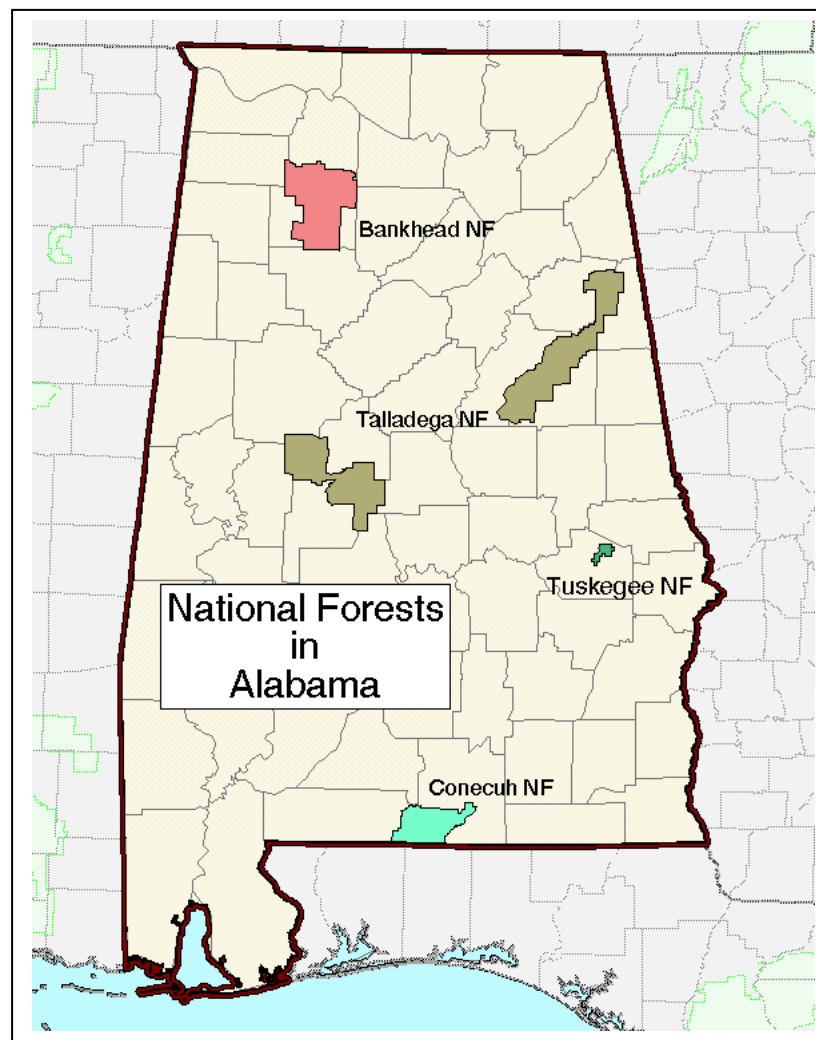


# ANNUAL MONITORING AND EVALUATION REPORT

## National Forests in Alabama

**Fiscal Year 2001-2003**



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## Forest Supervisor's Certification

I have evaluated the monitoring results and recommendations in this Report. The information reported herein was used in the development of the Revised Forest Land and Resource Management Plan.

Direction provided in the Revised Forest Plan for National Forests in Alabama, January 2004, will provide the framework for future Management for the National Forests in Alabama unless ongoing monitoring and evaluation identify further need for change.

Any amendments or revisions to the Revised Forest Plan will be made using the appropriate NEPA procedures.

*/s/Miera B. Crawford*

Miera B. Crawford  
Forest Supervisor

6-11-07

Date



# Executive Summary

*This section includes a brief summary of the process used to develop this report and the important findings and results for this period.*

**T**he National Forests in Alabama annually monitor and evaluate programs and projects to determine whether these activities are meeting the management direction shown in the Forest Plan. Monitoring and evaluation are specifically designed to insure:

- (1) Forest Plan goals and objectives (outputs) are being achieved,
- (2) Standards are being properly implemented,
- (3) Environmental effects are occurring as predicted, and
- (4) Our actions are having the expected results,
- (5) New issues are being identified and addressed.

The evaluation of monitoring results allows the Forest Supervisor to initiate action to improve compliance with Standards where needed and determine if any amendments to the Forest Plan are needed to improve resource management. This Annual Report also provides a tool to improve internal communication and feedback, and provides for accountability to the public.

During the FY 2001 to FY 2003 (October 1, 2000 to September 30, 2003) the forest was actively engaged in the Forest Plan Revision Process. As a result, much effort usually focused on monitoring was directed to providing information for the Forest Plan Revision. In February 2003, the Draft Environmental Impact Statement for the Draft Forest Plan was released to the public. The Final Environmental Impact Statement and Revised Land and Resource Management Plan were issued in January 2004. The Revised Plan incorporated findings from previous monitoring and evaluation reports. Appropriate standards from the previous plan were carried forward; goals and objectives were developed with extensive, unprecedented public involvement

This report summarizes the monitoring efforts during the period FY 2001 thru FY 2003, and concludes the

reporting requirements for the 1986 Forest Plan. Future Monitoring and Evaluation reports will be based on the Revised Forest Plan.

As this report is transitory to the Revised Forest Plan, it will mainly focus on findings. Recommendations have been incorporated into the plan revision process.

The Forest Plan is implemented through individual projects at the district level. Monitor of implementation is accomplished through reviews of selected projects for compliance with standard procedures. The evaluations of the monitoring results are reported by resource activity area as follows:

*1. Ecosystem Condition, Health and Sustainability* – During the forest plan revision process, a need for emphasizing forest health and restoration of native ecosystems was identified. An example of this need is loblolly pine growing in longleaf pine ecosystems. Maintenance and improvement of ecosystem condition and health require continued management dominated by restoration efforts.

Habitat improvement work is continuing on all units. Prescribed burning for RCW and wildlife has occurred at increased levels and the mix of dormant and growing season burning is contributing to the diversity of habitat and herbaceous conditions across the forest.

Game species (deer, turkey and squirrel) population numbers appear to be stable or increasing, although deer appear to have lower population levels outside the wildlife management area on the Talladega Division than inside. Quail numbers continue to be quite low in the general forest area, but suitable habitat has increased on the Conecuh NF and around the quail emphasis areas where prescribed burning has occurred more frequently.

Red-cockaded woodpeckers continue to have a downward trend on all districts except the Conecuh, which experienced a decline after Hurricane Opal but has increased slightly in recent years. The Oakmulgee has shown a recent decline and emphasis is being placed on increasing that population. Habitat improvement work on the Talladega division continues in preparation for translocation of birds onto both the Talladega and Shoal Creek districts.

Loblolly decline (previously called die-off) on the Oakmulgee, Shoal Creek and Talladega districts continues to be

a concern. Coordination continues with Southern Station Researchers in developing management strategies. Southern Pine Beetles were epidemic on the Bankhead and Oakmulgee Districts in FY 2001 and FY 2002. While SPB declined significantly on the Bankhead during FY 2003 they continued to be epidemic on the Oakmulgee that year. Many of the sites impacted by SPB were densely stocked loblolly stands on sites better suited to other species. Longleaf restoration on these sites is a recommended treatment. Implementation of the Longleaf Restoration, decision on the Conecuh, began in 1999 and is a major step towards addressing the off-site slash pine problem on that unit. Non-native invasive species continue to be a problem in some areas. Of particular concern are those sites where threatened and endangered species habitat is being invaded. The species that are the most invasive such as kudzu and cogongrass are highest priority for treatment.

Although air quality standards continue to be met, air quality is a growing and continuing concern, particularly where industrial influences are greatest. With increases in prescribed burning, monitoring becomes more critical to remain within thresholds, particularly ozone and particulates.

Water quality standards were met in FY 2001 thru FY 2003 and site productivity appears to be maintained.

A concern with ecosystem diversity is the increasing lack of early seral stage and woodland and savanna conditions with reduced tree canopy cover and restored native herbaceous ground cover. Management considerations include the need to increase the emphasis on first thinning in pine stands and increase the number of acres regenerated to meet forest plan goals and objectives, as well as habitat needs. Also, habitat improvement work such as prescribed burning, opening maintenance, nest boxes, seeding closed roads and log landings should be continued and in some cases increased.

*2. Sustainable Multiple Forest and Range Benefits* - A broad spectrum of recreational opportunities are being offered to the public but funding shortfalls have created a situation with a backlog of reconstruction and maintenance needs and recreation opportunities that are not meeting our current standards. While SCSEP programs have provided a major portion of the workforce in the past, all program slots for NFsAL were lost in July 2003. The recreation program was evaluated and realigned resulting in reduction of season at 6 facilities, reduction of services at 10 facilities, increased fees at 2 facilities and decommissioning 4 FS operated water systems. Trail maintenance continues to have a very large backlog of needs even with the substantial contribution from volunteers and partners. Some off trail OHV use is still occurring and use on the Kentuck Trail

has increased, creating some maintenance concerns. Road construction has not occurred at the level projected by the plan and re-construction has occurred at a higher level than projected. Two of the three wilderness areas have certain places that are receiving heavy use and some value impairment is occurring along locally popular trails and entrance points.

Timber products are being offered at a level below Allowable Sale Quantity (ASQ) and projected levels. Regeneration acres are well below recommended levels. Increasing emphasis on ecosystem restoration and reductions in the suitable land classes for timber production, due to Plan Amendments and Revision, are may slightly increase the levels of regeneration cutting. Demand for grazing has decreased and currently only two of the 20 allotments are being grazed.

Our land purchase and land exchanges continue to fall well below Plan levels and due to increasing environmental concerns, litigation and funding shortfalls, this trend is likely to continue. Heritage resource surveys continued on all districts. Considerations include the needs to continue implementing the Meaningful Measures process and Infrastructure, continue to use Fee Demo receipts as appropriate, use partnerships whenever possible to address maintenance needs, in wilderness areas and the wild and scenic river continue the LAC process to identify and address resource concerns. Additionally, we need to look for opportunities to provide early seral stage habitat and evaluate the need for and amounts of this habitat appropriate for the plan revision process.

*3. Organizational Effectiveness* - The annual budget continues a downward trend. There is a very large disparity between the projected budget needs and the actual budget, which leads to backlogs of projects and maintenance needs. Due to the Plan Revision process, increased public involvement activities, new policies, and litigation, there are a large number of new and important issues facing the forest. This should continue in the future and will create new challenges and opportunities for the forest. The forest continues to request funding for needed projects and continue to provide open lines of communication with the public, address the changing conditions, and make necessary adjustments.

## Introduction



The purpose of this report is to document the results of the Forest Plan monitoring and evaluation program from FY 2001 through FY 2003. The National Forests in Alabama annually monitor and evaluates the programs and projects to determine whether these activities are meeting the management direction in the Forest Plan. During the FY 2001 to FY 2003 the forest was actively in the Forest Plan Revision Process. As a result much effort usually focused on monitoring was directed to providing information for the Forest Plan Revision, and the Monitoring and Evaluation

Reporting was delayed. This report summarizes the monitoring efforts during the period FY 2001 thru FY 2003, meets and concludes the reporting requirements for the 1986 Forest Plan. Future Monitoring and Evaluation reports will be based on the Revised Forest Plan, January 2004.

Monitoring and evaluation is an ongoing process that is documented through reviews made by the individual resource specialists, Forest Leadership Team and District Rangers. The information from these reviews, individual inventory reports, reports and information from cooperators and research are compiled into one comprehensive report after the Fiscal Year (FY) is completed. The Forest Interdisciplinary and Leadership Teams complete the evaluation and final report. This monitoring report contains information for FY 2001 through FY 2003.

The monitoring and evaluation report that follows is presented in three chapters and five Appendices.

Chapter 1 is primarily an introduction and summary of the report findings and recommendations. Chapter 2 is the actual results and findings of the monitoring completed. Chapter 3 is a discussion and evaluation of the findings presented in Chapter 2, and also contains the Action Plan.

Appendix A is the list of Interdisciplinary and Leadership Team members who participated in the preparation and review of this report.

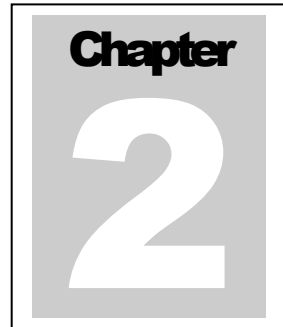
Appendix B is a summary of the field reviews and other administrative activities completed in connection with the monitoring and evaluation efforts.



Appendix C is the updated Action Plan from FY 2000 showing status of action items. Items not accomplished are so noted and included in the new action plan or reasons listed as to why the action item will not be accomplished.

Appendix D is a summary of the significant research finding and a prioritized list of research needs that have been identified for the National Forests in Alabama.

Appendix E is framework for FY 2004 monitoring activities under the Revised Forest Plan.



# MONITORING RESULTS AND FINDINGS

## I. ECOSYSTEM HEALTH, CONDITION AND SUSTAINABILITY

### **Biodiversity**

**Vegetation management** – The Forest is in the midst of a dynamic time. Emerging issues, the plan revision process, and litigation cases have led to a shift in priorities and emphasis for management. This changing emphasis includes ecosystem restoration and maintenance, pest management, and early thinning of pine stands to reduce risk for southern pine beetle (SPB) infestations. Southern pine beetle have impacted thousands of acres over the past 3 years. These acres are in the process of being inventoried and work begun to ensure regeneration, especially on the many 5-acre and larger spots.

Vegetation continues to be managed through our prescribed burning program. The mix of dormant and growing season burning is having a positive impact on the fire dependant forest communities, particularly on the Conecuh district.

**Threatened and Endangered Species/ Management Indicator Species** – Threatened and Endangered Species (TES) are surveyed and monitored with project planning and implementation. During the plan revision process and as result of litigation, MIS for the forest were evaluated. The details of that evaluation may be found in the *Supplemental Information Report Management Indicator Species, National Forests in Alabama, Draft – September 2001*. This report also contains the status of TES for the forest.

Overall, habitat for MIS is being maintained and improved consistent with Forest Plan objectives for most species requiring mid-to-late successional conditions and many aquatics. However, the lack of early successional conditions may result in the continued decline of some species due to specialization or dependence on early seral stage habitats. Table 1 summarizes the monitoring results for each species or species group.

<b>Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group</b>			
<b>MIS Species</b>	<b>Habitat Type(s)</b>	<b>Population &amp; Habitat Condition/ Trends</b>	<b>Management Considerations</b>
White-tailed deer	Early Forest Stage (any forest type age 0-10)	Deer numbers inside wildlife management areas (WMA) are in line with habitat capacity projected in the Plan. Early successional habitat has declined on the National Forests in Alabama in the last 16 years. Number of deer seen during annual spotlight surveys from 1987 to present display an increase on all national forests in Alabama.	This species should be reconsidered as a suitable indicator of management effects to habitats. Declining suitable habitat did not result in declining populations. Management of facilities and hunters seem to have a greater influence on populations. Provide seasonal closures, utilize silvicultural treatments, openings and prescribed fire to optimize habitat conditions. Coordinate with AL Wildlife & Freshwater Fisheries Division to determine harvest levels and seasonal dates.
Eastern wild turkey	Early Forest Stage (any forest type age 0-10), Mature conifer forest, Mature upland	The Breeding Bird Survey(BBS) on the Talladega and Oakmulgee Divisions show an increasing trend in turkey populations after 1989 and on the Tuskegee National Forest after 1981. Annual harvest data	Continue to use prescribed fire and access barriers to provide good nesting and brood rearing habitat. This species should be reconsidered as a suitable

**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
	hardwood forest, and Mature bottomland hardwood forest	on wild turkeys indicated that hunter success has declined on the Bankhead and Conecuh National Forest since 1984. Hunter success on both Divisions of the Talladega National, however, has increased. Statewide populations have shown dramatic increases over the past 30-40 years.	indicator of management effects to habitat. There seems to be no population response to habitat trends. Management of hunters and facilities seem to have a greater than compensatory effect than habitat conditions.
Gray & Fox squirrel	Mature conifer forest, Mature upland hardwood forest, and Mature bottomland hardwood forest	Squirrel populations vary with mast crops, so annual variation is expected. Harvest data made no distinction between squirrel species. Squirrels appear to be declining on all forests except the Talladega; which appears to be stable. CISC data indicates an increase in suitable habitats.	Ensure compliance with Plan standards and guidelines to maintain hard mast producing component on all Forests. These species should be reconsidered as a suitable indicator of management effects. There seems to be no population response to habitat trends. Management populations by hunter- and access management may have a greater effect than habitat conditions.
Flatwoods salamander (Conecuh NF), seepage salamander (Talladega NF),	Sandhills, Mature conifer forest, and Mature upland hardwood forest	Amphibian productivity and dispersion vary widely with seasonal (and longer-term) precipitation, making trend analysis difficult. Flatwoods salamander larvae were reported from one locality during a Challenge Cost Share(CCS) project on the	Need to determine if amphibian populations, in general and specifically, seepage salamander is useful as an indicator. Longleaf pine restoration efforts, stand thinning, and growing

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MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
<p>gopher tortoise (Conecuh NF), &amp; dusky gopher frog (Conecuh NF)</p>		<p>Conecuh National Forest in 1980 with Bob Mount. Flatwoods salamanders have not been found since that initial sighting nor during subsequent surveys for dusky gopher frogs; even though all amphibians observed are required to be reported. Bailey and Jensen, subsequent CCS partners reported the Conecuh National Forest to be the northern-most periphery of the flatwoods salamander range and that minimum winter temperatures may limit their distribution.</p> <p>Seepage salamanders are very difficult to detect due to their limited distribution, size and reclusive nature. A cooperative study with Aresco and Guyer of Auburn University was established in 1991 to investigate the relationship between forest thinning and prescribed fire and gopher tortoise burrow abandonment. The study concluded that stand thinning to a basal area of 30m<sup>2</sup>/ha and prescribed growing season burns should improve habitat quality for this species. In 1988 a monitoring program was developed in cooperation with Auburn University, University of Montevallo, and interested</p>	<p>season fire in place on the Conecuh National Forest may have had a positive effect on the distribution and abundance of the gopher tortoise and dusky gopher frog.</p>

**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
		<p>individuals to investigate dusky gopher frog breeding activities on the Conecuh National Forest. Most breeding sites have experienced an increase in gopher frog egg masses overtime.</p>	
<p>Wood thrush, Hooded warbler &amp; American redstart</p>	<p>Mature upland hardwood forest, and Mature bottomland hardwood forest</p>	<p>CISC data indicates an increase in mature hardwood habitat in the last 16-18 years. Because wood thrushes require mature hardwoods, the increase in this habitat type should have resulted in an increase in wood thrush populations. The general trend on the National Forest in Alabama using breeding bird point counts, however, is decreasing numbers of wood thrush observations.</p> <p>Hooded warbler trends are mixed among management units, despite increasing hardwood acres.</p> <p>Habitat requirements for the American redstart are similar to those of the Hooded warbler. Breeding bird surveys and breeding bird points were not effective in detecting this species even though it is considered one of the most abundant warblers in North America.</p>	<p>Need to compile and analyze point count data and try to verify that the forest type and age class association assumptions are correct for these species. These species should be reconsidered as suitable indicators of management effects. The American redstart should be removed as an indicator, since its habitats can be sampled by an indicator that is more easily recognized by its vocalizations.</p>

**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
Quail	Early Forest Stage (any forest type age 0-10) and Mature conifer forest	BBS estimates of quail numbers indicate declining populations on all Districts except the Conecuh NF. Bobwhite quail harvests (based on hunter success) display a more variable population level. Hunter success tends display higher numbers of quail on the Shoal Creek and Talladega.	The decline in quail numbers on most National Forest lands in the past 20 years should be expected due to the forest-wide trend toward late-succession habitats. Active management of quail emphasis areas and restoration management for red-cockaded woodpeckers (thinning to create low basal area mature pine stands, midstory reduction treatments to encourage herbaceous ground covers, and growing season prescribed fire use) has improved quail habitat in woodland ecosystems. However, decreases in regeneration acres on National Forests in Alabama, limited use of prescribed fire at the landscape scale, and off-forest land use changes have reduced open, early successional habitat, suitable for quail.
Eastern bluebird & Northern flicker	Early Forest Stage (any forest type age 0-10 where	Both Breeding Bird Point counts (BBp) and BBS data indicate that bluebird populations have increased on the	Forest inventory data indicates that suitable habitat is declining due to aging of the forest and

**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
	sufficient numbers of snags have been retained.)	Bankhead National Forest. Upward trends were noted on all units except the Tuskegee. BBS data generally shows a slight upward trend for Northern flicker on the Conecuh NF and the Talladega Division, with a slight downward trend on the Oakmulgee Division and the Tuskegee NF.	reduced forest regeneration. Based on lack of response to management activities, these species should be reconsidered as suitable indicators of management effects.
Pileated woodpecker	Mature upland hardwood forest, and Mature bottomland hardwood forest	CISC data indicates an increase in mature hardwood habitats. This infers an increase in cavity availability. Linear regressions of BBS data indicate a declining trend on the Bankhead and Tuskegee National Forests and on the Talladega Division and a slight upward trend on the Conecuh National Forest and the Oakmulgee Division.	Although CISC data indicates an increase in mature hardwood habitat; population trends are mixed, therefore, this species should be reconsidered as a suitable indicator of management effects.
Broad-winged hawk	Mature upland hardwood forest,	Broad-winged hawks have been observed during BBP and during BBSs on the Bankhead National Forest, Talladega Division, Conecuh NF, and Oakmulgee Division. Because broad-winged hawks are predators at the top of their food chain, they are widely distributed during their nesting season. There were too few observations to be reliable for regression analyses.	Although CISC data indicates an increase in mature hardwood habitat; observations are too few to determine a population trend, therefore, this species should be reconsidered as a suitable indicator of management effects.



**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
Barred owl	Mature bottomland hardwood forest	Because barred owls are nocturnal, BBS and BBP, which are conducted during the daylight hours, are ineffective in monitoring this species. However, barred owls were observed during the BBP or BBS on the Bankhead National Forest, Conecuh National Forest, Talladega Division, Oakmulgee Division, and Tuskegee National Forest.	This species should be reconsidered as a suitable indicator of management effects due survey limitations.
Eastern screech owl	Mature upland hardwood forest and Mature bottomland hardwood forest	Eastern screech owls are nocturnal. Therefore BBS and BBP, which are conducted during the daylight hours, are ineffective. Screech owls are also cavity nesters and are often found nesting in wood duck house. Data collected during wood duck box surveys and maintenance on the Talladega Division indicates the percentage of wood duck boxes used by screech owls has increased in the 1990s.	This species should be reconsidered as a suitable indicator of management effects, due to survey limitations.
Yellow-breasted chat & Indigo bunting	Early Forest Stage (any forest type age 0-10)	BBS on the Conecuh National Forest and both divisions of the Talladega National Forest suggest that chat populations are increasing. The only downward trend in the BBS was observed on the Tuskegee National Forest; however, the data is	Forest inventory shows reduced suitable habitat acres for these species; population trends are mixed, therefore these species should be reconsidered as suitable indicators of

**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
		<p>highly variable.</p> <p>Data collected on the Bankhead National Forest by both BBP and BBS methods indicates that the indigo bunting population declined in the 1990s. Similar declines have also been observed on Talladega Division, Oakmulgee Division, and the Tuskegee National Forest. Increases in the indigo bunting population were observed only on the Conecuh National Forest.</p>	<p>management effects. Continued prescribed burning efforts and management activities creating early successional habitat will be of benefit.</p>
<p>Brown-headed nuthatch &amp; Pine warbler</p>	<p>Mature conifer forest</p>	<p>BBS indicate a decline in brown-headed nuthatches on both the Bankhead National Forest and Oakmulgee Division. BBS trends suggest that brown-headed nuthatch populations have increased on the Conecuh National Forest and Talladega Division. The BBS data collected on the Tuskegee National Forest is highly variable; however, it appears that the population was stable between 1982 and 1992 then began to decline. CISC records indicate mature pine habitat has increased through out the National Forests in Alabama. Data from BBP on the Bankhead National Forest showed an increase in pine warblers since 1997.</p>	<p>CISC records indicate mature pine habitat has increased through out the National Forests in Alabama; population trends are mixed, therefore these species should be reconsidered as suitable indicators of management effects. Continue prescribed burning and restoration efforts to maintain favorable habitat conditions.</p>

**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
		Pine warbler populations appear to be increasing on the Conecuh and Tuskegee National Forest and on the Oakmulgee Division.	
Kentucky warbler	Mature bottomland hardwood forest	This species was recorded on BBS for all five units of National Forest in Alabama. In general, monitoring data indicates that Kentucky warblers are declining on the National Forest in Alabama.	Suitable habitats for this species are increasing according to forest inventory, yet data indicates population decline, therefore this species should be reconsidered as a suitable indicator of management effects.
Swainson's warbler	Cane thickets	The Swainson's warbler requires cane thicket habitat. This habitat type is not abundant on any National Forests in Alabama. Further, BBS are road routes and do not generally go through cane thickets as road construction would alter this habitat type. As a result, this species has been reported only from the Talladega National Forest. Swainson's warbler appears to be the most common on the Oakmulgee Division and the population there appears to be increasing. Only one individual was observed on the Talladega Division BBS routes since 1980.	Breeding bird point count data needs to be compiled and analyzed for this species. Cane thickets are fire dependent communities, emphasis is needed on returning fire to this system for expansion and maintenance. Cane habitat is increasing on the Conecuh in response to the growing season burning program.
Pitcher plants ( <i>Sarracenia</i> spp)&	Herbaceous bogs of the Conecuh	Grasspink orchid and pitcher plant surveys have been conducted since the	Continue thinnings, prescribed burning, including growing

**Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group**

MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
Grasspink orchids ( <i>Calopogen</i> spp)		early 1980s by the USDA Forest Service, U.S. Fish and Wildlife Service, Alabama A & M, Huntington College, Auburn University, Alabama Natural Heritage Program, and The Nature Conservancy. Ocular estimates of abundance indicate that both species are increasing. Several bogs have been recently discovered. Active management of potential bog sites through prescribed burning and basal area reduction, appear to have been successful in increasing pitcher plant habitat and abundance. Similarly, grasspink orchids have only been observed in restored and managed bogs on the National Forest.	season burns, and other restoration treatments. Manage bog sites as rare community areas on the landscape and cease single-species inventory. This will provide for more coherent restoration of the rare community element on the landscape.
Lentic fishes (pond and lake species such as Bluegill and Large mouth bass)	Lakes and Ponds	No monitoring data was collected for Lentic fishes between 2001 and 2003. However, over the preceding 16-18 years, most units have stable or slightly upward trends for both species populations, while the Conecuh has a downward trend for both species in pond habitats.	Need to conduct monitoring of recreational fisheries and determine lake management needs on a case-by-case basis.
Lotic species (native stream fishes)	Streams	Recent data is not available for all species. Silverstripe shiner, speckled madtom and redeye bass show stable or upward trends. Water quality is being	Legacy data (paper reports provided by previous CCS partners) need to be transferred to spatial formats and analyzed.

Table 1: Summary of Monitoring Results for Management Indicator Species or Species Group			
MIS Species	Habitat Type(s)	Population & Habitat Condition/ Trends	Management Considerations
		protected and/or maintained through the streamside management zones.	Such data could determine the presence or absence of MIS fish species.

**Botany/Rare Communities** – During the analysis process for the Forest Health and Ecosystem Restoration projects, each district in cooperation with partners inventoried proposal areas for T & E and regional forester sensitive plants and rare communities. On the Oakmulgee district during FY 2002-2003, an unprecedented complete inventory by professional botanists of each stand proposed for treatments was completed. No Threatened, endangered or candidate species were found in the areas surveyed. Sandhill community and longleaf pine woodland savannah community were the only two rare communities documented.

On the Bankhead National Forest, stands proposed for treatment were either sampled (ages 15-20) or completely surveyed (ages 21-45), by professional botanists. No federally listed or Regional Foresters Sensitive species were found in the areas surveyed.

## Forest Health

**Pest Management** - In FY 2001, Southern Pine Beetles (SPB) were again very active on the Bankhead, Talladega and Tuskegee National Forests. Epidemic populations occurred on the Bankhead and Oakmulgee districts affecting more than 17,000 acres. While SPB declined significantly on the Bankhead during FY 2003 they continued to be epidemic on the Oakmulgee that year with more than 500 spots identified. The number of spots, size of spots, and extremely poor markets for pulpwood significantly impacted control efforts. The lack of sufficient contractors and crews were a problem that required prioritizing sites for treatments. Many sites that would normally have been treated were left untreated and monitored until higher priority spots were treated.

The Oakmulgee district has approximately 40,000 acres of planted loblolly pine stands growing on sites that previously supported longleaf pines. Approximately 20,000 acres are in the 40 to 70 year age classes. As stands approach the 40 to 50 year age class they exhibit symptoms of decline and dieback. Significant mortality starts occurring as the stands approach and enters the 50 to 60 year age class. This decline has also been found on the Talladega and Shoal Creek districts and is starting to impact older loblolly stands. The Forest continues to work with the Forest Health unit, Southern Research Station, to develop protocol for treatment of loblolly decline.

Non-native invasive species continue to be a problem in some areas. Priority for treatment are those sites where threatened and endangered species habitat is being invaded and those species that are most invasive such as kudzu, cogongrass, and Chinese tallow tree.

**Air Quality - Clean Air Act designated Class I Areas.** Inventory and monitoring of air quality related values at Sipsey Wilderness continues. The Sipsey IMPROVE air monitoring station is located at the district Work center and measures visibility through air particulate matter (PM 2.5). Data are available on the IMPROVE web site, at <http://vista.cira.colostate.edu/improve/data/data.htm>.

Visibility at Sipsey Wilderness is being impaired by regional haze. Inventory & Monitoring efforts have not yet revealed a trend toward improvement or deterioration. The Forest needs to continue to focus monitoring efforts on visibility and the effects of acid deposition. Funding is still needed for acid deposition monitoring.

The level of vegetation injury at Sipsey (and other Region 8 Class I areas) from tropospheric ozone has been documented. This and other information has been used to influence the revision of the National Ambient Air Quality Standards (NAAQS) for ozone.

**Ambient air monitoring information.** The National Forests in Alabama lie entirely outside of any areas designated as "non-attainment" regarding the NAAQS. Jefferson and Shelby Counties, the two most populous counties surrounding Birmingham, have been designated as non-attainment for ozone. Portions of the Forest lie 1 county east and 1 county southwest of this non-attainment area, however. Exceedances of the ozone standard are uncommon within the State of Alabama, except for these 2 counties.

**Air polluting emissions from Forest Service activities.** Prescribed burning is a FS management activity that can emit significant amounts of air pollutants, primarily in the form of PM10 and PM2.5. While forest fire emissions are striking, they're not among the major sources of particulate emissions throughout the State. Nevertheless, the Forest needs to become prepared for participation in the State's planning processes that will be required to bring non-attaining counties back into NAAQS attainment. During FY 2001 more than 79,000 acres were treated with prescribed fire. During FY 2002 nearly 61,000 acres were prescribed burned and during FY 2003 approximately 75,000 were burned.

## Watershed Conditions

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 is the next leading land use with urbanization (which includes commercial and industrial areas) a distant third. The quality of water flowing from a watershed can generally be categorized by the amount and type of these three land uses. Watersheds where the predominant land use is forest, typically exhibit higher water quality. Watersheds where the predominant land use is agriculture and urbanization, typically exhibit lower water quality. Forest Service ownership is generally in the headwaters where the predominant land use is forest. Therefore; the quality of waters flowing from the National Forests is typically high. The state's highest use designations cover many of the streams coming from the National Forests. The highest use designation, Outstanding National Resource Waters, was applied to streams entirely on National Forest Lands. Other use designations applied to waters on the Nation Forest include: Outstanding Alabama water, Public Water Supply, Swimming, and Fish and Wildlife.

The National Forests in Alabama has ownership within 9 major drainage basins, 18 fourth level HUC's (Hydrologic Unit Codes), 56 fifth level HUC's, and 127 sixth level HUC's as displayed in the table below.

Unit	Basin Names	Sixth level HUCs	Fifth Level HUCs	Fourth Level HUCS
Bankhead	Black Warrior Tennessee	35	18	6

	Upper Tombigbee			
Conecuh	Persiso-Escambia	23	9	4
Oakmulgee	Alabama Black Warrior Cahaba	26	12	3
Talladega Division	Coosa Tallapoosa	39	15	5
Tuskegee	Tallapoosa	4	2	1

During the Revised Land and Resource Management Process a draft analysis for all 56 fifth level HUC's was conducted to determine condition class. Six of the HUC's were found to have a below average condition class. Five of the HUC's were found to have an average condition class. The remaining 45 HUC's were found to have an excellent condition class. Those HUC's with condition classes other than excellent were found to have high levels of agricultural and urban land uses which result in higher levels of erosion and sedimentation.

The forest continues the migration of watershed data in GIS databases, both new information and legacy data. This process will enable the districts to better utilize the information while planning and implementing management activities. The entering of stream data in GIS format was completed for the Bankhead, the Conecuh and the Tuskegee. Watershed personnel continue to provide support and training in the implementation of State BMP's and Forest-Wide Standards to the Districts. Additionally the watershed personnel continue to assist Districts in the formulation, documentation, implementation, and monitoring of projects.

During FY 2002 soil inventory updates were completed on 15,000 acres and an additional 15,000 acres were completed during FY 2003. Soil inventory updates will assist with the decision process for resource management, specifically forest health and longleaf ecosystem restoration as well as watershed health by supplying updated and more detailed soil data on the Oakmulgee Ranger District than the previous soil



inventory. Soil collection and data support continues to be provided to Forest Health as they continue researching the causes for Loblolly decline/die off on the Talladega National Forest.

Information from the Sipsev water monitor site managed by the United States Geological Survey indicate waters flowing within that portion of the Bankhead National Forest meets State and Federal standards.

## II SUSTAINABLE MULTIPLE FOREST AND RANGE BENEFITS

### Outdoor Recreation Opportunities

A wide array of recreation opportunities are available on the National Forests in Alabama, including: backcountry or remote experiences; dispersed recreation opportunities such as hiking, hunting, fishing, and viewing scenery; and developed recreation opportunities at campgrounds, shooting ranges, and picnic areas. However, due to inadequate funding in previous years, some of these opportunities do not meet current standards. SCSEP programs have provided a major portion of the workforce in the past; however, all program slots for NFsAL were lost on July 1, 2003. The recreation program was evaluated and realigned resulting in reduction of season at 6 facilities, reduction of services at 10 facilities, increased fees at 2 facilities and decommissioning 4 FS operated water systems. Fee Demo receipts are used as appropriate. Budget allocation criteria shifted some additional funding to trail maintenance, but there is still a backlog of needs. Some off trail OHV use is still occurring and use on the Kentuck Trail has increased, creating some maintenance concerns. While contributions from volunteers and partners are substantial, trail operation and maintenance funding continues to be inadequate, resulting in a maintenance backlog. Road construction has not occurred at the level projected by the plan and re-construction has occurred at a higher level than projected. Two of the three wilderness areas have certain places that are receiving heavy use and some value impairment is occurring along locally popular trails and entrance points.

Fiscal Year 2001	2001	2002	2003
Recreation Visitor Days (estimated)	1,362,000	1,313,000	1,331,000
Developed Areas	28	28	28
Fee Areas	23	23	23
Recreation Fee Demo Receipts	\$303,857	\$223,825	225,967
Trails (miles)	313	313	313
Wilderness Acres	41,477	41,477	41477
Cultural Surveys	431	2,261	625

Law enforcement efforts are stretched to the limit so trail use regulations often go un-enforced. In some cases, this is leading to trail maintenance problems and / or resource damage off trails. Monitoring is continuing to

identify and mitigate horse trail use impacts in TES drainages. No other impacts were identified during monitoring.

Off-road use is adequately monitored on designed trails. Some off-trail use is still occurring. Current maintenance of trail system is protecting the land and other resources and maintaining public safety. However, use is increasing, placing the adequacy of current maintenance resources in doubt. Occurrence of inappropriate use and user conflicts is decreasing, and the new loop constructed at Kentuck was constructed to accommodate increased use.

**Scenery** - Overall current Plan visual quality objectives are being met; however, some project implementation has resulted in public perception of a reduction of visual quality. Need to implement the new Scenery Management System and train forest personnel in its use. Integrate visual quality analysis by the Forest Landscape Architect into all proposed activity planning in visually sensitive viewsheds. Currently on the forest, there are no known areas in need of rehabilitation for scenery. The continuing SPB problems are impacting visual resources by increasing the number of dead trees in concentrated areas and the number of small openings visible.

## Infrastructure

Condition/status of facilities – No new facilities were constructed on the forest during FY 2001 - FY 2003, but several repair and maintenance projects were completed. General maintenance was accomplished on quarters and many other buildings.

Condition/status of roads – During FY 2002 a new bridge was constructed on Conecuh National Forest. Road maintenance continues.

Fiscal Year 2002	2001	2002	2003
<b>PERMANENT ROADS (MILES)</b>			
Constructed/Reconstructed	0.5	0	0
Bridges Constructed	0	1	0

Fiscal Year 2002	2001	2002	2003
<b>FACILITIES MAINTAINED</b>			
Road miles	645	645	659
Bridges	94	98	98
Buildings	45	162	162
Dwellings		6	6
Fire towers	5	13	13
Water systems	11	11	6
<b>EQUIPMENT</b>			
Light vehicles	100	105	108
Heavy equipment	29	29	29
ATV's	30	30	31
LEI vehicles	8	7	7

## Human Influences

The National Forests in Alabama have a very broken ownership pattern, meaning that there are many private lands dispersed throughout the forest. Many of these private lands have been subdivided, either through inheritance or sale, and there are an increasing number of homes being built near the national forest. This broken ownership pattern leads to concerns and conflicts as more people move into the forest area. Prescribed burning, smoke management, and boundary disputes are probably the largest concerns. The City of Helfin has also raised a water issue because their primary water impoundment facilities are very old and they recognize

that they will need to plan for the future, note that Heflin is in Cleburne County which is one of the counties listed on the table below, with a very high population increase. This growth is expected to continue and the current impound, which is also reported to be filling with silt, will not meet the future needs of Heflin and the county. The Shoal Creek district does contain several PL 566 lakes that could meet at least part of their future needs. Cooperation and communication with city water board is ongoing.

### Roadless Areas/Wilderness/Wild & Scenic Rivers

The first step in evaluation of potential wilderness is to identify and inventory all roadless, undeveloped areas that satisfy the definition of wilderness found in Section 2(c) of the 1964 Wilderness Act. During the plan revision process the forest assessed roadless areas. The National Forests in Alabama has 5 inventoried roadless areas, as shown on the table below.

Overall use in Sipsey and Cheaha Wildernesses conforms to wilderness values. However, specific areas of both Wildernesses are receiving overuse and some value impairment is occurring along locally popular trails. All 32,247 acres were managed in accordance with established law and policy, to the extent of budgeting. Dugger Mountain wilderness is too new for use trends to be evident.

The National Forest in Alabama has one designated Wild and Scenic River, the Sipsey Fork, West Fork River and selected tributaries.

Reed Brake – Oakmulgee District	602 acres
Oakey Mountain – Shoal Creek District	6,080 acres
Blue Mountain – Shoal Creek District	4,801 acres
Cheaha A – Talladega District	236 acres
<u>Cheaha B - Talladega District</u>	<u>718 acres</u>
<b>Total</b>	<b>12,437</b>

The nine-step process for Limits of Acceptable Change (LAC) was initiated, with public comment and participation. Continue LAC process for the Wild and Scenic River and the wilderness areas to deal with trail overuse and camping impacts. Continue Bankhead Trail Project, which will construct additional wilderness trails to disperse use.

## Timber

In recent years, the number of acres of timber harvest has steadily declined. Many factors contributed to that decline. The major contributors include: Forest Service policies concerning clearcutting, sustainable ecosystem management, and de-emphasis of timber commodity production; foraging and nesting habitat requirements for RCW; litigation; court decisions; and collaborative negotiations with potential appellants.

The future of regeneration harvesting in the pine and pine/hardwood forest types is expected to increase with the implementation of longleaf restoration programs which will replace off-site loblolly and slash pine stands with longleaf pine. In FY 1999, the Conecuh N.F. completed an Environmental Impact Statement and the District Ranger signed the Record of Decision to restore longleaf pine on about 4,000 acres of off-site slash pine stands and began implementation in FY 2000. Implementation of this project continues and was the primary non-salvage timber activity for the forest during FY 2001 – FY 2003. Following table displays timber harvest volume offered and sold by Fiscal year.

During this period the Oakmulgee, Shoal Creek, Talladega, and Tuskegee districts began inventory and analysis

<b>Fiscal Year</b>	<b>Timber Volume Offered (ccf)</b>	<b>Timber Volume Sold (ccf)</b>
2001	27,141	27,141
2002	22,314	21,737
2003	14,064	13,752

of forest health and longleaf restoration opportunities. The Bankhead National Forest also began a study to address the forest health issues related to off-site species and the need for restoration activities particularly on SPB decimated stands.

The table at the right displays the acres of silvicultural examinations and prescriptions were completed by year. Each year this was less than the 62,200 acres that should be examined annually to complete inventories and prescriptions in compartments on a ten years cycle. Staffing reductions, increased depth of analysis in environmental assessments, appeals and litigation are affecting accomplishments. Issues of southern pine beetle (SPB), loblolly decline (die-off), first thinning and longleaf restoration are changing the timing of scheduled entries into compartments.

<b>Silviculture Exams By Year</b>	
<b>Year</b>	<b>Acres</b>
2001	27,118
2002	23,699
2003	20,279

SPB and loblolly decline impact resulted in some increase in early succession on the forest. SPB spots greater than 5 acres are evaluated for site preparation and planting needs. If natural regeneration is not occurring the areas site prepared, if necessary and then planted. The following table shows regeneration by year, natural and artificial.

<b>Natural and Artificial Regeneration by Year</b>		
	<b>Natural Regeneration (acres)</b>	<b>Artificial Regeneration – Planting(acres)</b>
2001	680	986
2002	1103	885
2003	1107	570

## **Forage**

Desired forage production objectives are being achieved. Demand for grazing has decreased and only 2 out of 20 allotments are being grazed. All grazing has been carried out in compliance with provisions of the existing Term Grazing Permits.

## Other Products

**Mineral Leases and Permits** – Currently 82 leases and permits are being administered on the Forest. This is a program that responds to requests from the public, and the number administered each year is controlled by the number of requested received. The forest needs to continue to respond to these requests in a timely manner.

**Land Purchase & Land Exchange** – Between 2001-2004 about 745 acres were purchased on the Bankhead and Talladega National Forest. No exchanges were completed during this time due to decreased funding and lack of personnel. The Forest needs to continue to purchase land when funds become available and complete land exchanges as proposals are presented to and evaluated by the Forest.

**Special Uses** – The majority of Special Use Permits field inspected were in compliance with permit stipulations. Special Use inspections carried out by Districts indicate little or no deviation from permit stipulations. Those few situations where stipulations were not being fully complied with were handled through administrative corrections. The following table displays the number of special uses by year and by type.

<b>SPECIAL USE PERMITS</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Recreation	12	17	16
Agriculture	8	8	8
Community and Public Information	9	16	12
Research, Training, and Historic	57	56	42
Industry	5	4	6
Energy Generation and Transmission	55	67	67
Transportation	227	201	218
Communication	48	55	55
Water	42	51	53
<b>TOTAL</b>	<b>463</b>	<b>475</b>	<b>471</b>



## Heritage Resources

Archaeological surveys are conducted prior to land management activities and, sites considered eligible or potentially eligible to the National Register of Historic Places were avoided and protected during land management activities

<b>Archaeological Surveys by Year</b>	
Year	Acres Surveyed
2001	431
2002	2261
2003	625

### III ORGANIZATIONAL EFFECTIVENESS

#### Economics

The annual budget continues to decrease over time, impacting our ability to adequately manage the forest in many ways. Vacant positions go unfilled and some positions are not completely funded. Many monitoring activities are accomplished using agreement and partnerships that may have to be reduced in the future if budget shortfalls continue.

Annual Budget	
FY 2001	\$15,694,222
FY 2002	\$15,072,995
FY 2003	\$11,408,104

Due to the Plan Revision process, increased public involvement activities, new policies, and litigation, there are a large number of new and important issues facing the forest. This trend should continue and will create new challenges and opportunities for the forest.

## Evaluating New Information

Following is a list of the most current issues, concerns and opportunities for the National Forests in Alabama:

- ❑ Plan Revision – In January 2004 the Regional Forester signed the Record of Decision for the Final Environmental Impact statement for the Revised Forest Plan. Implementation of the Revised Plan and monitoring the effects of the implementation becomes the focus of the National Forests in Alabama.
- ❑ Loblolly Decline Oakmulgee/Talladega – The forest continues to work with the Forest Health unit on the causes of and management concerns related to Loblolly decline. Preliminary reports and a decision support system are developed and shared with the districts.
- ❑ A continuing forest health issue is the need for thinning of young (17 to 35 years old), overstocked loblolly pine plantation for the purpose of reducing their risk to SPB attack.
- ❑ The investigation of timber management practices on the Shoal Creek district concludes and the Forest begins to move forward. The Talladega Division of the Talladega National Forest issues a decision for Longleaf Ecosystem Restoration and RCW Habitat improvement.

## EVALUATION OF OUTCOMES ON THE LAND

Implementation of the Natural Resource Agenda on the National Forests in Alabama is an ongoing process. An important part of the process is to determine if the projects we are implementing are indeed moving resource conditions toward the desired conditions as described in the Natural Resource Agenda and the Forest Plan. Many valuable projects were completed from FY 2000 to FY 2003 and the following discussion highlights some of the outcomes of that work by major division of land on the National Forests in Alabama National Forests in Alabama.

### **Bankhead National Forest**

On September 19, 2003 the district ranger, Glen Gaines signed a Record of Decision for the Bankhead National Forest, Forest Health and Restoration Project. The project includes thinning of overstocked stand to reduce the threat of Southern Pine Beetle (SPB) and restoration of sites destroyed by southern pine beetle. Restoration areas on the district where the desired future condition emphasis is pine (shortleaf or longleaf) are scheduled for roller drum chopping, prescribed burning and then hand planted to either longleaf or shortleaf pine. Southern pine beetle sites which are located within the area of the district where the desired future condition is hardwood, the oaks and hickories will be released using hand tools, to move to achieve advanced regeneration of the preferred species (oaks and hickories) in these sites.

Overstocked Loblolly Stand



Thinned Stand



### **Conecuh National Forest**

Under the Conecuh's Longleaf Restoration Final Environmental Impact Statement (final decision notice dated August 23, 1999) activities were planned over a five year period to move toward restoring native longleaf pine to sites now occupied by off-site species (slash and loblolly). During the process 1,848 acres of off-site slash pine and loblolly pine stands were identified and found in need of thinning to reduce the potential of disease and insect attack to these species. Since the stands were off-site and un-thinned, the potential for devastating consequences of insect and disease outbreaks existed. Plans were to thin the 1,848 acres of individual stands, found through-out the District, by the end of FY 2005.

Implementation of this project is well under way with approximate 1/3 of the area completed by the end of FY 2003. The thinning should result in lessened chances of southern pine beetle attack and increased vigor for the retained trees.

### **Talladega National Forest**

During this period, the Oakmulgee District, the Shoal Creek District and the Talladega District were in the process of analyzing projects for Forest Health and Longleaf Restoration. In July 2003 the Talladega Division released Draft EIS for Forest Health and RCW Initiative. The Oakmulgee Draft EIS for Longleaf Ecosystem Restoration project was released in July 2004.

### **Tuskegee National Forest**



During this period the Tuskegee National Forest was in the process of identifying Forest Health and Longleaf restoration needs on the district.



### **National Forests in Alabama**

The Draft Environmental Impact Statement for the Revised of the Forest Land and Resource Management Plan was released in February 2003. The plan revision focuses on restoration of forest ecosystems to create and maintain healthy forest conditions. The Revised Land and Resource Management Plan was completed and signed by the Regional Forester in January 2004. Restoration projects are planned on each district consistent with Revised Plan directions.

## **FY 2003 Action Plan**

This monitoring and evaluation report was delayed by Forest Plan revision activities and the only action item would have been completion of the plan revision incorporating findings and recommendations in the process. The Revised Forest Plan was completed and the Final Environmental Impact Statement was signed in January 2004. There are no action items and no action plan for this report.

# Appendix A

## Forest M&E Interdisciplinary Team

This report was prepared or reviewed by:

Charles Price, Staff Officer for Planning and Natural Resources

Joe Nicholson, Staff Officer for Ecosystem Technical Support

Felicia Humphrey, Forest Planner

Art Goddard, Soil Scientist

Jay Edwards, Hydrologist

William Fadden, Lands and Minerals Specialist

Dagmar Thurmond, Wildlife Biologist

James Clute, Timber

Greg Born, Fire Management Officer

Joe Nicholson, Recreation Specialist

Robert Pasquill, Archaeologist

Glen Gaines, District Ranger - Bankhead RD

District Ranger, Conecuh RD

Cynthia Ragland, District Ranger - Oakmulgee RD

District Ranger - Shoal Creek RD

Kent Evans, District Ranger - Talladega RD

Jorge Hershel, District Ranger, - Tuskegee RD



## **Summary of Field Reviews and Other Administrative Activities**

The Forest did not complete any formal Quality Reviews (Integrated Program Reviews) due to other pressing, unscheduled events such as wildfires and Southern Pine Beetle problems.

- 1) During September 2003, trained Forest Service Staff completed a 100% inventory of known RCW cluster sites on the Oakmulgee District, Talladega National Forest. From this inventory the Oakmulgee district now has 99 known active cluster sites, which indicates approximately an 18% decline in known active clusters. The inventory included collection of habitat parameters which analysis of will provide information toward a strategy to address habitat deficiencies.
- 2) Fire Management conducted fire readiness reviews on each district that covered pre-suppression capability and the prescribed burning accomplishments and documentation. Additionally, in according with WO direction fire management conducts reviews on 10% of wildfires.
- 3) Previously established fixed monitoring plots (fuels) on the Conecuh, Oakmulgee and Talladega Districts were revisited to monitor prescribed burning activities. Additional plots were established.
- 4) A timber sale program review on Conecuh Ranger district was conducted in July 2003. This review included all aspects of the timber sale program from preparation to administration.

## Appendix C

### **STATUS OF PREVIOUS MONITORING AND EVALUATION PLAN**

1. **ACTION:** Based on Forest meetings and field evaluation, agreements were made for all 4 NFs in Alabama (ref ltr 5/17/01 – 2400/3400 - Summary of Agreements Reached, Bankhead SPB Meeting). In order to improve SMZ recognition, the following agreements were made; 1) control efforts within streamside management zones (SMZ) will be the exception rather than the rule, 2) when treatment within the SMZ would have a high priority of stopping the further spread of the beetles, the site will be reviewed prior to treatment by a pre-monitoring team or a soil and/or water specialist. Their concurrence, with necessary mitigation measures, will be well documented. Mitigation measures will be implemented in the contract. Post-monitoring was discussed on numerous occasions and will be implemented to further document adequate mitigation measures as described by pre-monitoring personnel were carried out and functional. (Note: pre and post monitoring will be accomplished by biologist and archeologist with proper documentation also).

**RESPONSIBILITY:** Post Monitoring Team; Soil Scientist, Forest Botanist , Air Specialist, Forest Archeologist, Aquatic Biologist, and Forest Biologist.

**COMPLETION DATE:** October 31, 2001 (yearly report with post monitoring continuing into FY 2002 if SPB still at epidemic levels).

**STATUS:** Agreements were implemented and monitoring continued for FY 2001.

2. **ACTION:** The NFs in Alabama need to continue to focus monitoring efforts on visibility and the effects of acid deposition in addition to acquiring funds to support acid deposition monitoring.

**RESPONSIBILITY:** Zone Air Specialist and the Soil, Water, & Air Unit Leader.

**COMPLETION DATE:** Continuous (yearly report of accomplishments).

**STATUS:** Continued monitoring for FY 2001- FY 2003. Additional funding needed to continue monitoring.

- ACTION:** The National Forests in Alabama need to become prepared for participation in the State's planning processes that will be required to bring non-attaining counties back into NAAQS attainment. Processes involved include emissions inventory, personnel/funding, and other related issues that arise during the State planning process. In addition, Forests need to resume scheduling Forest-wide quality reviews or similar review processes to assure adequacy of the smoke management practices.

**RESPONSIBILITY:** Zone Air Specialist, Soil, Water, & Air Unit Leader and the Forest Fire Management Officer.

**COMPLETION DATE:** FY 2003 (yearly report of accomplishments through FY 2003).

**STATUS:** Completed. Coordination continues with state planning processes and with National Fire Planning processes.

- ACTION:** Complete the review and report on status of MIS for the National Forests in Alabama. This report should include any recommendations for changes to the MIS list and/or monitoring protocols.

**RESPONSIBILITY:** Planning and Natural Resources Unit

**COMPLETION DATE:** FY 2001

**STATUS:** As a part of the Forest Plan Revision process the MIS list was reviewed, evaluated and updated. The new MIS and monitoring protocols are documented in the Monitoring Chapter (Chapter IV) of the Revised Forest Plan.

## **List of Significant Research Findings, Inventories, and Updated Research Needs**

Soil Inventory on Oakmulgee Ranger District

25 Selected Pets Study

Crayfish Species in the Tallapoosa

Unionid Mussels in the Uphapee

Assessing Genetic Variability and Viability of Fish

Holiday and Rush Darter

Mitchell's Satyr Butterfly

Botanical Surveys – Talladega Ranger District – Forest Health and Longleaf Restoration Project

Botanical Survey of 6500 Acres – Oakmulgee Ranger District - Forest Health and Longleaf Restoration Project

Botanical Survey of 3600 Acres - Bankhead Ranger District – Forest Health and Ecosystem Restoration Project

Environmental Conflict Resolution

Gulf Sturgeon

Changes in freshwater mussel populations in Bankhead National Forest from 1993 - 2002

## **FY 2004 Monitoring Framework**

Chapter 5 of the Revised Land and Resource Management Plan 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. Monitoring questions are listed below.

- 1. Are rare ecological communities being protected, maintained, and restored?**
- 2. Are landscape- and stand-level composition, structure, and function of major forest communities within desirable ranges of variability?**
- 3. Are key successional stage habitats being provided?**
- 4. How well are key terrestrial habitat attributes being provided?**
- 5. What is the status and trend in aquatic habitat conditions in relationship to aquatic communities?**
- 6. What are status and trends of forest health threats on the forest?**
- 7. What are the status and trends of federally listed species and species with viability concerns on the forest?**
- 8. What are the trends for demand species and their use?**
- 9. Are high quality, nature-based recreation experiences being provided and what are the trends?**
- 10. What are the status and trends of recreation use impacts on the environment?**

- 11. What is the status and trend of wilderness character?**
- 12. What are the status and trend of Wild and Scenic River conditions?**
- 13. Are the scenery and recreation settings changing and why?**
- 14. Are heritage sites being protected?**
- 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?**
- 16. What are the conditions and trends of riparian area, wetland and floodplain functions and values?**
- 17. How do actual outputs and services compare with projected? [36 CFR 219.12(k)1]**
- 18. Are silvicultural requirements of the Forest Plan being met?**
- 19. Are Forest Plan objectives and standards being applied and accomplishing their intended purpose?**

# Response Form

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MONITORING AND EVALUATION IS AN ONGOING PROCESS AND YOUR FEEDBACK IS IMPORTANT TO US. IF YOU HAVE ANY COMMENTS THAT YOU WOULD LIKE TO SHARE, WE INVITE YOU TO DO SO AT THIS TIME.

**Please send you comments to:**

**Planning Unit  
National Forests in Alabama  
2946 Chestnut Street  
Montgomery, AL 36107**

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