environmental education. All users, including Forest Service researchers, are subject to use limitations. Other compatible uses—such as individual nature study, which does not include specimen collection, photography, or day hiking—are permissible unless the use threatens the ecological integrity of the area and therefore its value as a research natural area representative of an important ecosystem. Infrastructure development, such as trails or parking areas, will be done only after the involvement of Forest Service research on the need for the project and the most appropriate methods and tools. There is little or no interaction among visitors. People must rely heavily on primitive recreation skills such as orienteering.

Standards:

4.B.1-01. **Special Uses:** New utility corridors or communication/electronic sites will not be authorized within these areas. Other special uses are authorized if consistent and compatible with the goals and objectives of these areas.

4.B.1-02. **Federal Minerals:** Using a No Surface Occupancy stipulation, Federal mineral leases may be permitted if compatible with the purposes for which the RNA was established. Mineral material authorizations would not be allowed.

4.B.1-03. **Forest Health:** Insect and disease outbreaks may be controlled when necessary to protect the values for which the area was established, to reduce hazards to visitors, or for safety or legal reasons.

4.B.1-04. **ROS Setting:** Semi-Primitive Non-Motorized.

4.B.1-05. **Scenery:** Scenic integrity objective is very high.

4.B.1-06. **OHVs:** This area is closed to OHV use.

4.C. GEOLOGIC AREAS

Emphasis: The primary desired outcome of management is a public understanding of, and appreciation for, the influence of geology in the ecology and human history of the larger land area being represented by the designated geologic area. These areas are suitable for timber production.

Desired Condition: Geologic areas provide outstanding opportunities for people to learn about the natural history of the forest and to enjoy a variety of recreation opportunities in an attractive setting.

There is low to moderate need for visitors to rely on their personal physical abilities and primitive recreation skills. Education and interpretation are strongly emphasized. Visitors often see sights and hear sounds of other human activity, the opportunity for this is from moderate to high. Visitors seeking solitude may find that difficult to achieve.

Visitors enjoy a natural-appearing setting with interesting geologic formations. Visitors are encouraged to practice minimum impact techniques while recreating. Trash receptacles may be provided at parking areas and high-use areas. Facilities of a modern nature will be present to provide for visitor safety and comfort and to protect resources. Facilities are designed with sensitivity to character, scale, and color, which complement the surroundings at each specific site. This could range from semi-primitive to rural. Facilities might include parking areas, trailheads, bulletin boards, interpretive kiosks, signs, rest rooms, and picnic sites.

Habitat associations being emphasized include mid- to late-successional deciduous associates and bottomland forest associates. Habitat conditions beneficial to mixed mesic associates and mixed xeric associates (primarily xeric oak and xeric oak-pine habitats) are provided. The mix of habitats provides suitable habitat for eastern wild turkey and white tailed deer. Management and/or protection of rare communities and species associates will be provided, along with management and/or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Standards and Guidelines:

4.C-01. **Federal Minerals:** Using stipulations such as No Surface Occupancy and Controlled Surface Use to protect the area, Federal mineral leases may be allowed. Mineral material authorizations with conditions to protect the area may be permitted.

4.C-02. **Forest Health:** Insect and disease outbreaks may be controlled when necessary to protect the values for which the area was established, to reduce hazards to visitors, or for safety or legal

reasons. Hazard trees could be felled in areas occupied by humans (i.e., roads and picnic sites). Actions need to be consistent with Forest Service policy, Vegetation Management EIS and SPB EIS.

4.C-03. **ROS Setting:** Roaded Natural.

4.C-04. **Scenery:** Scenic integrity objectives range from high to moderate.

4.C-05. **Roads:** There will be a variety of levels of access.

4.C-06. **OHVs:** This area is closed to OHV use.

4.D. BOTANICAL - ZOOLOGICAL AREAS

Emphasis: These lands serve as core areas for conservation of the most significant elements of biological diversity identified to date on the forest. In priority order, the goals of designation and management of these areas are: (1) to perpetuate or increase existing individual plant or animal species that are of National, regional, or State significance as identified on TES lists; and (2) to perpetuate plant and animal communities that are unique at the scale of their ecological section or subsection unit. These areas are unsuitable for timber production.

Desired Future Condition: Desired conditions include the following at each site: (1) protection of threatened, endangered, sensitive, or locally rare species from human taking or human-caused detrimental habitat changes; (2) viable and increasing populations of threatened, endangered, sensitive, or locally rare species; and (3) ecosystems functioning with natural change only.

These naturally-evolving or naturally-appearing areas are characterized by a variety of forested and nonforested communities generally being affected more by the forces of nature than by humans. Old-growth forest communities currently exist in some of these areas, and additional acres will develop in future years. Ideally, natural processes within these areas proceed unencumbered; however, in some cases, the prevailing environmental conditions have changed to prevent, or at least hinder, natural processes. Examples of these conditions include adjacent human development and influx of nonnative species.

All areas will be protected from human-caused detrimental habitat change, the taking of threatened or endangered species, and the collection of living plants or animals unless such collections are for the purpose of achieving the stated management goals. These areas will be classified as unsuitable for timber production. Recreational access through these areas may be limited in order to protect natural heritage resources. Where public access is unrestricted, interpretive information will be available to develop understanding of the importance of protecting the plant and animal communities of the area.

Access is limited to existing roads and trails generally outside the perimeter of the area. New trail sections to link existing trails or for education and interpretation are considered on a case-by-case basis. Recreation opportunities are limited to interpretation, bird-watching, wildlife viewing, nature photography, and hiking on nonmotorized, nonmechanized foot trails.

These sites can be nominated for placement on natural areas registries maintained by the State chapters of The Nature Conservancy. These voluntary agreements recognize that protection and management of natural areas support rare species and significant natural communities.

Standards:

4.D-01. **Special Uses:** New utility corridors or communication/electronic sites will not be authorized within these areas. Other special uses are authorized if consistent and compatible with the goals and objectives of these areas.

4.D-02. **Federal Minerals:** Using stipulations such as No Surface Occupancy and Controlled Surface Use to protect the area, Federal mineral leases may be allowed. Mineral material authorizations with conditions to protect the area may be permitted.

4.D-03. **Forest Health:** Insect and disease outbreaks may be controlled when necessary to protect the values for which the area was established, to reduce hazards to visitors, or for safety or legal reasons. Eradication of recently established invasive non-native species may be considered. Control of established invasive non-native may be considered. Actions need to be consistent with Forest Service policy, Vegetation Management EIS, and SPB EIS.

4.D-04. **ROS Settings:** Roaded Natural and Semi-Primitive Motorized.

4.D-05. **Scenery:** Scenic integrity objectives range from high to moderate.

4.D-06. **Roads:** There should be a low open road density (generally <1½ miles/1,000 acres). There should be no new roads constructed. Unneeded roads should be decommissioned.

4.D-07. **OHVs:** This area is closed to OHV use.

4.E. CULTURAL/HERITAGE AREAS

4.E.1. CULTURAL/HERITAGE AREAS

Emphasis: The primary desired outcome of management is a public understanding and appreciation for heritage resources in order to promote their protection within the designated area. Management activities are directed at achieving the desired public understanding and appreciation through (1) public access to cultural, heritage, and archaeological features; and (2) on-site communication in all forms about past history and human influences that operated in the area. These areas are unsuitable for timber production.

Desired Condition: Desired conditions include the following at each site: (1) protection of archaeological, cultural, and historical resources from human taking or human-caused detrimental changes, and (2) public access to, and understanding of, archaeological, cultural, and historical resources of each area. Sites will be preserved and protected as appropriate in accordance with the law.

These areas are characterized by a variety of forested and nonforested communities, often showing a great deal of human influence. The landscape character could range from naturally appearing to historic/pastoral/cultural. Old-growth forest communities now occur in some of these areas and additional acres may be allowed to develop in future years if consistent with the historic character of the area. All heritage resources within the areas will be protected from vandalism and overuse. The collection of living plants or animals and artifacts will be prohibited unless such collections are for the purpose of achieving the stated management goals. These areas will generally be classified as “unsuitable” for timber production, unless a regulated timber harvest would be consistent with the archaeological, cultural, or historic character being interpreted.

Management and/or protection of rare communities and species associates will be provided, along with management and/or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Recreation opportunities focus primarily on public education and interpretation of the cultural/heritage resources. Other appropriate recreational activities include hiking, bird-watching, photography, hunting, and fishing. In developed areas, visitors do not need to rely heavily on physical abilities or primitive recreation skills. At these sites, the opportunity to encounter other people is high. In the more wooded or remote sites, visitors may need to rely on their own physical abilities for hiking steep slopes and fording small streams. Reliance on primitive recreation skills is moderate. The opportunity to encounter other visitors is from low to moderate.

Facilities are designed with sensitivity to character, scale, and color—which complement the surroundings at each specific site. Facilities at the more

developed sites may include parking areas, trailheads, trails, bulletin boards, and interpretive kiosks. Trails may be highly developed where appropriate, including hardened trails for a high level of accessibility for persons of all abilities. The more remote cultural/heritage sites may have only a nonmotorized hiking or interpretive trail with no additional facilities for visitors' comfort. New mountain bike trails are not developed in these areas. Existing mountain bike trails are analyzed to determine if negative impacts are occurring to the cultural resource, the historic integrity of the site, or interpretation of that resource. Horse trails are also analyzed for their impacts; however, it is understood that horse travel and use of horses for labor were once historic parts of the scene at many of the cultural/heritage sites.

Standards:

4.E.1-01. **Minerals:** Using stipulations with No Surface Occupancy to protect the area, Federal mineral leases may be allowed. Mineral material authorizations with conditions to administer the area may be permitted.

4.E.1-02. **Forest Health:** Insect and disease outbreaks may be controlled when necessary to protect the values for which the area was established, to reduce hazards to visitors, or for safety or legal reasons. Eradication of recently established invasive non-native species may be considered. Control of established invasive non-native species may be considered. Hazard trees could be felled in areas occupied by humans (i.e., roads and picnic sites). Actions need to be consistent with Forest Service policy, Vegetation Management EIS, and SPB EIS.

4.E.1-03. **ROS Settings:** Semi-Primitive Motorized.

4.E.1-04. **Scenery:** Scenic integrity objectives range from high to moderate.

4.E.1-05. **Roads:** There will be a variety of levels of access.

4.E.1-06. **OHVs:** This area is closed to OHV use.

4.E.2. NATIONAL REGISTER DISTRICTS AS SPECIAL AREAS

Emphasis: Ensure that National Register (NR) Districts are preserved and protected, as appropriate in accordance with the law. These areas are unsuitable for timber production.

Desired Condition: There will be hundreds of contributing sites within each NR District, which are to be protected from disturbance of the aboveground and below-ground features. Between the contributing sites, designated by the Forest

Archaeologists, most normal forest activities can occur. Interpretive signs and trails will be encouraged and maintained. The landscape character could range from natural appearing to cultural/heritage. These areas can be classified as either suited or unsuited for timber production depending on local conditions and the goals and objectives of the Management Area.

Management and/or protection of rare communities and species associates will be provided, along with management and/or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Recreational opportunities and facilities are essentially the same as those described in prescription 4.E.1 above, except this area allows for a potentially broader range of recreation opportunities. Motorized recreation, horse, and mountain bike use are considered on a case-by-case basis, as determined by the Forest Archaeologist in coordination with recreation specialists.

New Areas: As new sites are identified within the NR District, they will be added to this prescription and removed from the timber base. Likewise, as new NR Districts are identified, they will be added to the NR prescription.

Standards:

Same as 4.E.1.

4.I. NATURAL AREAS - FEW OPEN ROADS

Emphasis: Provide recreation opportunities in isolated areas where users can obtain a degree of solitude and the environment can be maintained in a near-natural state.

Desired Condition: The landscape will appear to be primarily shaped by ecological processes, rather than management activities. The areas will be unsuitable for timber production, and they will be managed for “Roaded Natural 2” or “Semi-primitive Motorized” conditions.

Terrestrial conditions will provide suitable to optimal habitat for species associated with late-successional deciduous forest habitats and late-successional high-elevation forest habitats. Habitat associates emphasized within this allocation are mid- to late-successional deciduous forest associates; general high-elevation forests and high-elevation spruce-fir associates; and basic and mixed mesic forest associates. Aquatic habitats and associated species within or downstream of these areas will be maintained or improved because of the undisturbed terrestrial and riparian forest, resulting in high water quality conditions. Management and/or protection of rare communities and species associates will be provided, along with management and/or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare

species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

These areas will provide tracts of backcountry recreation opportunities where human activities are subordinate to the landscape. Visitors will see little evidence of humans or human activities other than backcountry recreation use, with the exception of the few open roads that provide access. Development of hiking trail systems will be emphasized. Outdoor skills and self-reliance will be important for visitors because of the limited access to these areas. Hiking, nature study, backpacking, orienteering, hunting, and fishing will be typical activities available in a setting where freedom from sights and sounds of modern civilization is important.

Standards:

4.I-01. **Federal Minerals:** Using lease terms for environmental protection, Federal mineral leases would be allowed. Mineral material authorizations would be allowed.

4.I-02. **Forest Health:** Stands may be actively managed to reduce the risks and hazards of damage from native and invasive non-native species, while still meeting a medium to high level of scenic integrity. Forest pests are kept within acceptable levels through Integrated Pest Management Techniques. "Acceptable" levels will be determined based on site conditions and specific pest species involved. Involve Forest Health professionals as appropriate.

4.I-03. **Roads:** There will be a low open road density (generally <1½ miles/1,000 acres). Existing roads can be used, but new roads will not be constructed.

4.I-04. **ROS Settings:** Semi-Primitive Non-Motorized.

4.I-05. **Scenery:** The scenic integrity objective ranges from very high, high, and moderate.

4.L. CANYON CORRIDORS

Emphasis: This prescription applies only to the Cumberland Plateau physiographic region. This area will be managed to (1) protect canyon corridors and associated aquatic, riparian and upland flora and fauna; (2) restore degraded canyon character; (3) recover threatened, endangered, sensitive and/or locally rare species that may occur as part of the canyon corridor; and (4) offer a variety of dispersed recreational opportunities including environmental education and interpretation.

This prescription area would be unsuitable for timber production. There will be no timber salvage, however, there may be some timber by-products as a result of providing for safety and legal requirements (ESA, CWA).

Desired Condition: The canyon corridor is characterized by a narrow river valley and its adjacent steep cliffs or hillslopes. The lateral extent of this prescription includes the aquatic component (with its associated water, biotic communities, and the habitat features), the riparian component, the ecotone of transition between riparian and upland ecosystems, and the canyon bluff lines or steep hillslopes. This prescription contains the habitat for many aquatic and plant threatened, endangered, sensitive (TES) or locally rare species as well as habitat for Gray bat. It also encompasses many cultural resources sites.

Most canyon corridors would be in a mid- to late-successional stage with a continuous forest canopy. Dead, dying and down trees are common. This prescription is compatible with old growth prescriptions in that it already contains old growth stands and the long term forest community will be old growth. Predominate forest trees within the canyon ecosystem include beech, hemlock, sweet birch, cucumber tree and some oak species. Ground cover appears as a continuous mat of vary depths and composition. Disturbances caused by natural processes (floods, wind storms, and fires) will occur, however, detrimental impacts to facilities or improvements will be corrected. This prescription would be classified as unsuitable for timber production. Occasionally, some vegetation manipulation and open forest canopies would be present due to TES or locally rare species habitat improvement or protection and restoration of the canyon character.

Evidence of past and present management activities (i.e. tree stumps, trails, firelines) may be present. No wildlife openings would be allowed as well as no new roads except at crossings. Prescribed fire will commonly burn into and/or through these areas. Pushed firelines used for controlled fires within the corridor are located to avoid sensitive areas. Pushed lines running near the edge of the corridor will be located to preserve the canyon character.

The area will be managed to maintain a naturally appearing landscape character. Dispersed recreation would be offered where it meets the intent of these Desired Conditions and management objectives for water quality and riparian areas. Hiking, backpacking, dispersed camping, hunting and fishing are typical activities available. Human activities may be evident in some places, especially at road and trail crossings. Some lengthy segments of foot trails may be contained within this prescription. Forest visitors will occasionally see other people especially near popular stream related sites, or in those areas with motorized access. Roads and non-motorized trails will provide the predominant means of access. Outdoor skills are of moderate importance to visitors in these areas except where knowledge of specialized activities such as canoeing or kayaking is critical. Existing recreation sites are allowed to continue and may be expanded to meet visitor demands where compatible with the capabilities and functions of canyon corridors. The development of new recreation activities (i.e. horse trails, interpretive trails) will be

weighed against Desired Conditions and potentially damaging impacts. Attention would be given to improving conditions where human activities, i.e. roads, trails, dispersed sites, are or have degraded water quality or riparian functions.

The habitat associations being emphasized include: warm water aquatic habitats; streamside associates; mid- to late- successional deciduous forest associates; and bottomland hardwood associates. Large diameter hardwood, lush understory and/or old growth forest structure would characterize the canyon corridors. The habitat conditions will be suitable for the basic and mixed mesic associates and the mixed xeric associates. The mix of habitats will also provide suitable habitat for the eastern wild turkey and low levels of suitable habitat for early successional forest associates. The management and/or protection of rare communities and species associates will be provided, along with the management and/or protection measures for population occurrences for threatened, endangered, sensitive and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Standards:

4.L-01. Federal Minerals: Using No Surface Occupancy or Controlled Surface Use stipulations or lease terms, Federal mineral leases would be allowed. Mineral material authorizations to administer the watershed and to restore riparian areas and aquatic habitat may be allowed.

4.L-02. Forest Health: Insect and disease outbreaks will be treated where threatened, endangered, proposed, sensitive or locally rare species and their habitats may be adversely impacted or to prevent damage to resources on adjacent land. Eradication of recently established invasive non-native species may be considered when the risk of loss is high and/or the inaction would allow a new exotic pest to become established. Biological control of established invasive non-native species through the release of natural enemies may be considered. Native pests are not suppressed unless negative ecological impacts to streams will occur as a result of inaction. Felling of dead trees in streams will not occur unless beneficial to aquatic resources. However, hazard trees could be felled in areas occupied by humans (i.e., roads and recreation sites) for their safety.

4.L-03. Fire: Prescribed fire may be used for understory maintenance, wildlife habitat improvement, and to enhance the recreation experience. Prescribed fire will be scheduled to insure minimal impact on recreational opportunities. Pushed firelines will follow Forestwide Standards, particularly SMZ and riparian standards.

4.L-04. Roads: There will be a low open road density (generally <1.5 miles/1,000 acres).

4.L-05. OHVs: Closed to OHV use.

4.L-06. Wildlife: No wildlife openings will be permitted. Existing wildlife habitat improvements that meet the Desired Condition may be maintained. Additional improvements are appropriate if they contribute to achievement of the overall recreational experience and met protection of soil and water resources.

4.L-07. ROS Settings: Roaded Natural and Semi-Primitive Motorized.

4.L-08. Scenery: The scenic integrity objective is high.

5. SPECIAL USES/ADMINISTRATION SITES

5.A. ADMINISTRATIVE SITES

Emphasis: Sites are managed to serve/support resource programs and will be maintained to protect capital investment. Includes areas such as work centers, lookout towers, Forest Service-owned houses and offices. These areas are unsuitable for timber production.

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 roads and trails. Facilities should have barrier-free access.

The landscape character could range from natural appearing to urban/cultural. These areas are classified as unsuited for timber production.

The protection of rare communities and species associates will be provided, along with the protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Forest Service offices and/or visitor centers provide educational and interpretive opportunities such as exhibits and displays, books, videos, and brochures. Where feasible and appropriate, short hiking trails are provided in association with office visitor centers. Hunting and fishing are generally not allowed at administrative sites.

Standards:

7.A-01. Federal Minerals: Using stipulations, such as No Surface Occupancy or other lease terms to protect the area, Federal mineral leases may be allowed. Mineral material authorizations with conditions to administer the area may be permitted.

7.A-02. **ROS Settings:** Rural.

7.A-03. **Scenery:** Scenery integrity objectives range from high to moderate.

5.B. DESIGNATED COMMUNICATION/ELECTRONIC SITES

Emphasis: These uses include administrative management and public benefit. Ridge top towers and other related facilities to provide for the nation's communication and electronic network. These designated areas are managed to minimize adverse impacts on other resources. These areas are unsuitable for timber production.

Desired Condition: Existing special-use authorizations for communications and electronics continue within these designated areas. Each site is developed and utilized to its greatest potential in order to reduce the need to develop additional sites. Where possible, existing sites are expanded as needed rather than creating additional areas. All users' equipment will be compatible to forest surroundings and others users equipment and frequencies. New equipment should be as inconspicuous to the surrounding terrain as possible. Special-use permits will be issued.

The protection of rare communities and species associates will be provided, along with protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

The landscape character could range from natural appearing to cultural. Scenery management techniques are used to mitigate adverse impacts. Utilizing existing and proposed towers to accommodate as many users as possible within technical constraints reduces tower clutter. These sites are nonforested, benefitting wildlife species that favor grass, shrubs, old fields, and forest edges. These areas are managed to retain low-growing vegetation, which conforms to the safe-operating requirements of the utility and which reduces surface water runoff and erosion. These lands will be classified as unsuited for timber production. Recreation is discouraged at these sites.

Standards:

5.B-01 ROS Settings: Roaded Natural and Rural.

5.B-02 Scenery: Scenic Integrity Objectives range from moderate to low.

7. RECREATION/SCENIC EMPHASIS AREAS

7.A. SCENIC BYWAY CORRIDORS

Emphasis: A scenic byway corridor is managed to provide visitors with enjoyment of outstanding scenery of natural and cultural landscapes along a well-maintained

road. The area may also contain recreational and interpretive trails. The byway corridor is defined by 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 the 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 being designated a scenic byway. These areas are unsuitable for timber production.

Desired Condition: The area provides exceptional opportunities for motorized recreation, including scenic driving. Views along the byway are natural appearing and include a variety of landscape characters, primarily a continuous overstory canopy of large hardwoods and pines as well as understory and ground cover vegetation, which provide colorful accents and interesting textures for each season. There is an occasional opening or meadow in the forest where visitors may enjoy viewing wildlife, a water or geographic feature, or a cultural landscape such as a hayfield, grazing livestock, or old stone or log cabin. Road corridor improvements and interpretive facilities are evident changes to the natural environment, but these human-made alterations fit well with the character of the surrounding landscape. Other management activities are not evident to the average visitor.

The prescription area is easily accessed. The potential for encounters with other forest visitors is moderate to high, especially at byway facilities, which might include pullouts, overlooks, interpretive kiosks, trails, rest rooms, and picnic sites. Scenic, historic, and natural resources may be interpreted for the benefit of visitors. These recreation and interpretive facilities are designed and constructed to blend well and complement the natural or cultural environment surrounding the byway. Most, if not all, facilities are designed to accommodate persons with disabilities.

Maintaining a good road surface and providing informational signs for protection of the natural and cultural resources will minimize impacts from visitors within the prescription area, as well as provide for the safety and comfort of visitors.

Biological communities are maintained or improved to provide an attractive setting for visitors, complement the recreational and scenic values, and provide varied plant communities, structural stages, and associated wildlife. Management and protection of rare communities and species associates will be provided, along with the management and protection measures for population occurrences of TES and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands. High quality watershed conditions are provided resulting in secure aquatic ecosystems/habitats on NFS lands.

The landscape character could range from natural appearing to pastoral. Vegetation is influenced both by natural processes and humans. The area is classified as unsuitable for timber production. Some restoration activity may take place in order to improve the long term visual integrity of the by way.

Standards:

7.A-04. **Vegetation Management:** During any vegetation manipulation, flowering trees will be maintained. Vegetative manipulation will only be allowed for public safety, TES habitat improvement, private land protection, elimination of off site species (restoration), and scenic enhancement. Slash from harvesting operations will be no higher than 6 inches in the zone 25 feet from edge of road unless the area is out of sight from vehicles. Slash from harvesting operations will be no higher than 2 feet in a zone 25 feet to 75 feet from the edge of road unless the area is out of sight from vehicles. Vegetation manipulation will only be used to open up vistas, create spatial diversity along travel ways, decrease straight line effect of cleared utility corridors, for insect and disease suppression, for scenic rehabilitation, or on a limited basis, restoration. Openings and restoration areas will be 25 acres or less.

7.A-05. **Prescribed Fire:** Firelines will be rehabilitated to original contour within sight distance of the drive.

7.A-06. **Recreation:** New structures, including but not limited to buildings, signs, kiosks, walls, towers, and fences, will conform to the USDA Forest Service BEIG.

7.A-07. **OHV**: Trails are not compatible except at designated trailheads.

7.A-08. **Minerals:** Controlled surface use.

7.A-09. **Roads:** Design and construct access roads to meet the scenic integrity of high. Permit new access roads, provided they quickly enter and leave the seen area and do not parallel existing travel ways.

7.A-010. **ROS Setting:** Roaded Natural.

7.A-011. **Scenery:** Scenic integrity objective is high.

7.B. SENSITIVE VIEWSHEDS

Emphasis: The emphasis is on providing, through maintenance or restoration and design, high-quality scenery in very sensitive recreational and travel way settings. Examples include areas adjacent to “gateway” communities; areas around lakes, rivers, and streams; and “backdrop” areas viewed from State-designated byways and major travel ways. These areas are unsuitable for timber production.

Desired Condition: Visitors will view high-quality scenery in a setting conducive to a variety of recreational experiences. Human modifications will be subordinate to

the characteristic landscape. Landscape restoration and rehabilitation to meet high-quality scenic conditions will be a high priority. Coordination with nearby communities will help provide complementary management of adjoining lands.

The landscape is predominantly natural appearing and is generally an intact, continuous forest canopy. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs, and wildflowers. Some views into park like stands to highlight larger diameter trees and scenic water features may be present. The sensitive viewshed may also be a natural appearing open area, bald, or ~~a~~ pastoral landscape. Areas may show evidence of forest resource management activities but are visually subordinate to the characteristic landscape. Restoration of areas with predominantly off site species may be restored.

Non-motorized and motorized recreation may occur in this prescription area as long as it does not negatively impact the scenic value of the area as viewed from sensitive travel ways, use areas, and gateway communities. Hiking, mountain biking, and horse trails are appropriate throughout the prescription area. OHV trails may be present, but new OHV trails are not constructed, except where desired to link existing trail systems. Facilities are designed to fit the character of the specific sites where they are located. Facilities might include roads, pullouts, overlooks, parking areas, trailheads, bulletin boards, interpretive kiosks, rail fences, signs, rest rooms, and picnic sites. Trails may be highly developed, including hardened trails for a high level of accessibility for persons of all abilities. Facilities will be designed to harmonize with the desired landscape setting.

Biological communities are maintained or improved to provide an attractive setting for visitors, complement the recreational and scenic values, and provide varied plant communities, structural stages, and associated wildlife. Management and protection of rare communities and species associates will be provided, along with the management and protection measures for population occurrences of TES and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands. High quality watershed conditions are provided resulting in secure aquatic ecosystems/habitats on NFS lands.

Areas may show evidence of management activities but are visually subordinate to the characteristic landscape. Lands can be classified as either suited or unsuited for timber production depending on local conditions and goals and objectives of the Management Area.

The landscape character will predominantly be variations of natural appearing landscapes. Scenic integrity objectives will be in the upper values of high to moderate. The recreational opportunity spectrum will range from semi-primitive non-motorized, semi-primitive motorized, roaded natural, to rural.

Standards:

7.B-01. **Vegetation Management:** Slash treatment zones will be established for 50 feet from the edge of trail, on both sides. Slash will be removed from this zone, or lopped to no higher than 2 feet above ground level. Conserve flowering trees during any vegetation manipulation activities. Vegetative manipulation will only be allowed for public safety, TES habitat improvement, private land protection, elimination of off site species (restoration), and scenic enhancement. Clearcuts and regeneration harvest units will only be used to open up vistas, create spatial diversity along travelways, decrease straight line effect of cleared utility corridors, for insect and disease suppression, for scenic rehabilitation, or on a limited basis, restoration. Clearcuts and regeneration harvest units will be 25 acres or less.

7.B-02. **Prescribed Fire:** Firelines will be rehabilitated to blend in with surrounding landscape for at least 50 feet from each side of trails.

7.B-03. **Recreation:** New structures, including but not limited to buildings, signs, kiosks, walls, towers, and fences, will conform to the USDA Forest Service BEIG.

7.B-04. **OHV:** New OHV trails are not compatible except to link existing OHV trail systems.

7.B-05. **Minerals:** No surface occupancy.

7.B-06. **Roads:** Design and construct new roads to meet the scenic integrity of high.

7.B-07. **ROS Settings:** Roaded Natural.

7.B-08. **Scenery:** Scenic integrity objectives range from high to moderate.

7.C. OHV USE AREAS

Emphasis: The emphasis will be to provide for motorized recreation opportunities in designated areas. ATVs and motorcyclists would utilize designated routes within prescription area. Larger OHVs such as four-wheel-drive vehicles would use existing, open, system roads, which are suitable for high-clearance vehicles. Facilities, such as trailheads, are provided to enhance the quality of the recreational experience and provide access to designated routes. This area is managed to minimize impacts to riparian functions and aquatic habitats. These areas are unsuitable for timber production.

Desired Condition: An OHV use area is managed to provide a variety of motorized recreation opportunities on identified routes in naturally appearing settings. Within this area, route mileage should total at least 20 miles. Routes will be maintained, improved, or expanded to meet local demands. Trail difficulty levels vary to accommodate a variety of desires and abilities. Users are adequately advised of trail difficulty levels and hazards. Support facilities including trailheads, parking lots, rest rooms, water access, and information boards are well designed to meet the needs of the visitor. Use area and route information and regulations are provided to make the visitor's experience more enjoyable. This area will be managed and monitored to absorb moderate to high levels of use while protecting soil, water, and air resource conditions.

The recreation setting will meet RN or rural ROS conditions. This area will provide primarily motorized and some non-motorized recreation opportunities. While motorized recreation is emphasized on designated routes, other routes could be used for hiking, mountain biking, and horseback riding. Other recreation opportunities—such as hunting, fishing, and berry picking—occur within the prescription area that is adjacent to the designated route corridors. Physical impacts are confined to the immediate trail or road profile and do not spread beyond. Though physical impacts from OHV use are confined to the immediate road or trail environment, sounds of motorized vehicles may be audible in other sections of the prescription area.

The landscape character is natural appearing with variations created by the recreational facilities. A variety of landscapes will be appropriate along the trail corridor. Along many of the routes, views are restricted to the immediate foreground by vegetation and natural landform, but occasional openings reveal middle ground or distant background vistas. Constructed routes blend well with the natural environment. Small created openings in the forest canopy may be apparent, and visitors may see evidence of resource management activities. However, treatments blend with the natural landscape, and vegetation diversity is enhanced over time. Constructed facilities are visually subordinate to the land.

Maintenance is performed to protect the routes and minimize effects to soil and water resources. Routes may be closed seasonally or during inclement weather to protect resources. Off-route and other unauthorized OHV use are not allowed. When such use occurs to a chronic degree, routes are closed permanently or until the situation is corrected. New routes are considered for development only when there is a demonstrated need and interest and a developed partnership with user groups.

Lands within this prescription area will be classified as unsuitable for timber production. Roads used or constructed to facilitate vegetation treatment are managed to provide non-conflicting access for both timber harvest and motorized recreation uses.

Protection of rare communities and species associates will be provided, along with protective measures for population occurrences of TES and locally rare species.

This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Standards:

7.C-01. **Recreation:** Routes are closed to ATV/OHV use when unacceptable adverse effects occur or are likely to occur. The routes or trails remain closed until the adverse effects are eliminated and until measures are implemented to prevent recurrence.

7.C-02. **Vegetative Management:** Vegetative manipulation will only be allowed for public safety, TES habitat improvement, private land protection, and elimination of off site species (restoration).

7.C-03. **ROS Settings:** Roaded Natural.

7.C-04. **Scenery:** Scenic integrity objectives range from high, moderate, and low.

7.D. CONCENTRATED RECREATION ZONE

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 recreation 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 recreation opportunities on the remainder of the forests. These areas are unsuitable for timber production.

Desired Condition: Visitors will be able to choose from a wide variety of recreation opportunities in high quality, well maintained developed or dispersed settings. Campgrounds, picnic sites, boat ramps, river access sites, swimming beaches, interpretive sites, primitive vehicle camps, and trails for walkers, horseback riders, bicycle riders, and off-highway vehicle (OHV) riders are all examples of facilities found in Concentrated Recreation Zones. Other facilities consistent with the mission and complimentary to the ecosystem may also be provided. Constructed facilities will almost always be visually subordinate to the land. There will be a variety of recreation facilities provided dependent on the development scale appropriate to the recreational opportunity spectrum (ROS) class and consistent with the design narrative in developed recreation sites. Facilities outside the developed recreation sites will be provided to protect resources. Facilities that provide for user convenience, as well as protect resources, will be constructed and/or maintained in the developed recreation areas. Outdoor skills are generally of low importance except where knowledge of specialized activities, (i.e. 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 (i.e. walking and viewing nature) will be non-motorized.

Use may be highly concentrated in some spaces or relatively uncrowded in other sections of Concentrated Recreation Zones. Recreation information and regulation will be provided to make the visitors' experience more enjoyable. Interpretive programs may also be offered to enhance the visitors' educational and recreational experience. Access to fishing, hunting, and nature study will be emphasized. Fish stocking is appropriate for Concentrated Recreation Zones. Plants and animals will be managed (pest control) to protect visitor enjoyment in developed recreation sites, but not at the expense of the general health of local ecosystem. Plants and animals will be managed outside of developed recreation sites on a situation by situation basis.

The protection of rare communities and species associates will be provided, along with protection measures for population occurrences for threatened, endangered, sensitive and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

The landscape character will be natural appearing with variations created by the recreational facilities. These variations will primarily occur in developed recreation sites to accommodate human use and protect high use sites. Lesser variation will occur in Concentrated Recreation Zones outside developed recreation sites. Ecosystem vegetative management will also be employed where necessary throughout Concentrated Recreation Zones. The scenic integrity objective will be high to moderate. The recreational opportunity spectrum will range from roaded-natural one (RN1) for development scale 1, 2, and 3 areas to rural for development scale 4 and 5 areas. Roads will be maintained to achieve the recreation objectives. Concentrated Recreation Zones will be classified as unsuitable for timber production. The size of developed recreation areas will vary depending on the number and the layout of the constructed facilities.

Standards:

7.D-01. **Health and Safety**: To keep humans free from unhealthy exposures to human waste, the waste is removed immediately upon discovery or notification.

7.D-02. **Health and Safety**: A site safety inspection is completed annually. Documented high-risk conditions are corrected prior to use in all developed recreation areas.

7.D-03. **Health and Safety:** High-risk site conditions that develop during the use season are mitigated, or identified to protect the public, or the site is closed.

7.D-04. **Health and Safety:** Electrical systems meet the National Electric Code.

7.D-05. **Health and Safety:** Employees, volunteers, and partners have dependable communications.

7.D-06 **Federal Minerals:** Using stipulations such as no surface occupancy and controlled surface use to protect the characteristics of these areas, Federal mineral leases would be allowed.

7.D-07 **Fire:** Firelines will be immediately (within 30 days of closure) returned to a natural appearance that blends with the adjacent forest floor in developed recreation areas.

7.D-08 **Forest Health:** Within developed recreation areas use a forest health strategy to prevent the occurrence of pest problems by managing host-type conditions at low hazard. Within concentrated-use areas and high-density dispersed areas use a forest health strategy to actively manage stands to reduce the risks and hazards of damage from native and invasive non-native species. Aggressive tactics should be used within one and one-half times the tree height of trails. Indigenous forest pests are kept within acceptable levels through IPM techniques. Forest pests native to the area are minimized through judicious use of biological controls, silvicultural practices, and timely salvage of damaged trees. "Acceptable" levels will be determined based on site conditions and pest species involved.

7.D-09 **Hunting:** Hunting is not permitted in developed recreation areas.

7.D-10 **OHV:** Major OHV route systems are not appropriate, but OHV trailheads and their support facilities with access routes to OHV-use areas or other OHV trail systems may be found in this prescription.

7.D-11 **Special Uses**: New utility corridors or communication/electronic sites will not be authorized within Concentrated Recreation Zones. Other special uses are authorized if consistent and compatible with goals and objectives of the area.

7.D-12 **ROS Settings**: Roaded Natural and Rural.

7.D-13 **Scenery**: Scenic Integrity Objectives range from high to moderate.

7.E. DISPERSED RECREATION AREAS

7.E.2. DISPERSED RECREATION AREAS WITH VEGETATION MANAGEMENT

Emphasis: These areas 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, and diversity of the land. Timber harvesting and vegetative manipulation may be used to achieve recreational, wildlife, ecosystem restoration, or aesthetic values. These areas are unsuitable for timber production.

Desired Condition: These areas will be characterized by easy access and will be capable of sustaining a relatively high number of recreationists in a manner that protects the surrounding water, soil, vegetation, and wildlife. Visitors to these natural appearing settings will be able to choose from a wide variety of well-maintained nature-based recreation opportunities. Forest roads and well-marked trails through these areas provide convenient access for visitors. Management is designed to meet the growing demands of dispersed recreation and to showcase high quality scenery maintained through low intensity, planned vegetation management activities. Cooperatively managed State Wildlife Management Areas occur within this prescription allocation. Hunting and wildlife viewing are expected to be major recreation activities with wildlife viewing being an important component of sightseeing. Early successional forest habitat is an important condition in support of these opportunities, therefore it is desirable to provide 4% to 10% of the forested landbase in early successional forest (0-10 age class). Existing food plots or old fields may be maintained. Expansion of existing openings and creation of new openings may occur.

Dispersed recreation opportunities occurring are expected to be varied; however, each Management Area has particular capabilities or emphases in the 7.E.2. allocation. These capabilities or attributes support particular dispersed recreational activities, some examples of the recreation uses for each Ranger District are: Bankhead Ranger District; sightseeing and trails opportunities will have emphasis where appropriate. The Black Warrior Wildlife Management Area is included in this prescription allocation, therefore, hunting and wildlife viewing are also expected to be major recreation activities with wildlife viewing being an important component of sightseeing. Conecuh Ranger District; the area serves to support the setting around Open Pond Recreation Area, Blue Lake Recreation Areas, and sections of the Conecuh Trail. The Blue Springs Wildlife Management Area is included within this prescription allocation; therefore, hunting and wildlife viewing are also expected to be major recreation activities. Oakmulgee Ranger District; this area serves to support the setting around Payne Lake Recreation Area. A Trail system linked to Payne Lake is another appropriate emphasis for this prescription. The Oakmulgee Wildlife Management Area is included within this prescription allocation; therefore, hunting and wildlife viewing are also expected to be major recreation activities. Shoal Creek Ranger District; sightseeing and trails opportunities will have emphasis where appropriate. The 7.E. prescription north of Interstate 20 serves to support the setting around the Pinhoti Trail, the horse trail system out of Warden Station Horse Camp, and Coleman Lake Recreation Area. The Choccolocco Wildlife Management Area encompasses almost the entire north end of the prescription; therefore, hunting and wildlife viewing are also expected to be major recreation activities. The 7.E. prescription south of Interstate 20 serves to support the setting for the Talladega Scenic Byway and the Pinhoti Trail. Wildlife viewing is expected to be emphasized is this area as well. Talladega Ranger District; the area serves to support the setting for the Chinabee Silent Trail and the Skyway Loop Trail. The Walk in Turkey Hunting Area is located in this prescription; therefore, hunting, particularly turkey hunting is an emphasis.

Tuskegee Ranger District; the area serves to support the setting for both sections of the Bartram Trail and the bicycle trail.

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. There will be a wide range of recreational opportunities.

The area is generally assessible by road, but some roads may be managed through seasonal or year round motorized vehicle closure. Non-motorized and motorized trails will be maintained or improved as needed for visitor experience and resource protection. Trails may be expanded to meet local demands provided watershed and ecosystem health are not negatively affected. Limitations of use will occur if any dispersed activity results in, or is expected to result in, negative affects to watershed or ecosystem health.

A visually appealing landscape is emphasized by providing vista openings, featuring special attractions like rock outcroppings and waterfalls, and by providing park-like stands and a diversity of vegetation species and age classes. The landscape will predominantly be variations of structurally diverse mid- to late-successional communities with some open areas. Landscape character will be naturally appearing. Small and medium patches of old growth forest communities as well as small canopy gaps will develop over time throughout the area. The scenic integrity objectives will be in the upper values of high to moderate.

Forest management activities maintain or restore the natural characteristics that make the area popular. They are designed to 1) create a pleasing mosaic of various densities and stem sizes; 2) conserve flowering trees; 3) enhance herbacious and shrub species; 4) create park like effects in the understory; 5) enhance both game and non-game wildlife habitat for viewing, photography and hunting; 6) minimize impacts from insect or disease outbreaks; or 7) rehabilitate areas damaged by insects or diseases. Management activities will normally be visually subordinate to the surrounding landscape. In the foreground of sensitive trails and roads, these activities will rarely be evident to the casual observer.

Timber harvesting operations focus on what is retained in the stand, not on wood fiber production. Timber harvest practices and restoration activities are designed to recognize the recreational and aesthetic values of these lands. Group selections, individual tree selections, thinnings, and shelterwood harvests are predominately used. Clear cutting will be an exception and will be used when it is the only management tool available to achieve the management objectives and ecosystem restoration.

Biological communities are maintained or improved to provide an attractive setting for visitors, complement the recreational values, and provide varied plant communities, structural stages, and associated wildlife. Management and protection of rare communities and species associates will be provided, along with the management and protection measures for population occurrences of TES and

locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands. High quality watershed conditions are provided resulting in secure aquatic ecosystems/habitats on NFS lands.

Standards

7.E.2-01. The Landscape Architect or Recreation specialist in the Supervisor's Office will review timber harvesting activities in scenic class 1 & 2.

7.E.2-02. Slash treatment zones along roads and trails will be 50' from edge or as designated by the LA or Recreation specialist in the Supervisor's Office.

7.E.2-03. All project design will include landscape architect or Recreation specialist.

7.E.2-04. Protect native flowering trees along roads and trails.

7.E.2-05. Clearcutting will only be used when it is ecologically the best management tool available to achieve the recreational and ecosystem restoration objectives.

7.E.2-06. Timing and choice of herbicide treatments will be selected to minimize visual impacts.

7.E.2-07. Leave 2-4 large dominant or co-dominant mast producing hardwoods per acre, where available during harvest and vegetation management treatments. Leave trees will be left in clumps (groves), tied to SMZs, or edges.

7.E.2-08. ROS Settings: Roaded Natural.

7.E.2-09. Scenery: Scenic integrity objectives range from high to moderate.

8. LANDSCAPE HABITAT EMPHASIS AREAS

8.B. MIX OF SUCCESSIONAL HABITATS - EARLY SUCCESSIONAL HABITAT EMPHASIS

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 in the form of open park like woodlands and savannas with herbaceous ground cover. 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. These areas are unsuitable for timber production.

Desired Condition: The area contains a mix of forest successional classes, primarily in southern pine and mixed pine-hardwood forest community types. There is much evidence of forest management activities in the area; including timber harvesting, prescribed burning, and wildlife food plot management. Herbaceous plants dominate the ground cover. Open, park-like, forest stands produce quality ground cover conditions for Bachman's sparrows, prairie warblers, and northern bobwhite quail. Permanent forest openings may contain native and desirable non-invasive exotic vegetation. In addition, some rare communities and associated species would continue to exist in the area, including disturbance-dependent communities that require fire and open canopies.

Habitat associations being emphasized include, early successional grass/forb associates, and early successional shrub/seedling/sapling associates. In addition, there will be suitable habitat for southern pine forest associates and pine savanna/woodland associates. The resulting landscape structure of this allocation provides a forest matrix considered marginal for linking large- and medium-sized old-growth hardwood community patches. Old-growth pine forest communities are a component of this landscape, contributing to early-successional habitat associates' needs through their frequently disturbed herbaceous layers. Management and protection will be provided for rare communities and species associates, along with management and protection measures for population occurrences of TES and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

To emphasize early successional habitats, it is desirable to have 4% to 10% of the forested landscape in early successional forest (0 to 10 age class). Additional early successional habitat will exist as grass/forb and shrub/seedling conditions under open tree canopies. In the Southern Ridge and Valley, Piedmont, Coastal Plain, and Southern Cumberland Plateau areas, mid- to late-successional pine forest/woodland conditions may be found on at least 66 percent of the total pine forest acreage in the land allocated.

The landscape character will be natural appearing. Management activities may be evident, and visitors will likely see other people in this area. The Conecuh Trail crosses through this area.

Standards:

8.B-01 ROS Settings: Roaded Natural.

8.B-02 Scenery: Scenic integrity objectives range from high, moderate, and low.

8.D.1. RED-COCKADED WOODPECKER MANAGEMENT AREAS

Emphasis: This prescription is designed to provide suitable to optimal habitat conditions in areas containing small RCW populations in a larger designated habitat management area. These RCW populations are at the greatest risk of local extirpation and in need of immediate, aggressive management action to create and protect suitable habitat. Management will be based on the RCW FEIS. These areas are unsuitable for timber production.

Desired Condition: Habitat within the sub-HMA will consist of yellow pine and mixed pine-hardwood forest types. The RCW's nesting habitat consists of mature pines with an open, park-like understory; therefore, stand conditions in the sub-HMA will be maintained as mature or will be managed to establish mature stand conditions.

Habitat associations being emphasized include: southern yellow pine associates, pine savanna/woodland associates, and some species (fire-dependent species) in early successional habitat associates. Northern bobwhite quail, Bachman's sparrows, and prairie warblers are benefited by the understory conditions produced by this management. Brown-headed nuthatches are common wherever large pines occur. Southeastern American kestrel and great crested flycatchers are also greatly benefited by management geared to RCW restoration. All of these species have declined precipitously in recent years. Suitable habitat will also be found for eastern wild turkey and white-tailed deer. This prescription is aimed at providing suitable to optimal habitats to support populations of these plant and animal species associates and to provide a very high likelihood that all species within these associations continue to persist on National Forest System lands.

Management and protection will be provided for rare communities and species associates (including disturbance-dependent communities), along with management and protection measures for TES and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

In emphasizing RCW management, at least 83 percent of the total pine forest acreage should be in mid- to late-successional pine forest/woodland conditions (greater than 20 years old) and at least 50 percent of the total pine forest acreage should be in late-successional pine forest conditions (greater than 60 years old). A maximum of 8.3 percent of the pine forest/woodland community should be in early successional grass/forb and shrub/seedling habitat conditions in patches greater than 10 acres in size. It is desirable to have 4% to 10% of the total forested landscape in early successional forest (0 to 10 age class). Additional early successional habitat will exist as grass/forb and shrub/seedling conditions under open tree canopies.

The landscape character will be natural appearing. This area will provide a variety of motorized and non-motorized recreation opportunities. Human activities may be evident. Visitors will likely see other people in the parts of this area with motorized access. Outdoor skills are of moderate importance to visitors in this area, except where knowledge of specialized activities is critical.

Standards:

8.D.1-01 ROS Setting: Roaded Natural.

8.D.1-02 Scenery: Scenic integrity objectives range from high, moderate, and low.

All other standards are covered at the forestwide level. Specifically, the RCW standards are applied at the forestwide level for Conecuh, Oakmulgee Division, and Talladega Division.

9. ECOSYSTEM RESTORATION/MAINTENANCE AREAS

9.C.3. SOUTHERN CUMBERLAND PLATEAU NATIVE ECOSYSTEM RESTORATION AND MAINTENANCE

Emphasis: The area will be managed to maintain or move towards restoration of a mix of hardwood, hardwood-pine and pine (including shortleaf and longleaf) forest communities based on historic conditions (as described in LTA and future LT descriptions). Restoration may be accomplished through a combination of silvicultural activities such as even-aged, two-aged and uneven-aged silvicultural methods, and/or other treatments such as prescribed burning. These areas are unsuitable for timber production.

Desired Condition: This prescription applies only to the Bankhead National Forest. Three major vegetative conditions, and the transition area between each, characterize this physiographic region. The northern part of the area contains primarily a mix of oak, oak-hickory and oak-pine forest community types. Moving southward, the area transitions to a mix of mesic hardwoods and shortleaf pine communities. Further south, the transition continues with a mix of mesic hardwoods and longleaf pine communities.

Loblolly pine is generally distributed over areas that were previously cleared and farmed. Virginia pine typically occurs in very shallow soils and rock outcrops/bluff lines. Oaks (mostly chestnut, post, northern red, black, black jack, white, and scarlet) and hickories (mostly pignut and mockernut) occur on ridges and slopes on the more northern sections. Gorges and ravines contain primarily beech, hemlock, sweet birch, cucumber tree and some oak species. On the Tennessee Valley escarpment, eastern red cedar, walnuts and cherry become important.

The northern part of the area is dominated by interior forest conditions, with large hardwood trees being common throughout. The communities are structurally diverse, with occasional openings or gaps (occurring from natural events or timber

harvests). Hardwood communities on xeric sites will contain smaller trees and less diverse structure than those on mesic sites. Evidence of forest management activities (i.e., tree stumps, logging roads, prescribe burning) may be seen. Between 10-17% of the area may be in early successional forest. These early successional conditions should be distributed across the community types and across the forest landscape. In addition, rare communities and associated species would continue to exist in the area, including disturbance dependent communities requiring active management.

The landscape character will be natural appearing. This area will provide a variety of non-motorized recreation opportunities. The sights and sounds of human activities, especially motorized uses along main travel corridors, will be evident in many parts of this area. Visitors will frequently see other people in some parts of this area. Motorized access will be available to many places.

Standards:

9.C.3-01 ROS Settings: Roaded Natural

9.C.3-02 Scenery: Scenic Integrity Objectives range from high, moderate, and low.

9.D. RESTORATION OF COASTAL PLAIN LONGLEAF PINE FORESTS

Emphasis: This prescription is designed to restore and maintain native longleaf forest communities in the coastal plains region of Alabama. This is accomplished through intensive silvicultural activities including but not limited to prescribed burning, mechanical and chemical vegetation control, even-aged, two-aged, and uneven-aged silvicultural methods. This prescription will provide suitable to optimal habitats to support populations of the plant and animal species associated with these communities. These areas are unsuitable for timber production.

Desired Condition: The area is dominated by longleaf pine forest communities with open herbaceous understories. This forest is primarily in mid- and late-successional conditions with a portion of the area in old-growth conditions. Small patches of the old-growth longleaf pine community type can be found throughout the area. Old, flat-topped pine trees can be seen in the area. The pine communities are structurally simple [pine overstory and herbaceous/shrub understory] shaped primarily by the use of frequent fires (every 2-4 years - emphasis on growing season), with occasional gaps occurring from natural and or management events. Evidence of forest management activities (i.e., tree stumps, logging roads) may be seen. These are needed to convert off-site species to longleaf pine, to sustain a flow of pine habitats for the long-term, and provide optimal early successional habitat conditions. Other deciduous forest community types may make up a smaller proportion of the area. Xeric oak communities, containing smaller trees, are found interspersed as a small proportion of the uplands. Primarily mid- and late- successional mesic hardwood communities, bottomland hardwood communities, swamp forests, and riparian habitats dissect

the area. In addition, rare communities and associated species would continue to exist in the area, including disturbance dependent communities requiring active management.

Habitat associations being emphasized include: southern yellow pine associates, pine savanna and woodlands associates, mixed xeric habitat associates, fire dependent species, and early successional habitat associates. The conditions provided for wild turkey are suitable to optimal. Habitat conditions are suitable for the mid- to late-successional forest associates.

The landscape character will be natural appearing. These areas will provide a variety of motorized and non-motorized recreation opportunities. The sights and sounds of human activities, especially motorized uses along main travel corridors, will be evident in many parts of these areas. Visitors will frequently see other people in some parts of these areas. Motorized access will be available to many places. Non-motorized trails will also be available, and in some cases, motorized trails will be available. Outdoor skills are of moderate or low importance for visitors except where knowledge of specialized activities is critical. ROS class is roaded natural.

Standards:

9.D-01 ROS Setting: Roaded Natural.

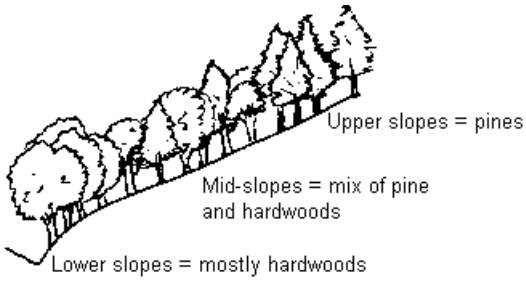
9.D-02 Scenery: Scenic integrity objectives range from high, moderate, and low.

9.D.1. SOUTHERN RIDGE AND VALLEY NATIVE ECOSYSTEM RESTORATION AND MAINTENANCE

Emphasis: Mountain longleaf pine and associated native forest communities will be restored and maintained. This community type occurs in the mountains of northeastern Alabama and adjacent areas in Georgia, and currently exists almost entirely on National Forest lands. Restoration and maintenance activities are accomplished through intensive silvicultural activities including prescribed burning; mechanical and chemical vegetation control; and even-aged, two-aged, and uneven-aged silvicultural methods (including commercial and non-commercial timber harvesting). The treatments will mimic disturbance regimes and vary by site conditions. This prescription will provide suitable to optimal habitats to support populations of the plant and animal species associated with this community. These areas are unsuitable for timber production.

Desired Condition: The mountain longleaf community contains a mix of open herbaceous understory conditions and shrub understory conditions. The canopy is dominated by longleaf pine but may also contain shortleaf, Virginia or loblolly pines, and oaks or other hardwoods. North-facing slopes contain more xeric oak and oak-pine mixtures and mesic oak forest components. Shortleaf pine predominates the canopy of some sites, particularly on the Shoal Creek District.

Generally this forest community can be described as a continuum from stream bottom to ridge top, containing a mixture of pines and oaks as depicted in the picture below.



Old, flat topped pine trees can be seen in the area. The pine communities are shaped primarily by frequent fires (every 2-4 years – mix of dormant and growing season), with openings and gaps created by management activities and natural events. Evidence may be seen of forest management activities, needed to restore native vegetation to these sites. These activities maintain a diversity of pine habitats for the long term, and provide young grass and forb habitat conditions. Deciduous forest community types may make up a smaller proportion of the area. Xeric oak communities, containing smaller trees, are found interspersed in the uplands. Primarily mid- and late-successional mesic hardwood communities, bottomland hardwood communities, and riparian habitats dissect the area.

A variety of habitat associations are emphasized including: southern yellow pine associates, pine woodlands associates, mixed xeric habitat associates, fire-dependent species, and early successional habitat associates. The conditions provided are suitable for game and non-game species, including wild turkey and white-tailed deer.

At least 40 percent of the total pine forest acreage should be in late-successional pine forest conditions. As a result of implementing activities to maintain/restore the longleaf pine communities, 4% to 10% of the forest landscape would be in early successional forest. Additional early successional habitat will exist as grass/forb and shrub/seedling conditions under open tree canopies.

The landscape character will be natural appearing. This area will provide a variety of non-motorized recreation opportunities. The sights and sounds of human activities, especially motorized uses along main travel corridors, will be evident in many parts of this area. Visitors will frequently see other people in some parts of this area. Motorized access will be available to many places.

Standards:

9.D.1-01 ROS Settings: Roaded Natural.

9.D.1-02 Scenery: Scenic integrity objectives range from high, moderate, and low.

9.F. RARE COMMUNITIES

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. Rare communities, wherever they occur on the Forest, are managed under this prescription to ensure their contribution to meeting goals for community diversity, endangered and threatened species recovery, and species viability. These lands serve as core areas for conservation of the most significant elements of biological diversity identified to date on the Forest. The emphasis of designation and management of these areas are: (1) to perpetuate native communities that are rare (at the scale of their ecological Section or Subsection unit), and (2) to perpetuate or increase associated plant or animal species that are federally listed as threatened or endangered , or are of viability concern. These areas are unsuitable for timber production.

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 cutting, may be evident.

Beyond restoration and maintenance activities, human-caused alteration of rare communities is not evident. Recreational access may be limited by signs and barriers 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.

Rare communities covered by this prescription include:

A. Wetland Communities

1. Bogs, Fens, and Seeps [Southern Appalachians, Piedmont, Coastal Plain]
2. Limesink, Karst, and Depression Ponds [Southen Appalachians, Piedmont, Coastal Plain]
3. Open and Emergent Marshes [Southern Appalachians, Piedmont, Coastal Plain]
4. Riverine Vegetation [Southern Appalachians, Piedmont, Coastal Plain]
5. Atlantic White Cedar Swamp [Coastal Plain]
6. Coastal Plain Ponds and Pond Margins [Coastal Plain]
7. Coastal Plain Seepage Bogs [Coastal Plain]
8. Coastal Plain Baygalls and Bayheads [Coastal Plain]

9. Wet Pine Savannahs and Flatwoods [Coastal Plain]

B. Glades, Barrens, and Associated Woodlands

1. Calcareous Woodlands and Glades [Southern Appalachians, Coastal Plain]
2. Carbonate Glades and Barrens [Southern Appalachians]
3. Sandstone Glades and Barrens [Southern Appalachians]
4. Shale Glades and Barrens [Southern Appalachians, Piedmont]
5. Serpentine Woodlands [Southern Appalachians]
6. Mafic Glades and Barrens [Southern Appalachians, Piedmont]

C. Forest Communities

1. Basic Mesic Forests [Southern Appalachians, Piedmont, Coastal Plain]
2. Xeric Sandhills [Coastal Plain, Piedmont]

3. Mountain Longleaf Pine [Southern Appalachians, Piedmont]

D. Cliffs and Rock Outcrops

1. Talus Slopes [Southern Appalachians]
2. Forested Boulderfields [Southern Appalachians]
3. Acid Cliffs [Southern Appalachians]
4. Alkaline Cliffs [Southern Appalachians]
5. Spray Cliffs [Southern Appalachians]
6. Rock Houses [Southern Appalachians]
7. Granitic Flatrock [Southern Appalachians, Piedmont]

E. Other Communities

1. Patch Prairies and Grasslands [Southern Appalachians, Piedmont, Coastal Plain]
2. Canebrakes [Southern Appalachians, Piedmont, Coastal Plain]
3. Caves [Southern Appalachians, Piedmont, Coastal Plain]

Standards for all Rare Communities:

9-1 Rare communities are protected from any detrimental effects caused by management actions. Site-specific analysis of proposed management actions will identify any protective measures needed in addition to Forest Plan standards, including the width of protective buffers where needed. Management activities occur within rare communities only where maintenance or restoration of rare community composition, structure, or function is expected.

9-2. Where recreational 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.

9-3. Invasive non-native species are controlled where they are causing negative effects to rare communities. Non-native invasive plants are not introduced in or near rare communities, except where their influence is expected to be beneficial to community composition, structure, or function.

9-4. Permits for collection of flora or fauna from rare communities are not issued except for approved scientific purposes.

9-5. Removal of dead & down logs or other woody debris in rare communities is prohibited. Where needed to ensure public or employee safety, snags may be felled, but will be retained within the community as downed wood.

9-6. Rare communities containing TES species will receive the highest priority for restoration and protection. Restoration may include use of protection measures, prescribed burning, removal of encroaching vegetation, and reintroduction of key species. Management recommendations will make use of the best available information and most current research.

9-7. Prohibit surface occupancy or mineral exploration in rare communities

Wetland Communities

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 non-alluvial, 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 limesink, karst, and depression ponds, which may hold areas of shallow open water for significant portions of the year. Also included are all 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 Complex, Mountain Ponds, Seasonally Dry Sinkhole Ponds, and Beaver Pond and Wetland Complex as defined in the Southern Appalachian

Assessment (SAMAB 1996), and all Associations within the following Ecological Groups as defined by NatureServe (2001a):

458-15 Appalachian Highlands Wooded Depression Ponds
458-20 Appalachian and Interior Highlands Limesink and Karst Wooded Ponds
470-10 Appalachian Highlands Forested Bogs
470-20 Appalachian Highlands Forested Acid Seeps
470-50 Appalachian Highlands Forested Fens and Calcareous Seeps
475-10 Appalachian Highlands Acid Herbaceous Seeps
475-20 Appalachian Highlands Alkaline Herbaceous Fens and Seeps
475-30 Appalachian and Interior Highlands Herbaceous Depression Ponds and Pondshores

Standards for Wetland Communities:

9-8. Provide mitigation, such as silt fencing between activity and buffer zones for bogs and seasonal ponds. Do not use continuous silt fencing to allow for movement of amphibians in and out of the sites.

9-9. For springs associated with streams, follow riparian management direction.

9-10. Remove encroaching vegetation, if necessary, by limited mechanical or chemical means in consultation with forest botanist, or by hand removal.

9-11. Exclude grazing and livestock from wetland rare communities to protect sensitive and endemic plant population occurrences, and to limit introduction of exotic, invasive weed species.

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 maintenance of desirable in-stream flows. These communities include River Gravel-Cobble Bars as defined in the Southern Appalachian Assessment (SAMAB 1996), and the rare Associations within the following Ecological Groups as defined by NatureServe (2001a):

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

Forest Communities

Several Forest Communities that occur in higher and more northerly elevations (> 4500 ft) of the Southern Appalachians do not occur in the Southern Cumberland Plateau or Southern Ridge and Valley Physiographic Regions of Alabama. These communities include Carolina Hemlock Forests, Table Mountain Pine Forests and Woodlands, Spruce-Fir Forests, and Beech Gap Forests.

Basic Mesic Forests

These communities are characterized by closed-canopy deciduous overstories and rich and diverse understories of calciphilic herbs, underlain by high-base geologic 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 eastern hemlock (*Tsuga canadensis*), rhododendron (*Rhododendron* spp.), and Christmas fern (*Polystichum acrostichoides*). An oak-dominanted 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 codominated by shumard oak (*Quercus shumardii*) or chinquapin oak (*Quercus muehlenbergii*) or of Shagbark Hickory (*Carya glabra)*, 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. Coastal Plain Basic Mesic forests are often characterized by the presence of Hickories (*Carya glabra, Carya alba, Carya carolinae-septentrionalis),* White Oak (*Quercus alba)* and Beech (*Fagus grandifolia)* Buckeyes (*Aesculus spp),* and Chalk Maple or Southern Chalk Maple (*Acer leucoderme, Acer barbatum).* On the fall line, these areas may be found in conjunction with dolomite ridge glades, with Butternut (*Juglans cinerea*), Eastern Red Cedar (*Juniperus virginiana*) and Redbud (*Cercis canadense*) present.

On lower elevation sites, these communities are more typically found on north or east 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 (), or white ash (), 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 exotics such as Japanese honeysuckle (*Lonicera japonica*) or Chinese privet (Lingustrum vulgare). Basic mesic forest communities are found in both the Appalachian and Piedmont regions as well as in the Coastal Plain. Only prime examples of these communities, as identified in the forest-wide rare community database, are managed under the Rare Community Prescription. Primary management needs are protection from nontarget management disturbance. This community includes the following Associations defined by NatureServe (2001a, 2001b):

CEGL007711 Southern Appalachian Cove Forest (Rich Foothills Type)
CEGL008442 Shumard Oak-Chinquapin Oak Mesic Limestone Forest
CEGL008466 Basic Piedmont Mesic Mixed Hardwood Forest
CEGL008488 Southern Ridge and Valley Basic Mesic Hardwood Forest
CEGL004542 Piedmont Rocky Mesic Mafic Forest.
CEGL007225 Coastal Plain Calcareous Mesic Forest
CEGL004671 Interior Upland Calcareous Mesic Forest

Standards for Basic Mesic Forest Protection and Enhancement:

9-12. Inventory and map the best examples of basic mesic forest for designation as special botanical areas. Designate limited areas of lesser quality basic mesic forest for protection in the rare community prescription. Include the ecotone between this community and drier forests in these designations.

9-13. Maintain closed canopy, late successional deciduous forest conditions on sites where the federally listed relict trillium and the Florida gooseberry occur.

9-14. Use backing fires in basic mesic forests. Prescribed fires should not be lit on lower slopes of these communities. Fire should be allowed to back into basic mesic forests from more xeric uplands. Monitor fire effects in basic mesic forests.

9-15. Conduct range-wide inventories for butternut to assess its distribution. Survey and monitor the incidence and severity of butternut canker. Explore opportunities to enhance existing basic mesic forests with disease-resistant varieties of American chestnut and butternut hickory.

9-16. Avoid new road construction or other soil disturbance in these communities.

Cliffs and Rock Outcrops

Several Cliff and Rock Outcrop Communities, as defined by NatureServe (2001a), that occur in high elevations (> 2500 ft) of the Southern Appalachians do not occur in the Southern Cumberland Plateau, Southern Ridge and Valley, or

Piedmont Physiographic Regions of Alabama. These communities include Talus Slopes, Forested Boulderfields, Rock Outcrops, and Rocky Summits.

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. In Alabama these communities are found in the Southern Cumberland Plateau of the Bankhead National Forest. A special Habitat Prescription, the Canyon Corridors Prescription, was authored in Alabama to spatially represent this single feature and insure its protection. 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 (SAMAB 1996), 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
430-55 Eastern Moist Alkaline Cliffs
430-60 Appalachian Highlands Northern White-Cedar Bluffs
430-65 Appalachian Highlands Rock Houses

Standards for Cliff & Bluff Protection and Enhancement:

9-17. Prohibit rock climbing at significant T&E plant locations, through coordination with recreation and PAO staff.

9-18. Mature forest cover is maintained within 100 feet slope distance from the top of cliffs and 200 feet slope distance from the base of cliffs to provide habitat for cliff-associated wildlife. Within this zone, activities are limited to those needed to ensure public safety or to maintain or improve habitat for federally listed species or other species whose viability is at risk.

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 the majority 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 (SAMAB 1996), 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
440-05 Appalachian Highlands Carbonate Glades and Barrens
440-10 Interior Highlands Carbonate Glades and Barrens
440-25 Appalachian Sandstone Glades and Barrens
440-40 Appalachian Shale Glades and Barrens
440-65 Appalachian Serpentine Woodlands
440-80 Appalachian Mafic Igneous/Metamorphic Glades and Barrens

Standards for Glades, Barrens, and Associated Woodlands Protection and Enhancement:

9-19. Prohibit the use of off-road vehicles and wheeled or tracked heavy equipment on glades and barrens.

9-20. In certain instances, may have overlap with cliff/canyon prescriptions. See these for additional guidance.

9-21. Prescribe burn on a 1-8 year cycle to maintain or restore the structure, function and species composition of glades/barrens.

9-22. Remove heavy amounts of large dead and down woody debris from glades and rock barrens to prevent long-duration/intense burning, which may sterilize the thin soils.

9-23. Remove encroaching or invasive non-desirable midstory and create canopy gaps to restore/maintain glades/rock barrens structure and composition.

9-24. Coordinate herbicide and heavy equipment use that may cause excessive soil disturbance in these rare communities with Forest Botanist.

Patch Prairies and Grasslands

These communities occur on dry upland sites and are characterized by dominance of grasses and herbs, though scattered trees may be present. These communities represent remnants of naturally occurring grasslands historically maintained by fire and other natural forces, as opposed to old fields. Provisions of the Rare

Community Prescription apply only to prime examples that support significant populations or associations of species at risk. Other natural grasslands will be restored and maintained within complexes of open woodlands. These communities are found in both the Appalachian and Piedmont regions. Additional communities may be found in the coastal plains, as remnant blackland prairie and residual tall-grass prairie. Primary management needs are maintenance and restoration using a variety of vegetation management methods including prescribed fire. These communities include all Associations within the following Ecological Groups as defined by NatureServe (2001a):

445-10 Interior Highlands Patch Prairies and Grasslands
CEGL004664 Schizachyrium Blackbelt Herbaceous Vegetation
CEGL004044 Andropogon virginicus var virginicus Herbaceous Vegetation
V.A.6.N.q101 Juniperus Virginiana/Schizachyrium scoparium Wooded Herbaceous

Standards for Patch Prairies, Grasslands Protection & Enhancement

9-25. Prescribe burn on a 1-3 year cycle to maintain or restore community composition, structure and function. Alternate seasonality to maximize species diversity.

9-26. Emphasize growing season fires to facilitate grass seeding and germination.

9-27. Restore or maintain proper community structure by removing encroaching undesirable shrubs, reducing basal area and midstory, and creating canopy openings.

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. This community is often within the riparian are, and therefore is also protected by Riparian Prescription Standards. 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

Standards for Canebrake Protection and Enhancement:

9-28. Prescribe burn on a 1-8 year cycle to maintain or restore natural canebrake function, structure and composition.

9-29. Introduce canopy gaps to restore or maintain natural canebrake structure and composition.

9-30. Coordinate herbicide and heavy equipment use that may cause excessive soil disturbance in these rare communities with Forest Botanist.

9-31. Refer to riparian prescription for additional guidance.

Caves and Abandoned 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. Primary management needs are protection from nontarget management disturbance and recreational impacts, and maintaining quality of water flowing into underground streams.

Standards for Caves and Abandoned Mines Protection and Enhancement:

9-32. Develop site-specific management plans for each significant cave to meet the intent of the Federal Cave Resources Protection Act.

9-33. Until caves or abandoned mines have been surveyed for use by federally-listed bats, these species are assumed to be present and habitat is maintained for them by applying standards for occupied caves and mines.

9-34. For all caves and abandoned mines suitable for supporting cave associated species, a minimum buffer of 200 feet is maintained around portals, and any associated sinkholes and cave collapse areas. Prohibited activities within this buffer include use of wheeled or tractor vehicles (except on existing roads), mechanical site preparation, vegetation cutting, recreation site construction, tractor-constructed firelines, livestock grazing, herbicide application, and construction of new roads (including temporary roads), skid trails, and log landings. Wider buffers are identified through site-specific analysis when necessary to protect cave and mines from subterranean and surface impacts, such as recreational disturbance, sedimentation and other adverse effects to water quality, and changes in air temperature and flow.

9-35. Use of caves for disposal sites or alteration of cave entrances is prohibited, except for construction of appropriate cave gates or closures. Where previously modified entrances are causing adverse impacts to cave fauna, entrances area restored to eliminate adverse effects.

Alabama's Upper and Lower Coastal Plain Rare Community Definitions

Atlantic White Cedar Swamp

This forest, or forested wetland community, occurs along streams or in basins in the East Gulf Coastal Plain of Alabama, Florida and Mississippi. Dominant and characteristic species are Atlantic white cedar (*Chamaecyparis thyoides*), slash pine (*Pinus elliottii*), swamp blackgum (*Nyssa biflora*), magnolia (*Magnolia grandiflora*), and Cliftonia (*Cliftonia monophylla*) in the overstory. The shrub layer is fairly open to very dense. Understory species include titi (*Cyrilla racemiflora*), Cliftonia (*Cliftonia monophylla*), fetterbush (*Lyonia lucida*), large gallberry (*Ilex coriacea*), inkberry (*Ilex glabra*), and saw palmetto (*Serenoa repens*). Herbaceous density and composition varies with site hydrology, litter depth, and fire history. Herbaceous species found include, beak rush (*Rhynchospora* spp.), Southern long sedge (*Carex lonchocarpa*), netted chain-fern (*Woodwardia areolata*), sweet pitcherplant (*Sarracenia rubra*), sphagnum mosses (*Sphagnum* spp.), goldenclub (*Orontium aquaticum*), partridge berry (*Mitchella repens*), sundews (*Drosera* spp.), cinnamon fern (*Osmunda cinnamomea*), and royal fern (*Osmunda regalis*).

In the field, Atlantic white cedar swamp can be distinguished from drier surrounding sites by the presence of moist or saturated soils. This condition is obvious during the late winter and early spring when high rainfall levels and low evapotranspiration may allow ponding of water. The presence of Atlantic white cedar is adequate to denote the community. A range of understory conditions is possible. 1.) It can be found in saturated basins or hummocks in which a heavy peat or muck layer overlies the sandy subsoil. This condition leads to a sparse herbaceous layer and a community dominated by trees. 2.) Linear occurrences along streams in saturated, highly acid, coarse sandy situations lead to sparsely forested woodlands dominated by shrubs or herbaceous ground covers. 3.) Occurrences along blackwater streamsides and springheads of uneven-aged mixed forests with well-developed shrub and herbaceous strata. Occurrences are typically small in size ranging from five to ten acres.

This community includes the following rare associations identified and defined by NatureServe[1] (2001):

360-20 - Southeastern Coastal Plain Streamhead Atlantic White Cedar Forests.
Atlantic White Cedar-Slash Pine/Swamp Blackgum-Carolina Red Maple/Saw Palmetto Forest - CEGL007145
Steephead White Cedar Woodland - CEGL003634
Gulf Coastal Plain Streamside White-cedar Swamp - CEGL007151

Standards for Atlantic White Cedar Swamp Protection and Enhancement:

9-36. Prescribe burn on a 1-5 year cycle to maintain the structure and composition of the Atlantic White Cedar Swamp. Allow area to burn in a natural mosaic.

9-37. Provide a buffer from adjacent management activities around this community type, based on site-specific analysis of vegetation, soils, and topography.

9-38. Protection measures should at a minimum correspond to riparian prescription guidelines.

9-39. Restoration or maintenance measures may include a reduction of the understory or midstory to restore the natural function and structure of this community type.

Pine Savannas and Woodlands

This open woodland community may have an overstory composed of slash (*Pinus elliottii*), pond (*Pinus serotina*) or longleaf (*Pinus palustris*) pine. Low tree density and a sparse shrub layer are characteristic of this shallowly inundated or wet community. Topography may be nearly flat seepage areas or slight depressions in deep sands or peat over a clay lens. The shrub stratum may be dense or sparse, and may consist of inkberry (*Ilex glabra)*, titi (*Cyrilla racemiflora*), and saw palmetto (*Serenoa repens*). The rich and diverse herbaceous layer consists of wiregrass (*Aristida beyrichiana*), feather bristle beaksedge (*Rynchospora oligantha*), toothache grass (*Ctenium aromaticum*), Gulf chaffhead (*Carphephorus pseudoliatris*), and several pitcherplants including trumpet pitcherplant (*Sarracenia alata*). Only prime examples of these communities, as identified in the forest-wide rare community database, are managed under the Rare Community Prescription.

In the field, pine savannas can be differentiated from surrounding upland habitats by a reduction in overstory density and elevation, wet or inundated ground conditions, scattered shrubs and a continuous herbaceous understory. Very slight topographic changes result in savannas and their sizes can range up to several hundred acres.

This community includes the following rare associations identified and defined by NatureServe[1] (2001):

330-10 – Southeastern Coastal Plain Longleaf Savannas and Flatwoods
East Gulf Coastal Plain Longleaf Pine Savanna – CEGL003645
Longleaf Pine/Saw Palmetto – Little Gallberry Woodland – CEGL003653
330-20(in part) – Southeastern Coastal Plain Wet Slash Pine Savannas and Flatwoods
Slash Pine-Pond Cypress Saturated Woodland - CEGL004768

Slash Pine (Pond Pine)/Southern Wiregrass-Feather-Bristle Beaksedge- (Yellow Pitcherplant, Hooded Pitcherplant, Parrot Pitcherplant) Woodland - CEGL003673
Slash Pine Titi Swamp - CEGL003638
Slash Pine/Saw Palmetto-Little Gallberry Woodland - CEGL003643

Standards for Pine Savannas and Woodlands Protection and Enhancement:

9-40. Manage at least one third of the fire climax communities in the East Gulf Coastal Plain National Forests in Alabama as woodlands (40-60 average BA, or ~ 20% of fire climax communities) or savannas (≤40 average BA, ~10% of the fire climax communities).

9-41. Restore at least 500 acres/year of Pine Savannas and Woodlands with restored, native, warm-season, herbaceous ground covers.

9-42. Prescribe burn on a 1-5 year cycle to maintain the structure and composition of Pine Savannas and Woodlands.

9-43. Emphasize growing season fires in Pine Savannas and Woodlands. Alternate seasonality of burn to maximize vegetative diversity.

9-44. Reduce basal areas (generally 30- 60 average BA) in pine savannas and woodlands to allow the development and persistence of an herbaceous understory throughout the majority of the life of the stand.

9-45. Refer to longleaf restoration prescription for additional guidance.

Xeric Sandhills

This community occurs in the East Gulf Coastal Plain, where it is restricted to extremely deep sandy soils. It is distinctive for its lack of wiregrass due to the extreme edaphic conditions. This sandhill association is widespread on Lakeland soils. Longleaf pine dominates the canopy, with 10-30% coverage. The understory of scrub oaks, mainly turkey oak (*Quercus laevis*), but also bluejack oak (*Quercus incana*), sand live oak (Quercus geminata) and sand post oak (*Quercus boyntonii*), is highly variable, from shrubs to small trees (depending on interval, season, and pattern of fire), and from very sparse to very dense. Hawthorn (*Crataegus lacrimata*) and gopher apple (*Licania michauxii*) are typically present as low shrubs. Little bluestem (*Schizachyrium scoparium*), three-awn grasses (?), and goat's rue (*Tephrosia* spp.), may be contained in the herbaceous stratum.

In the field, xeric sandhills can be distinguished from surrounding forests and woodlands by an increase in elevation, extremely deep sandy soils, low overstory density, and the small, shrubby, growth form of oak species in the area. Good

examples of xeric sandhills have a low incidence of sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), and exotics such as Japanese honeysuckle (*Lonicera japonica*) or Chinese privet (*Ligustrum sinense*). Occurrences are typically small in size, ranging up to ten acres.

This community includes the following rare associations identified and defined by NatureServe[1] (2001):

320-10 – Southeastern Coastal Plain Xeric Longleaf Pine Sandhill/Pinelands
East Gulf Coastal Plain Xeric Longleaf Pine Sandhills – CEGL003587
Longleaf Pine/Turkey Oak/Gopher-Apple/Southern Wiregrass – Sandhill Croton Woodland – CEGL003583

Standards for Xeric Sandhills for Protection and Enhancement:

9-46. Encourage TES species and selected occurrences of locally rare species located on open roadsides or utility corridors to spread away from these vulnerable corridors by thinning adjacent forest stands to a range of 60-80 BA followed by frequent burning in various seasons

9-47. Prescribe burn on a 1-8 year cycle to maximize soft mast production, and maintain xeric sandhill communities.

Coastal Plain Ponds and Pond Margins

These wetland communities occur as imbedded features, usually found in pine flatwoods, in the East Gulf Coastal Plain. They are influenced by drainage changes affected by impermeable clay lenses, slight depressions, peat accumulations, or limestone karst weathering. Surrounding higher terrain is underlain by deep sand, causing these ponds to be fed almost entirely by groundwater. These drainage changes cause seasonal, periodic, or permanent inundation. When dry, or reduced in size due to seasonal drought, these communities are subject to fires spreading from adjacent uplands. Winter fires are unlikely to burn these communities, except during extreme drought cycles. Surrounding vegetation and hydrology vary widely depending on the depth of the impermeable clay lens and the size of the watershed influencing the pond. Vegetation conditions range from cypress and gum ponds, to shrub-dominated swamps or bays, to continuous herbaceous flats or depressions. In the field, these communities can be distinguished from surrounding forests and woodlands by a marked change in overstory composition or density, the presence of ponded water or saturated soils, and a decrease in elevation. Good examples of Coastal Plain Ponds and Pond Margins have a low incidence of exotics. Occurrences are typically small in size, ranging up to twenty acres.

This community includes the following rare associations identified and defined by NatureServe[1] (2001):

340-10 – Atlantic and Gulf Coastal Plain Upland Depression Forested Ponds
Rufous Mayhaw Forest – CEGL007783
Swamp Blackgum Depression Forest – CEGL007434
340-20 – Southeastern Coastal Plain Flatwoods – Wooded Ponds and Dome Swamps
Swamp Blackgum/Myrtle Dahoon/Southern Waxy Sedge – Softhead Pipewort Forest – CEGL004720
Pond-cypress/(Swamp Blackgum)/Swamp Doghobble – Buttonbush – Wax-myrtle Depression Forest – CEGL007420
Pond-cypress/Myrtle Dahoon/(Peatland Sedge, Pinebarren Sedge) Stringer Forest – CEGL007419
Pond-cypress/Myrtle Dahoon Depression Forest – CEGL007418
340-50 – Southeastern Coastal Plain Upland Depression Shrub Ponds
Saturated Alder Thicket – CEGL003912
Pondshore Titi Thicket – CEGL003844
345-05 – Southeastern Coastal Plain Open Ponds and Marshes
East Gulf Coastal Plain Floatingheart Pond - CEGL004621
345-10 – Southeastern Coastal Plain Open Limesinks and Emergent Vegetation
Pineland St. John's-wort/Yellow Hatpins – Willowleaf Meadow-beauty – (Kral's Yellow-eyed-grass) Dwarf-shrubland – CEGL004998
Coastal Plain Vernal Pool Depression – CEGL004100
345-30 – Southeastern Coastal Plain Emergent Ponds and Marshes
East Gulf Coastal Plain Maidencane Pond – CEGL007792

Standards for Coastal Plain Ponds and Pond Margins Protection and Enhancement:

9-48. Activities that result in sedimentation and other changes in water quality or the site's hydrology are prohibited. Provide a minimum of 100-foot buffer around these areas.

9-49. Provide mitigation, such as silt fencing, between management activities and coastal plain ponds and pond margins. Do not use continuous silt fencing to allow for movement of amphibians in and out of the sites.

9-50. Do not introduce fish into seasonal or sinkhole ponds.

9-51. Do not permanently drain seasonal or sinkhole ponds, block or inhibit overflow channels from the ponds, or otherwise alter the hydrological regime.

9-52. Where livestock grazing occurs near a sinkhole pond, fence off and provide a buffer of sufficient size to prevent nutrient input from the livestock. Buffer size will be determined on a site-specific basis based on soils, topography and vegetation.

Wet Pine Flatwoods

This woodland community occurs in the East Gulf Coastal Plain, on low, flat terrain. It is usually dominated by slash pine (*Pinus elliottii*). Wiregrass (*Aristida stricta* var. *beyrichiana*) is a frequent groundcover, with pitcher plant bogs imbedded sporadically throughout the community. Pools, ponds, and bogs occur in the depressions in this terrain. **Only prime examples of these communities, as identified in the forest-wide rare community database, are managed under the Rare Community Prescription.**

In the field, wet pine flatwoods can be distinguished from surrounding forests and woodlands by a reduction in overstory density, the presence of seasonally wet or inundated soils, a transition into low, relatively flat, poorly drained terrain. Good examples of wet pine flatwoods have a low incidence of exotic species, and a high likelihood of imbedded bog communities. Surface rutting or compaction has not affected drainage. Feral hog, cattle, and horse populations, if present, are managed to keep their effects to species composition and hydrology, minimal. Occurrences can range in size up to several hundred acres.

This community includes the following rare associations identified and defined by NatureServe[1] (2001):

330-20(in part) – Southeastern Coastal Plain Wet Slash Pine Savannas and Flatwoods
Slash Pine/Saw Palmetto – Little Gallberry Woodland – CEGL003653

Standards for Wet Pine Flatwoods Protection and Enhancement:

9-53. Prescribe burn on a 1-5 year cycle to restore and maintain occurrences of Wet Pine Flatwoods structure and composition.

Coastal Plain Baygalls and Bayheads

These communities are dominated by sweetbay (*Magnolia virginiana*), redbay (*Persea borbonia*), and gallberry (*Ilex coriacea*). They may appear linearly along small stream courses or in large depressions near the head of drains. Infrequent fires during dry periods prevent this type's succession to closed canopy streamside forest.

In the field, coastal plain baygalls and bayheads can be distinguished from surrounding forests and woodlands by a decrease in elevation, an increase in shrub density, a change in overstory composition to predominately bays, and the presence of water, inundated soils, and moist conditions even during dry periods. Good examples of coastal plain baygalls and bayheads have a low incidence of exotic species. Occurrences are typically small in size ranging up to ten acres.

This community includes the following rare associations identified and defined by NatureServe[1] (2001):

360-10 – Southeastern Coastal Plain Baygalls and Bayheads
Black Titi/Shining Fetterbush – Blaspheme-vine Forest – CEGL007042
Shrub Titi Swamp – CEGL003847
Sweetbay – Swamp Blackgum – Southern Magnolia/Big Gallberry – Southern Wild Raisin/Bayhead Goldenrod Forest – CEGL007473
Atlantic/East Gulf Coastal Plain Sweetbay – Blackgum Streamhead Forest – CEGL004722
Atlantic/East Gulf Coastal Plain Sweetbay-Blackgum Seepage Forest – CEGL008552
Upper East Gulf Coastal Plain Mountain Laurel Hillside Seepage Bog – CEGL008548

Standards for Coastal Plain Baygalls and Bayheads Protection and Enhancement:

Refer to Riparian prescription and bog guidelines

Coastal Plain Seepage Bogs

Coastal Plain seepage bogs occur in a pine flatwoods landscape, on very gently sloping to almost level topography, and often have a sparse canopy (typically 5%-10% cover) of stunted longleaf (*Pinus palustris*) and slash (*Pinus elliottii var. elliottii*) pines. Characteristic species include wiregrass (*Aristida beyrichiana)*, feather bristle beaksedge (*Rhynchospora oligantha)*, Florida dropseed (*Sporobolus floridana)* (rarely), crimson pitcherplant (*Sarracenia leucophylla)*, and parrot pitcherplant (*Sarracenia psittacina)*. Patchy shrubs include wooly huckleberry (*Gaylussacia mosieri)*, inkberry (*Ilex glabra)*, wax myrtle (*Morella carolinensis* [= *Myrica heterophylla]*), fetterbush (*Lyonia lucida)*, coastal sweetpepperbush (*Clethra alnifolia)*, St. John's wort (*Hypericum* spp.), buckwheat tree (*Cliftonia monophylla)*, and laurel greenbriar (*Smilax laurifolia)*.

In the field, coastal plain seepage bogs can be distinguished from surrounding forests and woodlands by a drastic reduction in overstory density, the presence of wet or inundated soils, pitcherplants and other insectivorous plants, and stunted overstory trees. Good examples of coastal plain seepage bogs have a low incidence of non-native species and include wiregrass (*Aristida beyrichiana*) in the herbaceous layer. Occurrences are typically small in size, but may range up to twenty acres.

This community includes the following rare associations identified and defined by NatureServe[1] (2001):

347-10 – Southeastern Coastal Plain Herbaceous Seepage Bogs
East Gulf Coastal Plain Wet Flatwood Bog – CEGL004154

Standards for Coastal Plain Seepage Bogs Protection and Enhancement:

9-54. Prescribe burn on a 1-4 year cycle to maintain coastal plain bogs. Monitor to determine if fire interval and season is adequate to maintain the desired condition (both structure and composition) for a particular site and adjust as needed.

9-55. Where livestock grazing occurs near a bog, provide a buffer of sufficient size to prevent nutrient input from the livestock. Buffer size will be determined on a site-specific basis based on soils, topography and vegetation.

9-56. Where possible, provide a minimum 100 foot buffer around bogs and associated rare communities. Activities that result in sedimentation or negative changes to site hydrology are prohibited.

9-57 Remove encroaching vegetation in bogs either by mechanical means (in consultation with forest botanist), use of prescribed fire, or by mechanical hand tools only.

9-58 Do not impound bogs to create ponds

10. FOREST PRODUCT EMPHASIS AREAS

10.D. Grazing And Forage Emphasis Areas

Emphasis: The objective is to provide range and forage within managed allotments. These areas are unsuitable for timber production.

Desired Condition: Desired condition of rangelands is to maintain soil productivity and optimum forage production. These lands can be classified as either suitable or unsuitable for timber production depending on local conditions and the goals and objectives of the management area.

Management and protection will be provided for rare communities and species associates, along with management and protection measures for population occurrences of TES and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

The landscape character will range from natural appearing to pastoral/agricultural. This area may provide a variety of recreation opportunities. Human activities may be evident in some places, and visitors will likely see other people in parts of this area.

Standards:

10.D-01 ROS Settings: Roaded Natural.

10.D-02 Scenery: Scenic integrity objectives range from high, moderate, and low.

11. RIPARIAN CORRIDORS

Riparian Areas are functionally defined as areas with three-dimensional ecotones of interaction that include both terrestrial and aquatic ecosystems. They extend down into the groundwater, up above the canopy, outward across the floodplain, up the near-slopes that drain into the water, laterally into the terrestrial ecosystem, and along the watercourse at a variable width[1]. (For an operational definition of a riparian area based on soils, vegetation, and hydrologic characteristics see Appendix "C".) A Riparian Corridor is a management prescription area designed to include much of the Riparian Area. Within the riparian corridor management prescription area, management practices are specified to maintain riparian functions and values. As a management prescription area, this includes corridors along all defined perennial and intermittent stream channels that show signs of scour, and around natural ponds, lakeshores, wetlands, springs, and seeps. (See Appendix "C" for a graphical representation of a Riparian Corridor.)

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. Primarily, natural processes (floods, erosion, seasonal 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. ESA, CWA), provide for public safety, and to meet other riparian functions and values. Silvicultural treatments including timber and vegetation removal may occur to restore and/or enhance riparian resources such as water, aquatic and riparian-associated wildlife species, and native communities. These areas are unsuitable for timber production.

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. The preferred management for riparian corridors is one that maintains, or moves toward, the restoration of processes that regulate the environmental and ecological components of riparian areas. However, due to the high value that these areas have for many uses,

[1] **Ilhardt, B.L., E.S. Verry, and B.J. Palik. 2000. Defining riparian areas. Pages 23 – 42 in E.S. Verry, J.W Hornbeck, and C.A. Dolloff (editors)** Riparian management in forests in the continental eastern Uunited States. Lewis Publishers, New York. 402pp.

evidence of human activity (developed recreation areas, roads and trails, dams and reservoirs, and pastoral areas) may be present.

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 thru concentrated runoff, soil erosion, or sediment transport to the channel or water body are promptly rehabilitated or mitigated to reduce or eliminate impacts.

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-associated wildlife species. Recruitment of woody debris typically occurs naturally; however, woody debris may be purposefully introduced to enhance aquatic and terrestrial habitat. {Each Forest may quantify large woody debris amounts as needed based on stream characteristics}. Both in-stream and terrestrial woody debris are regarded as essential and generally left undisturbed.

The riparian corridor functions as a travel-way for aquatic and terrestrial organisms. The corridor serves as a connector of habitats and populations allowing gene flow to occur, thus keeping populations genetically viable. Stream structures -- such as bridges, culverts, and aquatic habitat improvement structures -- may be evident in some streams and water bodies. With the exception of some dams, most structures do not decrease in-stream connectivity.

Suitable habitat is provided in riparian areas, and where applicable in the associated uplands, for riparian-associated flora and fauna; especially threatened, endangered, sensitive (TES) and locally rare species. Vegetation (dead and alive) reflects the potential natural diversity of plant communities with appropriate horizontal and vertical structure needed to provide the shade, food, shelter, and microclimate characteristics for aquatic and terrestrial species. Rehabilitation of past and future impacts (both natural and human-caused) may be necessary to protect resource values and facilitate recovery of riparian structure and functions.

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 predominately forested; however, some native non-forested communities such as wet meadows and grass or shrub dominated plant communities may occur. The desired vegetative condition of non-forested communities is determined by site-specific analysis.

The forest contains multiple canopy layers, which provide diverse habitat structure, and thermal and protective cover for wildlife. Snags used by birds, bats, and other small animals are abundant. Dying and down trees are common, often in naturally occurring

patches. Wet meadows, non-forest communities, and open forest canopies, created by flooding, wind damage, wildland fire, insects infestation, disease, restoration, and vegetation management may be seen.

Vegetation management activities may take place to maintain, restore, and/or enhance the diversity and complexity of native vegetation, rehabilitate both natural and human-caused disturbances, and provide habitat improvements for aquatic and riparian-associated wildlife species (including migratory birds), provide for visitor safety, or to accommodate appropriate recreational uses. Silvicultural treatments, including timber and vegetation removal, may occur within the riparian corridor, but the corridor will be classified as not suitable for timber production. Prescribed fire can be used within the corridor to create or maintain the composition and vitality of fire-dependent vegetative communities (e.g., canebrakes and longleaf pine-wiregrass).

The landscape character is "naturally evolving" or "natural appearing," but occasional enclaves of a "rural" landscape character may occur with pastoral settings and recreation developments (such as a swim beach at a campground). Livestock grazing may occur, but it is managed to minimize impacts on stream banks, water quality, and other riparian resources.

Both dispersed and developed recreation opportunities may be present within these corridors. Although recreational areas and facilities may create long-term impacts on riparian corridors, allowances are made in this prescription since a majority of recreation within the national forests occurs in or near water bodies. Hiking, dispersed camping, hunting, and fishing are typical activities available within the corridor. Visitors may encounter developed camping areas, boat launches and fishing piers. Current recreation areas and facilities are managed to minimize impacts on stream banks, shorelines, and water quality. New recreation facilities will be developed in accordance with Executive Orders 11988 and 11990 to minimize impacts on the riparian resource. Environmental education and interpretation about the aquatic component and riparian corridor may be provided to increase awareness of the value of riparian dependent resources.

Desired Conditions for Aquatic Systems Within the Riparian Corridor

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 historic 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. Where channel shape is modified (e.g., road crossing), the modification preserves channel stability and function.

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

modifications of flow regimes are evaluated in accordance with the national Forest Service in-stream flow strategy and site-specific analysis.

Water quality remains within a range that ensures survival, growth, reproduction, and migration of aquatic and riparian-associated wildlife 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.

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 recreation developments. Some wetland habitats may show signs of restoration.

The biological integrity of aquatic communities is maintained, restored, or enhanced. Aquatic species distributions are maintained or are expanded into previously occupied habitat. The amount, distribution, and characteristics of aquatic habitats 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 of organisms in managed habitats is comparable to reference streams of the same region. Some streams, however, may be stocked with non-native fish by the respective State natural resource agency.

Determination of Riparian Corridors:

Due to their spatial extent, riparian corridors are not identified on the Forest Plan map of prescription allocations. Estimated acreages of the Riparian Prescription allocations are based on the widths described in tables in 1 and 2. For project planning and implementation, the following process will be used to determine the extent of site-specific riparian corridors:

Riparian corridor widths are designed to encompass the riparian area defined on the basis of soils, vegetation and hydrology as described in appendix X, and the ecological functions and values associated with the riparian area. The widths in tables 1 and 2 shall be used to define the Riparian Corridor 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 table 1 and 2, that width shall become the project level Riparian Corridor. This corridor shall be determined by an interdisciplinary analysis using site-specific information to ensure 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. 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%.) 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 recreation 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. (See also the forestwide standards.)

TABLE 1. RIPARIAN CORRIDOR WIDTHS FOR PERENNIAL STREAMS, LAKES, PONDS, OR WETLANDS* (IN FEET, MEASURED AS DESCRIBED ABOVE)

Slope Class		
0-10%	11-45%	45% +
100	125	150

TABLE 2. RIPARIAN CORRIDOR WIDTHS FOR INTERMITTENT STREAMS

Slope Class	
0-15%	16% and above
50	Use the formula:
	30 + 1.5(%slope)

Objectives:

(Note: The Forest IDTs will establish their own measurable objectives within the riparian corridors.)

Relationship with Other Management Prescriptions:

The Riparian Corridors overlap with other management prescription allocations. In order to establish precedence, the following rules apply:

1. Where the Riparian Corridor management prescription area overlaps with lands that have been allocated to Management Prescriptions 0 – Custodial Management, 1A/1B – Wilderness and Recommended Wilderness, 2A/2B – Wild/Scenic/Recreational Rivers and Recommend Rivers, 3A – National Scenic

Areas, 4A thru 4K – Special Areas, and 9F – Rare Communities; then whichever management direction is the most restrictive will apply.

2. 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:

FISH AND WILDLIFE MANAGEMENT

11-01. Large woody debris (pieces greater than 4 feet long and 4 inches in diameter on the small end) may be removed if it poses a risk to water quality, degrades habitat for aquatic and riparian-associated wildlife species, impedes water recreation (i.e., rafting) or poses a public safety risk for swimmers or when it poses a threat to private property or Forest Service infrastructures (i.e., bridges). The need for removal must be determined on a case-by-case basis.

11-02. Stocking of new nonnative species and stocking of previously unstocked areas is discouraged where it will adversely impact native aquatic species or communities. Prior to any stocking, national forests will coordinate with the appropriate State agencies to ensure that populations and habitats of native species are maintained.

11-03. 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 will be mitigated or closed and restored. New wildlife openings within the riparian corridor are allowed where needed to provide habitat for riparian-associated wildlife species.

Range

11-04. Where grazing is currently allowed and under a grazing permit, it will be controlled to maintain the integrity of stream channels and banks. Reauthorizing grazing in riparian corridors within these existing allotments may occur if continued grazing would be compatible with riparian management desired conditions and objectives. New grazing allotments or new permits for inactive allotments will exclude the riparian corridor.

11-05. Where allowed under a grazing permit, livestock watering areas, stream crossings, and stream banks will be armored to maintain bank stability. Designated entry points, crossings, and watering points will be located, sized and maintained to minimize the impact to riparian vegetation and function.

11-06. Feeding troughs and salt and mineral blocks are not allowed inside the riparian corridor unless the entire pasture is within the riparian corridor, in which case they will be located as far away from streams as possible. Watering troughs will be appropriately located to protect the streams.

RECREATION – TRAILS

11-07. New non-motorized trail construction is allowed to improve existing trail configuration and improve access to streams, lakes and the riparian corridor.

11-08. 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.

11-09. Motorized and non-motorized trail reconstruction and relocation within the riparian corridor are allowed to reduce impacts to riparian and aquatic resources.

11-10. All new stream crossings will be constructed so that they do not adversely affect the passage of aquatic organisms, or significantly alter the natural flow regime. Exceptions may be allowed to prevent the upstream migration of undesired species.

RECREATION – DEVELOPED

11-11. PROPOSED OR NEW FACILITIES MUST BE DEVELOPED IN ACCORDANCE WITH EXECUTIVE ORDERS 11988 (FOR 100-YEAR FLOODPLAINS) AND 11990 (FOR WETLANDS). 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.

RECREATION - DISPERSED

11-12. Where a riparian area is identified as vulnerable to environmental impacts, camping trailers and vehicles should not be allowed within 50 feet of perennial streams or lakes, except at designated areas.

11-13. Tethering or corralling of horses or other livestock is not allowed within 50 feet of stream courses or lakes. Existing corral sites will be maintained to limit impacts to water quality and riparian corridors.

Scenery Management

11-14. Scenic integrity within the riparian corridor ranges from high to moderate.

Federally Owned Minerals

11-15. New mineral or oil and gas leases will contain a no-surface-occupancy stipulation or controlled-surface-use stipulation for the riparian corridor.

11-16. Federal mineral material (36 CFR 228(c)) authorizations are allowed to restore riparian areas and aquatic habitat, control erosion and sedimentation, and repair flood damage.

11-17. Recreational mining is only allowed where it does not adversely affect stream channel stability, substrate, aquatic species, or their habitats.

Vegetation

11-18. *Note: large woody debris is addressed in DFC section.* Revegetation activities will emphasize using native plants.

11-19. 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.

11-20. Tree removals may only take place if needed to enhance the recovery of the diversity and complexity of vegetation, rehabilitate both natural and human-caused disturbances, provide habitat improvements for aquatic and riparian-associated wildlife species, reduce fuel buildup, provide for visitor safety, or for approved facility construction/renovation.

11-21. Lands in the riparian corridor are classified as not suitable for timber production.

11-22. Permitted firewood cutting within the riparian corridor must take into consideration the large woody debris requirements.

Insect and Disease Control and Salvage

11-23. Cut and leave will be the preferred method for control and suppression of insects and disease in the riparian corridor. Other control measures may be used when a condition poses a risk to stream stability, degrades water quality, adversely affects habitat for aquatic and riparian-associated wildlife species, poses a threat to public safety or facilities, or when "cut and leave" is not effective.

11-24. 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.

Prescribed Fire

11-25. Construction of firelines with heavy mechanized equipment (e.g., bulldozers) in wetlands or riparian corridors is prohibited.

11-26. Hand lines are used to create firelines near streams to minimize soil disturbance. Water diversions are used to keep sediment out of streams. Firelines are not constructed in stream channels, but streams may be used as firelines.

Road Stream Crossings

11-27. Where risks of resource damage are high, each road segment will be constructed and stabilized prior to starting another segment. High-risk areas include landslide prone areas, 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.

11-28. 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.

11-29. If culverts are removed, stream banks and channels must be restored to a natural size and shape. All disturbed soil must be stabilized.

11-30. All new stream crossings will be constructed so that they do not adversely impact the passage of aquatic organisms. Exceptions may be allowed in order to prevent the upstream migration of undesired species.

12. REMOTE BACKCOUNTRY AREAS

12.A. REMOTE BACKCOUNTRY RECREATION—FEW OPEN ROADS

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.). These areas are unsuitable for timber production.

Desired Condition: These areas provide backcountry opportunities with a non-motorized emphasis that does allow some motorized access. Human activities may be evident in some places. Visitors will occasionally see other people, especially near the few open roads in these areas. A non-motorized trail system will provide the predominant means of access, and trails will be improved or constructed. Decommissioned and closed roads will be available for non-motorized uses. Outdoor skills will be 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 will appear to be primarily shaped by ecological processes and the landscape character will be natural appearing. However, some active management activities are allowed. Prescribed fire, and associated hand tool or mechanized fire line construction, is permitted to reduce wildfire potential due to high fuel loadings, improve or maintain wildlife habitats, or to benefit certain fire

dependent floral species. No new roads or trails for public motorized uses are allowed. Roads not open for public use and roads not needed for management activities will be decommissioned. Roads needed for management activities may be closed to public motorized use, but open for administrative use to facilitate a degree of land stewardship. Maintenance of existing wildlife openings is allowed.

The areas will be unsuitable for timber production. Occasionally, some vegetation manipulation and open forest canopies may be present due to TES habitat improvements, public safety, and threats to private lands.

Habitat associates emphasized within this allocation are area-sensitive, mid- to late-successional deciduous forest associates; mid- to late-successional deciduous forest associates; bottomland hardwood associates; and basic and mixed mesic forest associates. The protection of rare communities and species associates will be provided, along with protection measures for population occurrences of TES and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Standards

12.A-01. Recreation: OHV trail development will not be allowed.

12.A-02. Minerals: no surface occupancy

12.A-03. Special Uses: require underground utilities on new permits

12.A-04. Facilities/Roads: no new permanent system roads

12.A-05. Forest Health: Vegetative manipulation will only be allowed for public safety, TES habitat improvement and private land protection.

12.A-06. Wildlife: no new wildlife openings, existing openings can be maintained.

12.A-07. ROS Settings: Semi-Primitive Motorized.

12.A-08. Scenery: Scenic integrity objective is high.

12.B. REMOTE BACKCOUNTRY RECREATION - NONMOTORIZED

Emphasis: Recreation opportunities are provided in large remote areas where users can obtain a degree of solitude and the environment can be maintained in a near-natural state. There will be little evidence of humans or human activities other than recreation use and non-motorized trails. These areas are generally 2,500 acres or greater in size (unless adjacent to a prescription that also provides a semi-primitive experience such as 1.A., 1.B., 4.A., 6.A., 12.C., etc.) and will be

managed for semi-primitive non-motorized setting conditions. These areas are unsuitable for timber production.

Desired Condition: These areas will provide backcountry opportunities with a semi-primitive non-motorized emphasis. The landscape character will primarily be naturally appearing where human activities are subordinate to the landscape. Visitors will generally see little evidence of humans or human activities other than backcountry recreation use. Development of hiking trail systems will be emphasized; however, the first priority will be to repair existing trails causing resource protection. All roads are closed to public motorized use. Closed roads not needed for occasional administrative use will be decommissioned. Outdoor skills and self-reliance will be important for visitors because of the remoteness of these areas. Hiking, nature study, backpacking, orienteering, hunting, and fishing will be typical activities associated with this prescription.

The landscape will appear to be primarily shaped by natural ecological processes, rather than management activities. However, a minimal amount of active management is allowed, such as for utility maintenance, existing wildlife opening maintenance, prescribed burning, and access for wildland fire suppression. Prescribed fire, with a minimal amount of fire line construction, is permitted to reduce wildfire potential due to high fuel loadings, improve or maintain wildlife habitats, or to benefit certain fire dependent floral species. No new permanent road construction is allowed. No salvage harvesting is allowed. All areas would be classified as unsuitable for timber production. Disturbances would primarily be caused by natural processes (floods, windstorms, insects and diseases, and fires). Occasionally, some vegetation manipulation and open forest canopies may be present due to TES habitat improvements, public safety, and threats to private lands.

Habitat associates emphasized within this allocation are area-sensitive, mid- to late-successional deciduous forest associates mid- to late-successional deciduous forest associates; bottomland hardwood associates; and basic and mixed mesic forest associates. The protection of rare communities and species associates will be provided, along with protection measures for population occurrences of TES and locally rare species. This will provide a high likelihood that species within these associations will continue to persist on National Forest System lands.

Standards

12.B-01. **OHV**: New trail construction is not allowed

12.B-02. **Wildlife:** no new wildlife openings

12.B-03. **Minerals:** no surface occupancy

12.B-04. **Special Uses:** require underground utilities on new permits

12.B-05 **Facilities/Roads:** no open roads and no new permanent system roads

12.B-06. **Forest Health:** Vegetative manipulation will only be allowed for public safety, TES habitat improvement and private land protection.

12.B-07. **ROS Settings:** Semi-Primitive Non-Motorized.

12.B-08 **Scenery:** Scenic integrity objective is very high.

CHAPTER 4

FORESTWIDE DESIRED FUTURE CONDITIONS

The condition of the National Forests in Alabama will change as this Forest Plan is implemented. This section summarizes the desired condition of the National Forests in Alabama after 10 years and after 50 years of plan implementation. More detailed desired condition statements are found for each management area and each management prescription.

The Forest in the Short Term

At the end of the first decade, changes in the overall character of the landscape will be small. The Forest will appear very much as it does today. Changes to the landscape will have been made through restoration to native communities, prescribed burning, wildlife habitat improvement activities, other management activities, and natural disturbances.

The processes and structures necessary to maintain the biological diversity of the forest will be provided for across the landscape as a whole. Management of forest vegetation focuses on restoring and maintaining healthy forest ecosystems. Forest products are generally by-products of management activities to meet other resource objectives, such as restoration, wildlife habitat management, and forest health improvement activities.

Riparian structure, function, and character will be in good or improving condition.

The character and qualities of the National Forests in Alabama, which draw visitors, will remain in place. A broad spectrum of recreation opportunities, ranging from primitive to developed, will be available. Information about recreation opportunities, the natural setting, and environment will be easily obtained.

The road system continues to provide adequate access for public and administrative use. Most roads have native surfacing and are rough and irregular. Public access on some roads is restricted either seasonally or permanently. New road construction and road reconstruction will rarely occur.

The Forest in the Long Term

After five decades of plan implementation, several changes will be apparent across the landscape. A diversity of terrestrial, aquatic, and riparian communities are distributed across the landscape in spatial and temporal patterns and frequencies that would be expected within the natural range of variation for each physiographic area. Terrestrial

and aquatic communities of special concern are sustained and well represented across the landscape, possibly in higher proportions than within the natural range of variation in each area. Regional, sub-regional, watershed, and habitat linkages are maintained so as to provide for the viability of native and desirable naturalized vertebrate, invertebrate, and plant populations and species. Ecological forces in all represented physiographic provinces include disturbances such as fire, ice storms, windstorms, tornados, and flooding.

The vast majority of forested areas will be in mid to late successional habitats. Early successional habitats will be found scattered across the landscape. These areas will have developed primarily through vegetation management activities and natural disturbance processes (fire, insects, and disease). Biological diversity will continue to be maintained or improved across the forest. The majority of riparian areas will be in a good condition.

A mosaic of forest communities would be spread across the landscape, generally including a variety of upland pine and pine-hardwood communities with hardwood-pine or bottomland hardwoods within and adjacent to riparian areas. The community structure will show a wide age distribution with various sized openings in the canopy. Vegetation patterns reflect natural disturbances, as well as planned harvest activities to provide for restoration, forest health, old growth conditions, wildlife habitat improvement, and activities associated with other resource objectives. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, will be visible.

Fire plays an increased role in maintaining many upland forest ecosystems. There is evidence of frequent, low-intensity fires on most upland sites. Fire-dependent communities are burned frequently to mimic the natural role of fire in these ecosystems, using growing season burns when ever possible.

Insects and diseases play a role in Forest ecosystems by contributing to various ecological processes including nutrient cycling, plant succession, and forest dynamics. A higher level of tree mortality occurs because of older-aged stands with reduced vigor and increased susceptibility to insects and disease. Integrated Pest Management (IPM) will continue to be used to maintain losses from insects and diseases at acceptable levels.

Diverse communities of terrestrial and aquatic wildlife occur throughout the National Forests. The communities and individual animal species found in a particular area will depend mainly upon the vegetation structure, composition, age, and plant communities. Unique and diverse aquatic communities and certain aquatic species abound with their locations being largely determined by location and velocity of the water (still or running). Many mussels, crayfish, and fish are common in the streams whereas most of Alabama's game fishes (bass, blue gill, crappie) and certain aquatic invertebrates (excluding most of our mussels) are normally found in lakes and ponds. Terrestrial game species such as turkey, deer, and quail, as well as many Neotropical Migratory birds are found throughout the forest. Canopy dwellers, such as squirrels, pileated woodpeckers, and several species of vireos and warblers are also seen in areas containing mature forests.

A variety of water birds, amphibians, invertebrates, and mammals can be seen in riparian areas of lakes, ponds, and streams. Amphibians require these moist streamside zones and downed woody material for their adult life and water for the larval stages of their life cycle. Many of the terrestrial invertebrates seen have an aquatic stage and can be found in waters during certain seasons of the year. Certain birds (egrets and herons) and mammals (beaver and otters) are seen feeding in or along the waters edge.

The Forest provides habitat for various species whose populations were previously threatened by dwindling numbers. Riparian areas support viable populations of many amphibians such as the flatwoods salamander and gopher frog. There is a recovering Red Cockaded woodpecker (RCW) population. Populations of formerly sensitive bird species are also no longer at risk. As a result of maintaining and enhancing various functioning ecosystems such as the longleaf pine ecosystem, plant species that were declining on National Forests lands are now thriving. American chaffseed is a common sight in the longleaf pine community. Populations of carnivorous plants are found in bog areas, and plant and animal species that were once considered sensitive, are thriving at viable levels.

The Forest continues to meet the public demand for a variety of developed recreation opportunities. Developed recreation is provided in three types of settings on the Forest: (1) highly developed areas to accommodate concentrated activities; (2) minimally developed areas designed with fewer developments and for smaller groups; and, (3) developments for specialized recreation activities such as rifle ranges. Depending on the specific site, facilities and amenities are provided for the comfort of the user. Developed recreation facilities are safe for visitors, and to the extent practical, accessible to visitors with disabilities. Maintenance and rehabilitation are prompt and thorough in developed sites. Interpretive facilities and programs are provided throughout the Forest. Interpretation emphasizes environmental education, cultural resources and National Forest management. Depending upon the site and level of development, a wide variety of quality activities are available either in the developed area or immediately adjacent. These activities include hiking, picnicking, bicycling, swimming, camping, wildlife viewing, fishing, and learning about nature through interpretive activities and programs. Establishing and reinstating an image of quality with a visible National Forest design ethic is emphasized in all maintenance, construction, and rehabilitation.

Opportunities are provided to support demand for dispersed recreation activities. These activities include but are not limited to hiking, off road vehicle use, mountain biking, camping, hunting, and fishing. Dispersed recreation areas that receive heavy use are managed to protect and preserve the resources of the areas. Social interaction with individuals and groups is the normal situation, however, some areas will provide opportunities for solitude and challenge.

Wilderness areas are provided and their character and public values are protected and perpetuated. These include, but are not limited to opportunities for solitude, inspiration, education, physical and mental challenge, scientific study, and primitive recreation. The ecosystem structure and condition is the result of natural succession and natural processes. In some areas, natural succession eventually results in an older forest of predominantly shade tolerant vegetation. In other areas, natural disturbances have

created varying vegetation conditions. Wildlife favoring mature vegetation or the late successional stages of vegetation are predominant in wilderness. Un-fragmented habitat is provided for area-sensitive species. Evidence of visitor use in the wilderness and interaction among users will be within the "Limits of Acceptable Change" as defined for each wilderness area. Facilities of a primitive nature may be present to protect the resources and the safety of visitors. Minor evidence of primitive travelways exists. No motorized use (including bicycles) is permitted.

Water quality meets or exceeds state standards, and beneficial downstream uses are protected or enhanced. The width and depths of streams are in dynamic equilibrium with stream discharge, sediment load, and bank material. Most streams do not display signs of accelerated downcutting, lateral cutting or aggrading. Where the channel shape has been modified (i.e.: road crossing), the modification preserves the channel stability and function. Downstream beneficial uses are not adversely affected by the modification. The sediment transport capacity exhibits a stable channel balance and does not show signs of excessive deposition or scour. The channel pattern and longitudinal profile have not been adjusted by sediment from the natural state.

Ponds and lakes (natural or artificial) offer clean water, wildlife habitat, aquatic niches, and various recreational opportunities. Most shorelines present a natural appearance. Rehabilitation of impacts (both natural and human caused) to the water resource follows ecological principles. Emphasis is placed upon preserving, restoring and enhancing the water column, aquatic and amphibian niches, and the riparian vegetative community.

Air quality is high, especially in wilderness areas. Some temporary reduction in air quality may occur as a result of prescribed or wild fires.

Long-term soil productivity is apparent. Nutrient levels and nutrient cycling processes continue to function unimpaired. Woody debris, leaf litter, and other organic matter are detained on many areas to provide soil organic matter, plant nutrients, and energy for soil microorganisms. The soil retains a fragile status. Exposed mineral soil is in a dispersed nature. Some scattered areas, such as roads and some log landing areas, may have low soil productivity and experienced soil loss, or change in soil structure. Human activity is managed so that compaction does not impair productivity or fertility of the soil. The filtering capacity and structure of the soil are not impaired by ground disturbing activities. The imprint of firelines and old woods roads do not compromise the integrity of the soil.

The forests/districts are becoming more consolidated in ownership patterns. Key tracts containing unique plant and animal habitats, riparian areas, geologic features, cultural resources, wetlands, and recreational opportunities are acquired. All property boundaries are legally located, visible, and free of unauthorized encroachments.

Significant cultural/historical, botanical, scenic, and geological sites are protected, managed, and interpreted.

MANAGEMENT AREA AND WATERSHED DIRECTION

The National Forests in Alabama are separated into five distinct management areas. These management areas are the five major divisions of land that comprise the National Forests in Alabama; Bankhead National Forest, Conecuh National Forest, Oakmulgee Division of the Talladega National Forest, Talladega Division of the Talladega National Forest, and the Tuskegee National Forest. The following section describes each of these management areas and the fifth level watersheds within each management area, and describes the desired future condition for each management area.

Management Area 1 – Bankhead National Forest

DESCRIPTIONS

MANAGEMENT AREA

The 348,917-acre Bankhead National Forest is located in Winston, Lawrence and Franklin Counties, Northwest Alabama. The Bankhead National Forest began as the "Alabama Purchase Unit" and was originally proclaimed the Alabama National Forest in 1918, and was renamed the Black Warrior National Forest in 1936. In June 1942, legislation was enacted by the Congress of the United States changed the name of the Black Warrior National Forest to the William B. Bankhead National Forest in honor of William B. Bankhead, one of Alabama's native sons, a member of Congress from 1917-1940, and Speaker of the House from 1936 until his death in 1940. Generally the area acquired was a mixed landscape of cleared and forested lands. The upland ridges contained cleared fields and the coves contained hardwood timber.

Based on ecological landscape mapping, the Bankhead National Forest is divided into 6 landtype associations (LTAs); Black Warrior Hills, Sipsey Plateau, Moreland Plateau, Sandstone Hills, Tennessee Valley Plains, and Tennessee Valley Escarpment. The Black Warrior Hills LTA is located in the Shale Hills and Mountain Subsection with the remaining five LTAs located within the Sandstone Mountain Subsection. Both subsections are located within the Southern Cumberland Plateau Section. Landscapes of the six LTAs can be described as moderately to strongly dissected plateaus with moderately low relief. Sandstone and layers of sandstone and shale are the dominant geologic content with sandstone, shale, and limestone layers found on a relatively small portion of the forest north of the Tennessee Valley divide. Soils derived primarily from sandstone. Shale mixed with sandstone is also a component south of the Tennessee Valley divide where north of the Tennessee Valley divide, soils are also derived from limestone. Soils tend to be moderately deep to deep, well drained, slow to moderately permeable with sandy loam surface textures and clay loam, silty clay loam or silty clay subsurface textures. Natural fertility and organic matter content tends to be low.

The network of streams is classified as riverine with a dendritic drainage pattern having moderate to low gradient that are well to moderately confined. Many streams are deeply

entrenched in high-walled gorges. Sharp waterfalls are common in the upper reaches. Stream substrate is sand and cobble controlled by bedrock and boulders. Most stream channels exhibit perennial flow most of the way up the to their headwater regions and support a robust aquatic community. This stream system is rainfall driven with moderate to rapid basin response resulting in frequent late winter/early spring flash flooding.

WATERSHEDS

The Bankhead National Forest lies within eighteen 5th level watersheds: Big Nance, Blackwater, Clear, Crowdabout, Lewis Smith, Lower Brushy, Lower Flint, Lower Rock, Lower Sipsey, New River, Right Fork Clear, Splurge, Town, Upper Bear, Upper Brushy, Upper Rock, Upper Sipsey, and West Flint. Six of these watersheds are within the Tennessee River Basin (Big Nance, Crowdabout, Lower Flint, Town, Upper Bear, and West Flint). The remaining twelve watersheds are within the Black Warrior River basin. Four of these watersheds, Big Nance, Crowdabout, Town, and Upper Bear, are in poor overall watershed condition. Primary factors affecting their condition are; point source pollution, hydrologic modification, and watershed vulnerability. Big Nance, Crowdabout and Town watersheds are on the Alabama State impaired list resulting from agricultural management, private forest management, and industrial use within each watershed. Big Nance, Blackwater, Clear, Crowdabout, Lower Flint, Lower Rock, New River, Right Fork Clear, Splurge, Town, and Upper Bear watersheds have less than 5% public land ownership. Most of the public land ownership, previously mentioned, lies within the headwaters of these watersheds. Forest Service management within these watersheds will have minimum effect on the improvement of overall watershed condition.

Lower Brushy, Lower Sipsey Fork, Upper Brushy, and Upper Sipsey Fork watersheds contain the largest public land ownership, averaging 85% for Upper Brushy and Sipsey Fork watersheds and 33% for Lower Brushy and Lower Sipsey Fork watersheds. Excluding Lower Brushy watershed, overall watershed condition is good and watershed vulnerability is low. Lower Brushy has a good overall watershed condition but has a moderate to high watershed vulnerability resulting largely from recreational pressure and urbanization with agriculture and forest management to a lesser extent. The aquatic condition is the primary vulnerable resource, containing a high diversity of native, endemic, threatened and endangered species. The potential for future increased vulnerability resulting from increases in recreation and urbanization is present within Lower Sipsey Fork watershed. Upper Brushy and Upper Sipsey Fork also has a potential for increased vulnerability from increases in recreational activities.

Major influences on watershed condition are located downstream and off public lands for most all of the watersheds involving the Bankhead National Forest. Four watersheds of the eighteen listed have sufficient public land ownership where land management can have an effect on improving watershed condition. The table below provides a synopsis of the eighteen watersheds containing public land ownership and influences, rated as high only, that are presently having an effect on the water resource. Additional information can be found in “A Watershed Analysis For The National Forests in Alabama”, 1999.

Table 4-1: Bankhead Watershed Effects Synopsis

Watershed Name	% Public Land Ownership	Point Source Pollution	Hydrologic Modification	Erodible Soils	Recreation Use	Riparian Health	AL State Impaired List	Overall Watershed Condition	Overall Watershed Vulnerability
Big Nance	0.3%	X					X		X
Blackwater, New River, and Splurge	Less than 0.1%		X						
Clear and Right Fork Clear	4%				X				
Crowdabout	1.5%		X				X		X
Lewis Smith	9.0%				X				
Lower Brushy	35%	X							X
Lower Flint	Less than 0.5%								
Lower Rock	1.5%								
Lower Sipsey Fork	32.0%		X		X				
Town	2.0%		X	X			X	X	X
Upper Bear	2.0%	X	X		X			X	X
Upper Brushy	82.%				X				
Upper Rock	6.0%	X							X
Upper Sipsey Fork	87.0%				X				
West Flint	16%						X	X	X

DESIRED CONDITIONS

The upland areas consist of pine, oak-pine, and mixed hardwood types. Loblolly is the most prevalent pine species with lesser amounts of longleaf, shortleaf, and Virginia pines. Most upland stands are pine or mixed pine-hardwood with significant components of hardwood, primarily oaks (such as white, northern red, southern red, scarlet, chestnut) and hickories. The predominantly pine stands have an open park-like appearance due to frequent low intensity fires. A small oak component is present in most pines stands, mainly in scattered clumps. Some upper slopes are mostly mixed hardwood with scattered pine.

Bottomland or cove hardwoods are found on lower slopes along rivers and creeks, and upland hardwood or mixed stands are often found on north facing slopes. Bottomland and cove sites appear as a closed canopy forest of tall, straight trees, mostly mixed oaks, hickories, beech, yellow poplar, and maple. The sparse midstory contains species such as blackgum, red maple, sweetgum, and other hardwoods. Evidence of fire is generally not present due to moist sites and the minimal use of prescribed fire on these sites. The community structure indicates a wide age distribution with a number of various sized openings in the canopy. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, are visible.

There is evidence of frequent fires, mostly on upland sites. Fire-dependent ecosystems are burned frequently during the growing season to mimic the natural role of fire in these ecosystems. Occasionally fires may enter bottomland or coves. Vegetation patterns are primarily the result of fire (including prescribed fire), hydrology, and vegetation management activities.

The quality of soil, water, and air will be acceptable. Wetlands show no evidence of being drained. The aquatic community will be adequate to robust. Water quality meets or exceeds state standards, providing biodiversity and beneficial downstream uses.

Wildlife found within the forest includes species that prefer both mature pine and hardwood forests, as well as early successional habitats resulting from forest management activities. Birds include wild turkey, quail, vireos, warblers, owls, and various other species. Mammals found here include white-tailed deer, gray foxes, gray squirrels, bobcats, raccoons, and others. The wetlands and streams attract numerous species that like water, such as a variety of salamanders, frogs, snakes, and birds.

In most places visitors may encounter other people and activities of various sorts. The feeling of isolation will be rare except in the Sipsey Wilderness, although a feeling of freedom and independence will be common. Recreational facilities, such as swimming areas, fishing access sites, trails, and viewing areas are occasionally found. Some areas have signs, interpretive displays, and other facilities for the comfort and safety of the user. Modification of the landscape through human intervention is a common sight in developed recreation areas.

Within the Sipsey Wilderness, the enduring resource of wilderness is maintained and perpetuated as one of the multiple uses of National Forest System land. Wilderness character and public values are protected and perpetuated.

The area is generally continuous, although some private land is interspersed within the forest. The road system continues to provide adequate access for public and administrative use. Most roads have native surfacing and are rough and irregular. These roads may not be stable during bad weather conditions. Public access on some roads is restricted either seasonally or permanently. Remnants of temporary roads leading from permanent roads to small openings can be seen. New road construction is minimal, and road reconstruction is decreased.

Management Area 2 – Conecuh National Forest

DESCRIPTIONS

MANAGEMENT AREA

Based on ecological landscape mapping, the Conecuh National Forest is divided into five landtype associations (LTAs); Conecuh & Yellow River Floodplains, Pine Hills, Bays, Dougherty Plain, and the Wet Pine Flatwoods. All LTAs are located in the Southern Loam Hills Subsection, Coastal Plain and Flatwoods, Lower Section. Landscape of the Conecuh and Yellow River Floodplains LTA can be described as level to slightly undulating, having low to very low relief, with evidence of past and present flooding. The landscape of the Bay LTA level to slightly concave, having very low to no relief, with ponding of water common throughout the year. The Wet Pine Flatwoods LTA is located on broad level uplands with very low relief. The remaining two LTAs form uplands having low relief. Geology consists of layered coastal marine sediment deposits but distribution, content, and thickness varies considerably between each LTA. The Bay LTA contains recent acid-organic deposits over marine sediment deposits. The Wet Pine Flatwoods and the Dougherty Plain LTAs formed from sand and clay sediments originating primarily from limestone. The Pine Hills LTA formed from deposits of sand and clay. The floodplain LTAs formed from recent fluvial deposits. The diverse geologic deposits in turn developed diverse soils. All the soils are considered deep, acid to very acid, low in natural fertility and organic matter content except the Bay LTA that is rich in fertility and organic matter content. Drainage is very poor to the opposite end, well drained with permeability quite variable also, from slow to rapid. Hydric (wetland) soils are very common within the Bay LTA and are common in the Wet Pine Flatwoods LTA.

The Pine Hills, the Dougherty Plain, the Conecuh and Yellow River Floodplains and the Wet Pine Flatwoods stream networks are classified as riverine with a dendritic drainage pattern, having a minor to significant palustrine components, characterized by low gradient that is poorly to moderately confined, often with braided channels with some entrenched channels; sand dominated substrate with a significant organic fraction. The Bays LTA is a palustrine system with a minor riverine component, characterized by a

seemingly disconnected system of channels; very low gradient; poorly confined, most with braided channels; sand dominated substrate with a significant organic fraction. Both systems exhibit perennial flow driven by rainfall and artesian or surficial ground water flow and support an adequate to robust aquatic community.

WATERSHEDS

The Conecuh National Forest lies within nine 5th level watersheds: Upper Conecuh, Five Runs, Yellow River, Lower Conecuh, Blackwater, Yellow North – Watkins, Lower Yellow – Givens, Sweetwater, and Big Horse. The Lower and Upper Conecuh watersheds are located in the Alabama River Basin. The remaining seven watersheds are located within the Escambia River Basin. Only one watershed is considered in poor overall watershed condition, Yellow River. The combination of hydrologic modification, urban, commercial, industrial, and agriculture land use, and fair riparian health contribute to the poor overall watershed condition. Watershed vulnerability is moderate. None of the watersheds are listed on the Alabama State impaired list. Public ownership varies considerably, with Big Horse, Conecuh and Yellow River watersheds containing less than 3%. Yellow River North and Lower Yellow River watersheds and Sweetwater watershed have less than 15% public ownership. Five Runs watershed contains approximately 21% public lands and has a moderate overall watershed condition and vulnerability. Five Mile watershed is experiencing increases in urbanization, coupled with agricultural use and hydrologic modification, contributing to declining conditions. There are known existing native, endemic, threatened and endangered aquatic species within Five Mile watershed. The watershed with the largest public land ownership is Blackwater at 49%. Blackwater is in good overall watershed condition. Recreation pressure and hydrologic modification along with the presence of native, endemic threatened and endangered aquatic species lends to the moderate watershed vulnerability for Blackwater watershed.

Major influences on watershed condition are located above, adjacent, and below public lands. Only one watershed has significant public land ownership, Blackwater, where land management can have an effect on improving watershed condition. Five Mile watershed can have limited improving watershed conditions considering this has 21% public land ownership. The table below provides a synopsis of the nine watersheds containing public land ownership and influences, rated as high only, which are presently having an effect on the water resource. Additional information can be found in “A Watershed Analysis For the National Forest s in Alabama”, 1999.

Table 4-2: Conecuh Watershed Effects Synopsis

Watershed Name	% Public Land Ownership	Point Source Pollution	Hydrologic Modification	Erodible Soils	Recreation Use	Riparian Health	AL State Impaired List	Overall Watershed Condition	Overall Watershed Vulnerability
Upper Conecuh	2.7%								
Five Runs	21.4%								
Yellow River	2.3%		X		X	X		X	Moderate to High
Lower Conecuh	3.5%								
Blackwater	49%								
Yellow North Watkins	14%	X							
Lower Yellow Givens	11.6%								
Sweetwater	12.4%		X						
Big Horse	<1%								Moderate

DESIRED CONDITIONS

A mosaic of forest stands is spread across most of the landscape. The community structure will show a wide age distribution with various sized openings in the canopy. Vegetation patterns reflect natural disturbances, as well as planned harvest activities to provide for forest health, old growth conditions, Longleaf pine restoration, wildlife habitat improvement, and other resource objectives. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, will be visible. Management of forest vegetation focuses on maintaining and restoring forest health, including species and age diversity. The forests continue to produce timber products but at reduced levels compared to previous decades. Forest products are generally byproducts of management to meet other resource objectives (wildlife, old growth, forest health). All harvest methods are available and are selected based on site-specific analysis and management objectives.

The upland areas consist of longleaf pine-wiregrass communities on the dry sites and wet pine flatwoods (grass/sedge flatwoods with sparse longleaf and slash pines) on the poorly drained sites. Bottomland hardwoods are found within the wide floodplains along rivers, and numerous bays are found on slowly drained wetland sites. The community structure indicates a wide age distribution with a number of various sized openings in the canopy. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, is visible.

The upland pine communities are dominated by large longleaf pine with wiregrass and other herbs in the understory. The midstory is sparse in places due to frequent low intensity growing season fires. A small oak component is present, mainly in the understory and in small, scattered clumps. Seepage bogs containing sensitive species (such as bogbutton, panhandle lily, bog spicebush, panicum, pitcher plants, yellow-eyed grass) are found throughout. Grasses and sedges with sparse longleaf and slash pines dominate the wet pine flatwoods.

The bottomland ecosystem is found within the wide floodplains of rivers and is covered by a closed canopy forest of tall, straight trees. These include several oak species (willow oak, cherrybark oak, water oak, swamp laurel oak, and swamp chestnut oak), spruce pine, green ash, sweetgum, water hickory, American elm, and sugarberry. The midstory contains species such as blackgum, red maple, sweetgum, and other hardwoods. Vines such as poison ivy, muscadine, Virginia creeper, and crossvine are frequently encountered. Rushes, sedges, ferns, and spring-flowering ephemerals, including many sensitive species, dominate the herbaceous layer. The different plant communities are not separated by sharp boundaries, but gradually merge in response to fluctuations in water levels and fire history.

There is evidence of frequent, low-intensity fires. Fire-dependent ecosystems are burned frequently during the growing season to mimic the natural role of fire in these ecosystems. Occasionally fires may enter wetlands. Vegetation patterns are primarily the result of fire (including prescribed fire), hydrology, and timber harvest activities. Tree trunks are blackened. Smoke from prescribed fires may be present. Evidence of firelines is rarely seen. The imprint of a narrow access road covered in grass may be common.

The quality of soil, water, and air will be acceptable. Wetlands show no evidence of being drained. The aquatic community will be adequate to robust. Water quality meets or exceeds state standards, providing biodiversity and beneficial downstream uses.

As a result of maintaining and enhancing various functioning ecosystems such as the longleaf pine ecosystem, plant species, which were declining dangerously, are now thriving. American chaffseed is a common sight in the longleaf pine community, as are populations of carnivorous plants found in bog areas.

Wildlife found within the forest includes species that prefer mature longleaf and slash pine forests. Birds include red-cockaded woodpeckers, wild turkey, quail, vireos, warblers, owls, and various other species. Mammals found here include white-tailed deer, gray foxes, gray squirrels, bobcats, raccoons, and others. Gopher tortoises are found here, along with many other species that share their burrows. Eastern Indigo snakes, alligator snapping turtles, alligators, rattlesnakes, and copperheads are typical reptiles. The wetlands and streams attract numerous species that like water, such as a variety of salamanders, frogs (including dusky gopher frogs), snakes, and birds.

In most places visitors may encounter other people and activities of various sorts. The feeling of isolation will be rare, although a feeling of freedom and independence will be common. Recreational facilities, such as swimming areas, fishing access sites, trails, and viewing areas are occasionally found. Some areas have signs, interpretive displays, and

other facilities for the comfort and safety of the user. Modification of the landscape through human intervention is a common sight in developed recreation areas.

The area is generally continuous, although some private land is interspersed within the forest. The road system continues to provide adequate access for public and administrative use. Traffic is frequently encountered. Most roads have native surfacing and are rough and irregular. These roads may not be stable during bad weather conditions. Public access on some roads is restricted either seasonally or permanently. Remnants of temporary roads leading from permanent roads to small openings can be seen. New road construction is minimal, and road reconstruction is decreased.

Management Area 3 – Oakmulgee Division, Talladega National Forest

DESCRIPTION

MANAGEMENT AREA

Based on ecological landscape mapping, the Oakmulgee Division of the Talladega National Forest is divided into 6 landtype associations (LTAs); Cahaba and Big Sandy Floodplains, Coker Formation (Low Relief), Coker Formation (Moderate Relief), Eutaw Foramtion, Gordo Formation, Oakmulgee and Elliott's Creek Floodplain. Both the Coker Formations are located in the Upper Loam Hills Subsection with the remaining four LTAs located in the Upper Clay Hills Subsection. Both subsections are located within the Coastal Plain, Middle Section. The two floodplain landscapes can be described as recent fluvial and low terrace deposit floodplains with very low relief. The Gordo and Eutaw Formation landscapes are described as moderately dissected uplands with moderate relief. The Coker Formations have similar landscapes, both having moderately dissected uplands, with relief ranging from low to moderate. Soils on uplands developed from marine sediments consisting of primarily layers of micaceous sand, sand and clay of various depths. These soils are deep, well drained, slowly to moderately permeable with sandy loam surface textures and sandy loam, clay loam and clay subsurface textures. Natural fertility and organic matter content tend to be low. Floodplain soils, derived from recent fluvial deposits of sand, silt and clay, are deep to very deep, somewhat poorly drained to moderately well drained on large floodplains like the Cahaba River and very poorly drained to somewhat poorly drained on small floodplains like Oakmulgee Creek. Natural fertility and organic matter content tends to be high in floodplains and moderate on terraces.

The network of streams are classified as riverine on uplands and riverine-palustrine in floodplains. Uplands have a dendritic drainage pattern with low to moderate gradient; poorly to moderately confined; often with braided channels; some channels entrenched; moderate sinuosity; sand dominated substrate with significant organic fraction. Most channels exhibit perennial flow all the way up to their headwater regions and support an adequate aquatic community. This fluvial system is driven primarily by rainfall with minor artesian flow contribution.

WATERSHEDS

The Oakmulgee Division, Talladega National Forest, lies within twelve 5th level watersheds: Affonee, Big Brush, Cahaba, Elliots, Fivemile, Gully, Little Oakmulgee, Lower Mulberry, Phipps, Sandy, Sixmile, and Valley. Five of these watersheds (Big Brush, Elliotts, Fivemile, Phipps, and Sandy) are located within the Black Warrior River Basin. Lower Mulberry and Valley watershed drains directly into the Alabama River Basin. The remaining five watersheds (Affonee, Cahaba, Gully, Little Oakmulgee, and Sixmile) are located within the Cahaba River Basin. There are no watersheds listed on the Alabama State impaired list nor are any of the watersheds in overall poor condition. Overall watershed condition is good. Overall watershed vulnerability is low for all but three watersheds. Cahaba, Gully, and Sandy watersheds have a moderate overall watershed vulnerability. This rating is based primarily on a high diversity of native, endemic, threatened and endangered species. Big Brush has a high rating for hydrologic modification. The Oakmulgee has a good land ownership base in most of the watersheds. Six watersheds (Elliots, Gully, Little Oakmulgee, Sandy, Affonee, and Fivemile) have a range in public land ownership between approximately 24% to 40%. This allows Forest Service management to have an effect in improving watershed condition. The Cahaba watershed contains 11% public land ownership, which would result in minor opportunities for watershed condition improvement. The other five watersheds have public land ownership ranging from less than 2% to as high as 8%.

Major influences on watershed condition are located above, adjacent, and below public lands. Six watersheds have significant public land ownership where management may be able to improve watershed conditions. The table below provides a synopsis of the twelve watersheds containing public land ownership and influences, rated as high only, that are presently having an effect on the water resource. Additional information can be found in "A Watershed Analysis For the National Forest s in Alabama", 1999.

Table 4-3: Oakmulgee Watershed Effects Synopsis

Watershed Name	% Public Land Ownership	Point Source Pollution	Hydrologic Modification	Erodible Soils	Recreation Use	Riparian Health	AL State Impaired List	Overall Watershed Condition	Overall Watershed Vulnerability
Sixmile	<1%								
Gully	26%								
Elliotts	37%								
Phipps	<1%								
Little Oakmulgee	28%								
Big Brush	2%		X						
Cahaba	13%								
Lower Mulberry	10%								
Valley	<1%								
Sandy	27%								
Affonee	31%								
Fivemile	30%								

DESIRED CONDITIONS

A mosaic of forest stands is spread across most of the landscape. The community structure will show a wide age distribution with various sized openings in the canopy. Vegetation patterns reflect natural disturbances, as well as planned harvest activities to provide for forest health, longleaf restoration, old growth conditions, wildlife habitat improvement, and other resource objectives. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, will be visible. Management of forest vegetation focuses on maintaining and restoring forest health, including species and age diversity. The forests continue to produce timber products but at reduced levels compared to previous decades. Forest products are generally byproducts of management to meet other resource objectives (restoration, wildlife, old growth, forest health). All harvest

methods are available and are selected based on site-specific analysis and management objectives.

The upland areas consist of pine, oak-pine, and mixed hardwood types. Longleaf, slash, loblolly, and shortleaf are the most prevalent pine species. Most upland stands are pine or mixed pine-hardwood with significant components of hardwood. Bottomland hardwoods are found on lower slopes and floodplains along rivers and creeks. The community structure indicates a wide age distribution with a number of various sized openings in the canopy. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, is visible.

The upland communities are dominated by large pine (primarily longleaf) and various hardwood species, primarily oaks (such as white, black, northern red, southern red, scarlet, chestnut) and hickories. Longleaf and hardwood species (chestnut oak, black oak, post oak, scarlet oak, pignut hickory) suited to dry sites are frequently encountered on dry ridges. Pine stands have an open park-like appearance due to frequent low intensity fires. A small oak component is present in most pines stands, mainly in scattered clumps. Some upper slopes are mostly mixed hardwood with scattered pine.

The bottomland sites appear as a closed canopy forest of tall, straight trees mostly mixed oaks (willow oak, water oak, cherrybark oak, swamp chestnut oak, overcup oak), beech, sweetgum, and spruce pine. Loblolly pine may also be frequent within the overstory. The midstory contains species such as southern magnolia, dogwood, red maple, sweetgum, and other hardwoods. Evidence of fire is generally not present due to moist sites and the minimal use of prescribed fire on these sites.

There is evidence of frequent fires, mostly on upland sites. Fire-dependent ecosystems are burned frequently to mimic the natural role of fire in these ecosystems. Occasionally fires may enter bottomland or wetland sites. Vegetation patterns are primarily the result of fire, hydrology, and timber harvest activities. Tree trunks are blackened. Smoke from prescribed fires may be present. The imprint of a narrow access road covered in grass may be common.

The quality of soil, water, and air will be acceptable. Wetlands show no evidence of being drained. The aquatic community will be adequate to robust. Water quality meets or exceeds state standards, providing biodiversity and beneficial downstream uses.

Wildlife found within the forest includes species that prefer both mature pine and hardwood forests, as well as early successional habitats resulting from forest management activities. Birds include wild turkey, quail, vireos, warblers, owls, and various other species. Mammals found here include white-tailed deer, gray foxes, gray squirrels, bobcats, raccoons, and others. The wetlands and streams attract numerous species that like water, such as a variety of salamanders, frogs, snakes, and birds.

In most places visitors may encounter other people and activities of various sorts. The feeling of isolation will be rare, although a feeling of freedom and independence will be common. Recreational facilities, such as swimming areas, fishing access sites, trails, and viewing areas are available. Some areas have signs, interpretive displays, and other

facilities for the comfort and safety of the user. Modification of the landscape through human intervention is a common sight in developed recreation areas.

The area is generally continuous, although some private land is interspersed within the forest. The road system continues to provide adequate access for public and administrative use. Traffic is frequently encountered. Most roads have native surfacing and are rough and irregular. These roads may not be stable during bad weather conditions. Public access on some roads is restricted either seasonally or permanently. Remnants of temporary roads leading from permanent roads to small openings can be seen. New road construction is minimal, and road reconstruction is decreased.

Management Area 4 – Talladega Division, Talladega National Forest

DESCRIPTION

MANAGEMENT AREA

Based on ecological landscape mapping, the Talladega Division of the Talladega National Forest is divided into 7 landtype associations (LTAs); Cheaha Mountain, Dugger Mountain, Hollins East, Horseblock Mountain, Nances Creek, Piedmont, Talladega Hills. The Piedmont LTA is located in the Schist Plains Subsection, Southern Appalachian Piedmont Section. The Dugger Mountain and Nances Creek LTAs are located within the Sandstone, Shale, and Chert Ridge Subsection. The remaining four LTAs are located within the Quartzite and Talladega Slate Ridge Subsection. Both Subsections are located within the Southern Ridge and Valley Section. The Piedmont LTA can be described as upland hills with moderately low relief. Schist is the major geologic component from which soils were derived from. Soils are shallow to moderately deep, well drained, moderately rapid to moderately permeable with loamy subsoils. Dugger Mountain LTA can be described as low mountains with moderate relief. Shale and sandstone are the major geologic component from which soils were derived from. Soils are shallow to deep, moderately permeable with loamy subsoils. Nances Creek LTA is a broad valley plain with very low relief. Geology is primarily limestone and shale. Soils are moderately deep to very deep, moderately well drained to well drained, slowly to moderately permeable, with clay, clay loam, silty clay loam, and silty clay subsoils. Talladega Hills and Horseblock Mountain can be described as upland hills of moderately low to moderate relief. Hollins East LTA can be described as an upland plateau with moderately low relief. All three of these LTAs have slate and phyllite as their dominant geologic components from which soils were derived. Soils found within these three LTAs are shallow to moderately deep, well drained, moderately permeable with silty clay to loamy subsoils. Cheaha Mountain LTA is a low mountain of moderate relief. Geology consists primarily of sandstone with some shale. Soils are moderately deep to deep, well drained, and moderately permeable with loamy subsoils.

The network of streams is classified as riverine with dendritic drainage patterns on slate and phyllite or schist geology and trellis on shale and sandstone geology. Streams **exhibit**

different characteristics based on geology and relief. The Piedmont LTA has streams with moderate to low gradient, moderately confined with gravel/sand dominated substrate on small streams and boulder/bedrock dominated substrate on large streams. Nances Creek LTA has streams that are broad with low gradient, moderately confined and entrenched in some areas with gravel/sand dominated substrate. The remaining LTAs have streams with moderate to low gradient, well to moderately confined streams with cobble/gravel dominated substrate containing bedrock in higher elevations and sand in lower elevations. In all the LTAs, most channels exhibit perennial flow all the way up to their headwater regions and support a robust to adequate aquatic community. The fluvial system is primarily rainfall driven with a moderately rapid basin response.

WATERSHEDS

The Talladega Division of the Talladega National Forest lies within eighteen 5th level watersheds: Cahulga, Cane, Chulafinee, Cheaha, Crooked, Enitachopco, Hurricane, Ketchepedrakee, Mad Indian, Middle Choccolocco, Muscadine, Talladega, Tallasseehatchee, Upper Choccolocco, Upper Hatchet, Upper Terrapin, Walnut, and Weogufka. Ten of these watersheds are within the Coosa River Basin (Cheaha, Hurricane, Middle Choccolocco, Talladega, Tallasseehatchie, Upper Choccoloco, Upper Hatchet, Upper Terrapin, Walnut, and Weogufka) and eight are located in the Tallapoosa River Basin (Cahulga, Cane, Chulafinnee, Crooked, Enitachopco, Ketchepedrakee, Mad Indian, and Muscadine). Four of these watersheds, Cheaha, Middle Choccoloco, Talladega, and Tallasseehatchie, are in poor overall condition. Primary factors affecting their condition are; recreational pressure (except for Talladega and Tallasseehatchie), point sources of pollution (except for Cheaha), hydrologic modification, and overall watershed vulnerability. Middle Choccolocco is listed on the Alabama State impaired list as a result of PCBs. Eight watersheds, Crooked, Enitachopco, Mad Indian, Muscadine, Tallasseehatchie, Upper Choccolocco, Walnut, Weogufka, have less than 1% public land ownership. Most of the public land ownership, previously mentioned, lies within headwaters of these watersheds. Forest Service management within these watersheds will have minimum effect on the improvement of overall watershed condition. One watershed, Upper Hatchet, has 11% public land ownership. Six watersheds, Cane, Chulafinee, Middle Choccolocco, Talladega, Tallasseehatcie, and Upper Terapin, have public land ownership ranging from a low of 19% to a high of 26%. Hydrologic modification is the primary effect within these watersheds. Cane Creek **watershed has a fair to poor riparian rating. Only three watersheds, Cahulga, Cheaha, and Ketchepedrakee, have public land ownership exceeding 30% with Cheaha having the largest ownership at 36%. Cahulga and Ketchepedrakee watersheds are in good overall watershed condition. Overall watershed vulnerability is rated moderate for the Cahulga, Upper Hatchet, and Upper Choccolocco watersheds. Overall watershed vulnerability in the remaining watersheds, a total of fifteen, are rated as high. Municipal water supply and impaired waters (Middle Choccolocco watershed) account for part of the high ratings. The high number of endemic aquatic species (the greatest of all National Forests in Alabama) and the presence of sensitive, threatened and endangered aquatic species accounts for the high overall watershed vulnerability rating.**

Major influences on watershed condition are located downstream and off public lands for most all of the watersheds involving the Talladega Division of the Talladega National

Forest. Three watersheds of the eighteen listed have sufficient public land ownership where land management can have an effect on improving watershed condition. The table below provides a synopsis of the eighteen watersheds containing public land ownership and influences, rated as high only, that are presently having an effect on the water resource. Additional information can be found in "A Watershed Analysis For The National Forests in Alabama", 1999.

Table 4-4: Talladega Watershed Effects Synopsis

Watershed Name	% Public Land Ownership	Point Source Pollution	Hydrologic Modification	Erodible Soils	Recreation Use	Riparian Health	AL State Impaired List	Overall Watershed Condition	Overall Watershed Vulnerability
Middle Choccolocco	25%	X	X		X		X	X	X
Cheaha	35%		X		X			X	X
Ketchepedrakee	33%								X
Talladega	24%	X	X					X	X
Tallaseehatchee	23%	X	X					X	X
Crooked Creek	<1%								X
Enitachopco Creek	<1%								X
Upper Hatchet	14%								OK
Walnut Creek	<1%								X
Weogufka Creek	<1%								X
Hurricane Creek	8%			X					X
Upper Terrapine	29%		X	X					X
Upper Choccolocco	39%		X		X				OK
Muscadine Creek	<1%								X
Cane Creek	20%					X			X
Cahulga Creek	36%		X						OK
Chulafinnee	21%		X						X
Mad Indian Creek	<1%								X

DESIRED CONDITIONS

A mosaic of forest stands is spread across most of the landscape. The community structure will show a wide age distribution with various sized openings in the canopy. Vegetation patterns reflect natural disturbances, as well as planned harvest activities to provide for forest health, old growth conditions, wildlife habitat improvement, and other resource objectives. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, will be visible. Management of forest vegetation focuses on maintaining and restoring forest health, including species and age diversity. The forests continue to produce timber products but at reduced levels compared to previous decades. Forest products are generally byproducts of management to meet other resource objectives (wildlife, old growth, forest health). All harvest methods are available and are selected based on site-specific analysis and management objectives.

The upland areas consist of pine, oak-pine, and mixed hardwood types. Loblolly, shortleaf, and longleaf are the most prevalent pine species. Most upland stands are pine or mixed pine-hardwood with significant components of hardwood. Bottomland or cove hardwoods are found on lower slopes along rivers and creeks, and upland hardwood or mixed stands are often found on north facing slopes. The community structure indicates a wide age distribution with a number of various sized openings in the canopy. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, is visible.

The upland communities are dominated by large pine and various hardwood species, primarily oaks (such as white, black, northern red, southern red, scarlet, chestnut) and hickories. Mountain longleaf and hardwood species (chestnut oak, black oak, post oak, scarlet oak, pignut hickory) suited to dry sites are frequently encountered on dry ridges. The predominantly pine stands have an open park-like appearance due to frequent low intensity fires. A small oak component is present in most pines stands, mainly in scattered clumps. Some upper slopes are mostly mixed hardwood with scattered pine.

The bottomland and cove sites appear as a closed canopy forest of tall, straight trees, mostly mixed oaks, hickories, beech, yellow poplar, and maple. The sparse midstory contains species such as blackgum, red maple, sweetgum, and other hardwoods. Evidence of fire is generally not present due to moist sites and the minimal use of prescribed fire on these sites.

There is evidence of frequent, low-intensity fires, mostly on upland sites. Fire-dependent ecosystems are burned frequently to mimic the natural role of fire in these ecosystems. Occasionally fires may enter bottomland or coves. Vegetation patterns are primarily the result of fire (including prescribed fire), hydrology, and timber harvest activities. Tree trunks are blackened. Smoke from prescribed fires may be present. The imprint of a narrow access road covered in grass may be common.

The quality of soil, water, and air will be acceptable. Wetlands show no evidence of being drained. The aquatic community will be adequate to robust. Water quality meets or exceeds state standards, providing biodiversity and beneficial downstream uses.

Wildlife found within the forest includes species that prefer both mature pine and hardwood forests, as well as early successional habitats resulting from forest management activities. Birds include wild turkey, quail, vireos, warblers, owls, and various other species. Mammals found here include white-tailed deer, gray foxes, gray squirrels, bobcats, raccoons, and others. The wetlands and streams attract numerous species that like water, such as a variety of salamanders, frogs, snakes, and birds.

In most places visitors may encounter other people and activities of various sorts. The feeling of isolation will be rare, although a feeling of freedom and independence will be common. Recreational facilities, such as swimming areas, fishing access sites, trails, and viewing areas are available. Some areas have signs, interpretive displays, and other facilities for the comfort and safety of the user. Modification of the landscape through human intervention is a common sight in developed recreation areas.

Within the Cheaha Wilderness, the enduring resource of wilderness is maintained and perpetuated as one of the multiple uses of National Forest System land. The ecosystem is the result of natural succession and natural processes. In some areas, natural succession eventually results in an older forest of predominantly shade tolerant vegetation. Wildlife favoring mature vegetation or the late successional stages of vegetation are predominate in wilderness. Unfragmented habitat is provided for area-sensitive species. There is little evidence of visitor use in the wilderness, and there is low interaction among users. Facilities of a primitive nature may be present to protect the resources and the safety of visitors. Minor evidence of primitive travelways exists.

The area is generally continuous, although some private land is interspersed within the forest. The road system continues to provide adequate access for public and administrative use. Traffic is frequently encountered. Most roads have native surfacing and are rough and irregular. These roads may not be stable during bad weather conditions. Public access on some roads is restricted either seasonally or permanently. Remnants of temporary roads leading from permanent roads to small openings can be seen. New road construction is minimal, and road reconstruction is decreased.

Management Area 5 – Tuskegee National Forest

DESCRIPTION

MANAGEMENT AREA

Based on ecological landscape mapping, the Tuskegee National Forest is divided into two landtype associations (LTAs); Tuskegee Hills and Uphapee Creek. Both of these LTAs are located within the Middle Coastal Plain – Upper Loam Hills Subsection, Coastal Plains, Middle Section. The Tuskegee Hills LTA can be described as upland ridges of low relief with deep, well drained, moderately slow to moderately permeable soils with sandy clay loam subsoils. While the Uphapee Creek LTA can be described as floodplains of low relief

subject to flooding with deep, poorly to moderately well drained, slowly to moderately permeable soils with sandy loam, sandy clay loam, and clay subsoils.

The network of streams are classified as riverine with a dendritic drainage pattern, having a significant palustrine component, characterized by low gradient that is poorly to moderately confined, often with braided channels with some entrenched channels. Stream substrate dominated by sand with a significant organic fraction. Floodplains and palustrine areas serve as an important source of aquatic foods released during flood events. Most channels exhibit perennial flow all the way up their headwater regions and support an adequate aquatic community. The stream system is rainfall driven with slow to moderate basin response.

WATERSHEDS

The Tuskegee National Forest lies within four 5th level watersheds: Chewacla, Uphapee, Opintlocco, and Calebee. Public ownership of these watersheds is minimal, the largest public ownership being in the Uphapee with about 10%. The remaining three watersheds have public ownership less than 1%. All four watersheds are located in the Tallapoosa River Basin. Overall watershed condition is rated as poor. Primary factors affecting there condition are; point source pollution, hydrologic modification, agricultural and industrial use, urbanization, and to some degree recreational use. Overall watershed vulnerability is moderate resulting from the presence of a high diversity of native, endemic, threatened and endangered species and municipal water supply. Riparain condition is ranked as fair resulting from extensive agricultural land use where forest conditions are limited. Forest Service management within these watersheds will have minimum effect on the improvement of overall watershed health because of the minimal amount of ownership. The table below provides a synopsis of the four watersheds containing public land ownership and influences, rated as high only, that are presently having an effect on the water resource. Additional information can be found in "A Watershed Analysis For The National Forests in Alabama", 1999.

Table 4-4: Tuskegee Watershed Effects Synopsis

Watershed Name	% Public Land Ownership	Point Source Pollution	Hydrologic Modification	Erodible Soils	Recreation Use	Riparian Health	AL State Impaired List	Overall Watershed Condition	Overall Watershed Vulnerability
Chewacla	<1%	X	X		X			X	
Uphapee	10%	X	X					X	
Opintlocco	<1%	X	X					X	
Calebee	<1%	X	X					X	

DESIRED CONDITIONS

The area will be made up of upland pine and pine-hardwood communities, and bottomland hardwoods. The community structure will show a wide age distribution with a number of various sized openings in the canopy. Evidence of natural disturbances, such as insects, disease, wind, and wildfire, will be visible.

The upland pine community will be dominated by longleaf pine with loblolly and shortleaf pine occasionally interspersed. The midstory may be sparse in patches because of frequent low intensity growing season fires. Several kinds of oaks (southern red, post, blackjack, black), hickories (sand, mockernut, pignut) and red maple will be among the shrubs, some grown large enough to reach the overhead canopy and form hardwood patches within the pine forest. Blueberry patches are common. The herbaceous understory layer will contain bluestem, and other grasses such as oatgrass and Panicum spp., legumes, Aster spp., and golden rods. Bracken fern may be frequent, but the emphasis of growing season burning over dormant season burning is beginning to reduce its dominance. Pockets of sandhill vegetation comprised of longleaf pine, turkey oak, bluejack oak, wafer ash, bluestem, asters, and Asclepias humistrata occur as rare inclusions. Along the toeslopes between the uplands and the bottomlands, loblolly pine and hardwoods become more prevalent.

The bottomland ecosystem typically borders a river. A closed canopy forest of tall, straight trees will cover the bottoms and terraces. These include several oak species (willow oak, cherrybark oak, water oak, overcup oak, and swamp chestnut oak), beech, **sweetgum, and spruce pine. Loblolly pine may be frequent within the overstory. The midstory will contain species such as southern magnolia, beech, redmaple, dogwood, and sweetgum. Vines such as poison ivy, muscadine, Virginia creeper, and crossvine are frequently encountered. Rushes, sedges, ferns, and spring-flowering ephemerals will dominate the herbaceous layer. Patches of moss are frequent. River birch, sycamore, and black willow are commonly encountered on sandy river banks. The different plant communities are not separated by sharp boundaries, but gradually merge in response to fluctuations in water levels and fire history.**

The National Forest lands within the Chewacla and Uphapee watershed are healthy condition and providing the necessary protection and filtering to protect the water quality and aquatic habitats. Management in the Chewacla watershed is addressing the issues related to the increasing population trend. Road density is stable or decreasing and recreation pressure remains moderate to high, but do not impact

There may be evidence of frequent, low-intensity fires. Tree trunks will be blackened. Smoke from prescribed fires may be present. The evidence of firelines will be rarely seen. The imprint of a narrow access road covered in grass would be common. The attributes of soil productivity, water quality, and air quality will be acceptable. Signs of soil terracing and eroding in the past would still be present. An organic layer will be present. Wetlands show no evidence of being drained. Stream channels appear to be entrenched, and many will be braided. Beaver activity will be very common, and the aquatic community will be adequate to robust.

Wildlife includes a wide range of species that inhabit the upland and bottomland areas. Mammals found here include white-tailed deer, wild turkey, bobwhite quail, eastern squirrel, coyote, bobcat, skunk, and opossum. Box turtles, eastern garter snake, king snake, cottonmouth, timber rattlesnake and copperhead would be typical reptiles. The wetlands and streams attract species that like water, such as salamanders, frogs, skinks, and sliders. Songbirds include vireos, warblers, and catbirds.

In most places visitors may encounter other people and activities of various sorts. The feeling of isolation will be rare, although a feeling of freedom and independence will be common. Recreational opportunities, such as fishing, hiking, mountain bike riding, horseback riding, and scenery viewing are available. Some areas will have signs, interpretive displays, and other facilities for the comfort and safety of the user. Modification of the landscape through human intervention will be a common sight.

Most roads will have native surfacing and be rough and irregular. Traffic will be frequently encountered. These roads may not be stable during bad weather conditions. Public access on some roads will be restricted either seasonally or permanently. Remnants of temporary roads leading from permanent roads to small openings can be seen.

CHAPTER 5

MONITORING PLAN

Introduction

Monitoring and evaluation provide information to determine whether programs and projects are meeting Forest Plan direction. Monitoring and evaluation is required by NFMA implementing regulations (36 CFR 219.12(k)) to determine whether 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 whether the desired conditions, goals and objectives of the Forest Plan are being met and whether 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.

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 – addressing whether the Forest Plan is being carried out
- Effectiveness monitoring – dealing with whether desired conditions are resulting
- Validation monitoring – to determine if information used in developing the Forest Plan has 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, the monitoring questions themselves or research needs.

Monitoring and evaluation are distinct activities. The monitoring phase generally includes the collection of 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

whether it needs to be changed. Forest Plan Monitoring and Evaluations will be reported annually in the Forest Monitoring and Evaluation Report.

Monitoring and evaluation may lead to adjustments of programs, projects or activities, changes or amendment to the Forest Plan itself or used 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 out of date 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, along with 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.

Management Indicator Species	Reasons for Selection
Community-based indices of rare community species composition	A focus on community composition reduces the variability inherent in looking at individual species, and thus provides more accurate information on the status and health of rare community ecosystems.

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. Population trends and habitats of Management Indicator Species will be monitored to help indicate effects of national forest management within selected communities.

Management Indicator Species	Reasons for Selection
Hooded warbler	Changes in presence and abundance of hooded warblers in mature mesic deciduous forests will be used to help indicate the effectiveness of management at providing dense understory and midstory structure within these forest communities.
Red-cockaded woodpecker	Trends in populations of this species will be used to help indicate the effectiveness of management at maintaining mature pine forests in open, fire-maintained conditions. (See also Monitoring Question 7.)
Brown-headed nuthatch, Bachman's sparrow	Trends in presence and abundance of these species in mature pine forest will be used to help indicate effectiveness of management at maintaining these communities in open fire-maintained conditions.
Scarlet tanager	Trends in presence and abundance of this species in mature upland oak and oak pine forest types will be used to help indicate effectiveness of management at maintaining these communities.
Beyrich's threeawn and other wiregrass species, Little bluestem, Broomsedge bluestem, Virginia bluestem, and Milkweed species.	Trends in presence and abundance of these species in areas restored to woodlands, savannas, and grasslands would be used to help indicate effectiveness of management at establishing desired conditions in these restoration areas.

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 high-elevation early-successional habitat, mature forest interiors, 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
Prairie warbler	Trends in presence and abundance of this species in early-successional forests will be used to help indicate the effectiveness of management in achieving desired conditions within these habitats.
Swainson's warbler	Trends in presence and abundance of this species in early successional riparian forests will be used to help indicate the effectiveness of management achieving desired conditions.
Acadian flycatcher	Trends in presence and abundance of this species in mature riparian forests will be used to help indicate the effectiveness of management in achieving desired conditions within these habitats.
Wood Thrush	Trends in presence and abundance of this species in mature deciduous forests will be used to help indicate the effectiveness of management in maintaining desired condition relative to forest interior habitats.

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 provide for the protection, restoration, and maintenance of 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
Pileated woodpecker	Trends in presence and abundance 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.

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

The Forest Plan provides for protection and restoration of riparian ecosystems, wetlands, and aquatic systems and for assuring that aquatic habitat conditions are suitable to maintain native aquatic communities. Water quantity and quality, atmospheric deposition, in-stream large woody debris, and aquatic species passage will be monitored. A community-based monitoring approach will be used to assess aquatic habitats, in lieu of designating individual MIS. The species composition of aquatic insects, fish, and mussels will be monitored in representative stream reaches of the National Forests. These approaches will

look at community composition as an indication of the overall integrity of aquatic communities. Comparisons of reference and managed reaches will be used to indicate the effects of management activities on aquatic habitat and communities.

Management Indicator Species	Reasons for Selection
Community based indices of aquatic species composition	A focus on community composition reduces the variability inherent in looking at individual species, and thus provides more accurate information on the status and health of aquatic systems.

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

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 species with viability concerns on the forest?

Contribution to conservation and recovery of federally listed threatened and endangered species 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. Some threatened and endangered species have been selected as Management Indicator Species because of their critical dependence on national forest management for recovery.

Management Indicator Species	Reasons for Selection
Red-cockaded woodpecker	Trends in populations of this species will be used to indicate effectiveness of management activities designed specifically to meet recovery objectives for this species. (See also Monitoring Question 2.)
Georgia aster	Trends in populations of this species will be used to indicate effectiveness of management activities designed specifically to meet recovery objectives for this species.

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 (e.g., fish, bats, birds). Individual Management Indicator Species have been selected because their viability is critically dependent on national forest management.

Management Indicator Species	Reasons for Selection
White Fringeless Orchid (Platanthera integrilabia)	Trends in populations of this species will be used to indicate effectiveness of management activities designed specifically to maintain viability of this species.
Pitcher Plant species (Sarracenia spp)	Trends in populations of this species will be used to indicate effectiveness of management activities designed specifically to maintain viability of this species.

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

The National Forests in Alabama 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 Alabama Wildlife and Freshwater Fisheries. 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 Alabama Wildlife and Freshwater Fisheries is available. Some species that are collected as special forest products will be monitored through management of the permitting process.

Management Indicator Species	Reason for Selection
White-tailed deer	Trends in harvest levels and hunting demand will be used to help indicate effectiveness of management in meeting public demand for this species.
Eastern wild turkey	Trends in harvest levels and hunting demand will be used to help indicate effectiveness of management in meeting public demand for this species.
Northern bobwhite quail	Trends in harvest levels and hunting demand will be used to help indicate effectiveness of management in meeting public demand for this species.

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

The National Forests in Alabama 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 recreation 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.

11. What is 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 can be used for tracking changes to the natural systems due to natural and human influences within and outside the wilderness. Although there are many components to the biophysical element, Air quality and fire are considered important. Air quality, viewed as a basic indicator of wilderness health and 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?

The two main elements in determining the eligibility and suitability of a river for inclusion in the National Wild and Scenic Rivers System are a free-flowing condition and the presence of Outstandingly Remarkable Values. 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 our forests.

13. Are the scenery and recreation 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 are essential in the management of recreational experiences and the quality of the environment. Changes in scenic quality of the forest and the recreation settings will be monitored.

14. Are heritage sites being protected?

Compliance with the National Historic Preservation Act is essential during implementation of this Forest Plan. The requirement that sites eligible for the National Register of Historic Places be identified and protected prior to occurrence of ground disturbing activities must be met. Monitoring will be done to assess how well sites are being identified for protection and whether site protection measures is effective in preventing site loss.

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 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 for practices to be carrying out during implementation of the Forest Plan. Watershed condition, improvement needs, water quality, and implementation of best management practices will be monitored.

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. 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 will 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 called for to assure that 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

Research and monitoring are related activities that help to meet information needs for adaptive management of national forests. Research involves rigorous study under controlled conditions, following the scientific method. Research activities include study planning, design, quality control, peer review and relatively rigid publication standards. Monitoring is generally conducted under less controlled conditions and results are often more general in contrast with research.

Research needs for management of the National Forests are to be identified during planning and periodically reviewed during monitoring and evaluation of implemented Forest Plans (36 CFR 219.28).

The Forest Service Research Branch is the largest forestry research organization in the world and a national and international leader in forest conservation. Agency research contributes to the advancement of science and the conservation of many of our Nation's most valuable natural resources, both on private lands and the National Forests. Research needs identified during planning, monitoring and evaluation are to be included in formulating overall research programs and plans for Forest Service Research to support or improve management of the National Forests.

Research needs identified during development of this Forest Plan are listed in Appendix RESEARCH NEEDS. Research needs identified while monitoring the implementation of the Forest Plan will be reported in Annual Monitoring and Evaluation Reports.