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Southern Region

Fiscal Year 2003
Monitoring and Evaluation Report
Chattahoochee-Oconee National Forests

September 30, 2004

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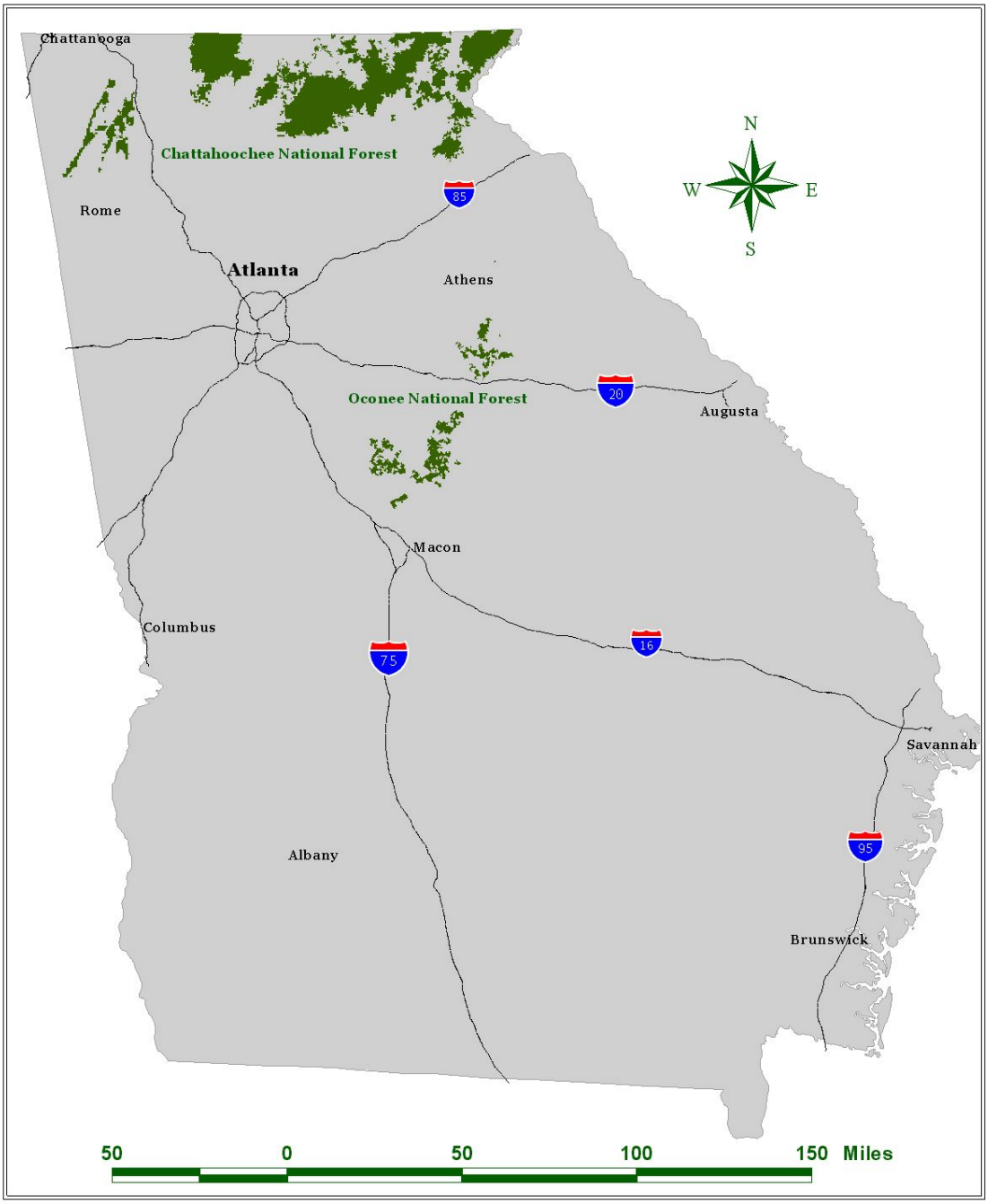
FOREST SUPERVISOR'S ADEQUACY STATEMENT

I have evaluated the monitoring results and recommendations in this report. The recommendations will be implemented, unless new information or changed resource conditions justify a change. I have considered and am making funding shifts in the budget necessary to implement these actions. In addition, additional funding has been requested from the Regional Office in response to these recommendations.

We have begun using portions of the monitoring and evaluation requirements associated with our revised Forest Plan as new projects are being implemented. However, some of the monitoring and evaluation recommendations made in this document are still based upon the older Plan, but will continue to guide our priorities until we completely integrate all of our projects under the new approved revised Forest Plan.

/s/ Kathleen Atkinson *September 30, 2004*

KATHLEEN ATKINSON **Date**
Forest Supervisor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INTRODUCTION

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

The recently revised Forest Plan Chapter 5 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 will be further refined during Forest Plan implementation into Monitoring Elements and Task Sheets, which are more detailed, specific and measurable than the Monitoring Questions themselves. Monitoring Elements and Task Sheets may be modified and prioritized to guide monitoring activities over the course of Forest Plan implementation. The Monitoring Summary Table and sample Task Sheet (Appendix G) demonstrate the relationships between Forest Plan Goals, Objectives, Standards and Monitoring Questions, and indicate the nature of Monitoring Elements and monitoring details that are to be further developed during Forest Plan implementation. The Monitoring Summary Table and sample Task Sheet are presented here only for information and may be modified as needed to address changes in needs, priorities, availability of personnel and funding.

The concept of adaptive management is foundational for planning and Forest Plan implementation in a dynamic environment. Regulations require that Forest Plans be revised periodically *(36 CFR 219.10(g)).* However, Forest Plans may need to be more dynamic to account for changed resource conditions (such as large storms or insect outbreaks), new information or findings of science, or new regulations or policies. An effective monitoring and evaluation program is essential for determining when these needs may exist and facilitating 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 (M&E) will be reported annually in the 'Forest Monitoring and Evaluation Report'.

Monitoring and evaluation may lead to adjustments of programs, projects, or activities or to changes or amendment to the Forest Plan itself. Alternatively, they may be 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.

M&E documents progress and results of implementing the Forest Plan. This report is for the administrative unit of the Chattahoochee National Forest and the Oconee National Forest considered together as the Chattahoochee-Oconee National Forests.

MONITORING AND EVALUATION PROCESS

This is the 14th year of this annual report. As mentioned earlier, this years report reflects a transition between the old 1985 Plan to the new 2004 Plan. Next years report will be based solely upon the revised Plan. The biggest difference between the two plans are in the MIS section. Forest MIS now reflect the changes in "Terrestrial Plants and Animals and Their Associated Habitats", these can be found in chapter 2 and 5 of the Plan. The MIS are mostly bird species. Birds reflect changes in habitat conditions very well.

The Process

Forest Plan monitoring is an ongoing task. Examples of formal monitoring are reviews, functional assistance trips, quality reviews, and specific data collection and analysis. Examples of informal monitoring include daily site visits to projects and visits, telephone calls, and letters to or from the public.

Objectives

Objectives of Quality Reviews are (1) to field examine a sample of activities associated with implementation of the Forest Plan with a full interdisciplinary team and (2) to document resource-specific and activity-specific monitoring results. Monitoring involved is both implementation monitoring and effectiveness monitoring. The reviews focus on answering such questions as:

- Were activities as planned consistent with the Forest Plan?
- Were the activities implemented according to what was planned?
- Upon completion of the activities, were the assumptions correct in both the planning of the project and the Forest Plan?
- Are Standards being applied appropriately, and are they doing what they are expected to do?
- Are mitigations being applied appropriately and working?

Evaluation

- The M&E Team evaluates the findings decides if action is needed, what the action would be, and how to go about it. Needed actions might include training of personnel and writing letters of clarification or a Forest Plan amendment. Even if items are in compliance, monitoring may lead to changes in implementation of future projects.

Functional Assistance Trips

- Within a function (such as wilderness, soil and water, or recreation), Staff Officers and specialists from the Supervisor's Office or Regional Office conduct their own reviews of their resource specialty. These reviews are carried out and checked for consistency with the Forest Plan. The results are documented and used in Forest Plan monitoring.

Plan in Hand

- The Forest is going to implement these reviews beginning in the latter part of 2004. What they consist of is going out on the ground and looking and discussing with the implementing Ranger District an approved project plan, prior to final implementation.

Specific Data Collection and Analysis

- A great deal of routine data collection and analysis is done on the forests. Examples are mentioned in the detailed monitoring discussions of this report. Shown next are mostly additional examples by resource areas. These are only examples and are not intended to be a complete listing of data collection efforts on the forests. Keep in mind that to monitor you first must have baseline data (inventories) to which to make comparisons.

Archaeological/Cultural/Historic Resources

- Forest personnel carry out archaeological investigations year-round at any forest location that has the possibility of ground disturbance; plus, they perform formal excavations at some previously discovered historic or prehistoric sites.

Recreation

- Fee Collections – Fee collections at developed recreation sites are valuable to monitor recreation-use levels.

- Inventories – Mapping of dispersed (concentrated streamside camping, not informal campgrounds) recreation sites and collecting data on their characteristics is getting increasing attention across the forests. Inventories are used to plan and carry out rehabilitation work and use patterns.

- Traffic Counts – Annual, routine traffic counting on forest roads is an indicator of use patterns, destinations, seasons of use, numbers of visitors, and types of use. Traffic counts prioritize road maintenance needs.

- Visitor Contacts – Conversations with forest visitors at campgrounds, at Wildlife Management Area check stations, at trailheads, at visitor centers, at district offices, and through telephone calls help to quantify and qualify use in situations where fees and trail registers do not give all the information needed to improve the condition of the forest recreation sites.

Soil, Water, and Air

- Air Quality – Forest personnel are sampling the effects of ozone and atmospheric deposition on forest resources—such as vegetation, water, and soils—in

the vicinity of the Cohutta Wilderness. They have collected and analyzed water samples from the Jacks River to assess effects of pollutants. Permanent plots with annual vegetation assessment are used to monitor ozone impacts.

- Ecological Classification – Forest personnel conduct integrated resource sampling on several areas on the forests to develop a multi-resource classification for ecosystem management. Examples of parameters sampled include aquatics, climate, geology, landform, soils, and vegetation.

- Inventories – Forest personnel complete soil surveys on the forests to identify soil types and their properties. They use survey data to develop alternatives for management actions and implement appropriate mitigation techniques to minimize impacts.

- Soil Productivity – Forest personnel examine areas with management activities—that is, timber harvest, prescribed burning, road construction, and recreation uses—during the life of projects to assess impacts on productivity. Surveys provide indication of the amount of area in degraded conditions in need of restoration.

Vegetation

- Forest Cover – Each year forest personnel inventory a portion of the forests for forest cover composition and condition and the information is updated in a computer database. In the future, this information will be matched with NTMB survey results, PETS species results, and fish/aquatic habitat conditions.

- Reforestation – Forest personnel examine each area reforested at least twice in the first 5 years to ensure that it has been successfully reforested. The results are formally reported to the Secretary of Agriculture.

Wildlife

- Bear Surveys - Forest personnel cooperate with the Georgia Wildlife Resources Division (GAWRD) in an annual bait station survey for bears. Visitation has shown a steady increase from 1983 through 2002. Likewise, legally harvested black bear numbers have increased (a record 245 bears harvested in 2000) and the population has probably reached carrying capacity. At the same time, nuisance bear reports to Georgia wildlife officials have begun to increase.

- Fisheries/Stream Aquatics– Forest personnel monitor several streams across the forests for fish populations and conditions each year. A subset of the streams sampled have been originally sampled in the 1950s and 1960s. In addition, some streams that are sampled have had, or will have, fish habitat

improvement structures constructed to measure the fish response to these efforts.

- Hunting Check Stations – Forest personnel cooperate with Georgia Department of Natural Resources – Wildlife Resources Division (GAWRD) in staffing check stations on Wildlife Management Areas (WMA's) across the forests. They collect data on animal conditions, hunter success ratios, and age structure of game species populations. This is used in Forest Plan monitoring.

- Neotropical Migratory Birds (NTMB) and Breeding Bird Surveys – Wildlife Staff and qualified bird identification personnel collect and evaluate population and occurrence data as it relates to habitats, abundance, numbers of species, and effects of management on all birds that breed within the Forests. In recent years, these birds have been a focus of concern because of population declines in various parts of the nation. We currently are monitoring 200 permanent bird points annually, not including occurrence bird data which is collected all year at any location in or near the forests.

- Proposed, Endangered, Threatened, or Sensitive (PETS) Species Surveys – Forest personnel have surveyed thousands of acres of the forests for PETS species; and they survey more acres each year. The knowledge gained from these surveys has been used to develop risk assessments and Biological Evaluations for parts of the forests and for projects. This data is being integrated into the Geographic Information System (GIS) mapping coverage—such as forest cover, PETS species, and soils—to develop predictive models throughout the forests and to show where further inventories are necessary across the forests.

SUMMARY OF RESULTS

Following the table is a narrative that gives a more detailed description of what the team found and its recommendation.

Summary of Forest Plan Compliance by Monitoring Item
Years 2003-2004

Monitoring Item No.	Brief Description	In Compliance	Not In Compliance					
			Management Prescription	Standard	Management Direction	Allocations	Outputs	Costs
A2-2	Swim area water	X						
A4	Mgmt Area 4	X						
A5	Visual quality	X						
A6	OHV trail status	**		X	X			
A8	Cultural resources	X						
B1	Wilderness	X						
C1	Wildlife	X						
C3	MIS, T & E	*	8.D, 8.D.1					
D-1	Grazing use	X						
E2	Reforestation	X						
E3	Silviculture	X						
E4	Harvest areas	*					X	
E5	Timber suitablility	X						
E6	Forest conversion	X						
F1	Water quality	X						
F2,MRx 11	Stream protection	X						
G1	Minerals	X						
K2	Soil productivity	X						
L2	Road standards	X						
P1	Wildland fires	X						
P2	Prescribed burns	X						
P3	Air quality	X						
P4	Insects/disease	*			X			
P5	Wilderness LE	X						
P6	Total LE	X						

** Non-compliance is limited to the Anderson Creek Trail system (see page 15 for narrative). Trail system was closed in November of 2003, and the Forest will be evaluating potential options for the established trails. Illegal trails were closed and rehabbed, and designated trail system was maintained in FY 04.
* See narrative section on this item. Some portion of this item needs additional work.
OHV – Off-highway vehicles; MIS – Management indicator species; T & E – Threatened or endangered species as listed by the U.S. Fish and Wildlife Service; LE – Law enforcement

The following is a list of possible recommendations:

- No changes needed; monitoring indicates that goals, objectives, management area (MA) direction, standards and guidelines are being achieved.

- Refer recommended action to the appropriate line officer for improvement in application of management area direction and standards and guideline interpretation.
- No Forest Plan Amendment required.
- Modify the management area prescriptions by Forest Plan amendment.
- Revise the schedule of outputs with a Forest Plan amendment.
- Revise the cost per unit of output with a Forest Plan amendment.
- Forest Plan direction has been changed or clarified by amendment.

A2-2 – Developed Recreation

- Water Quality at Swim Sites - Ensure compliance with Federal, State, and local standards for water quality. This answers question 9 and 10 in the new plan.

Forest swim areas (beaches) were monitored during this period through contract weekly beginning the week before Memorial Day and ending near Labor Day (about 90 total samples per year). Forest swim areas include:

- Lake Russell
- Rabun Beach (Lake Rabun)
- Lake Conasauga
- Morganton Pont (Lake Blue Ridge)
- Lake Winfield Scott
- Lake Sinclair

In each of the two years, there were occasional samples that failed to meet state water quality standards for fecal coliform bacteria. In these cases, the areas were resampled the next day, and in all of the cases the areas returned to normal readings. No swim beaches were closed. Bad samples are typically attributed to high levels of visitor use of the beach and reduced inflow of freshwater during low flow periods.

Recommendation: No changes needed; monitoring indicates that goals, objectives, and standards are being achieved.

A4 – Management Area 4

- Ensure that high elevation area direction is followed. These are now answered in various questions, such as 4, 9, and 13.

Recommendation: No changes needed; The new plan allocated these areas into Management Prescription 4.I, and 12.A.

A5 – Visual Quality

- Ensure that visual quality objectives (VQOs) are being applied according to standards. Answers questions 9 and 13.

Recommendation: Monitoring indicates that all aspects of the plan are being met.

A6 – Off-Road Vehicles (Roads and Trails) bikes, and Hiking Trails

- Compare uses, problems, and solutions to off-road vehicles (ORV, this category includes ATV's) use, abuse, and overuse. The Chattahoochee – Oconee National Forests currently have 133 miles of designated OHV trails. These will be monitored in the new plan under various questions ; mainly 15, 16, 9, and 13.

The Forests conducted a trails analysis process on its' designated network of all trails. During this process the physical existence of these trails was inspected "on the ground". There is 838.6 miles of designated "legal" trails on the Forest. During the process of field verification of these designate trails, use type was recorded (hiking, horse, bike, and OHV). The field review afforded the individual inventorying the respective trail to record condition surveys as related to water bar, stream crossing impact, side-slope erosion, camping impacts, step/ stairway "side stepping" as well as other general overall trail conditions.

In 2004, 78 miles of designated trail are maintained to Forest Handbook standards. Condition surveys will be conducted on 20 percent of the designated trails (167 miles) over and above the initial field verification of the 838.6 miles total Forest trails. This 20 percent is to meet the TRACS condition trail target mandated of each Forest nationwide. New trail construction occurred on 10 miles as part of a Congressional earmark appropriation for the Pinhoti Trail on the northwestern part of the Chattahoochee National Forest. At the time of construction, trail was built to Forest Handbook standards to ensure integrity to forest resources was maintained. Districts managing its' network of OHV trails are closing the trails to the public from January1st- March 31st each year due to freezing and thawing conditions which are prevalent during this period of time. This is also true for certain other trail systems such as horse and bike trails.

Illegal OHV trails have been closed across the Forest, implementing the recommendations from the 2001 and 02 Monitoring and Evaluation Report. Monitoring of these closures show that while some of them were effective, others have required further work to complete stabilization, control erosion, and eliminate illegal access. Posting illegal trails with "road closed" signs along with extensive law enforcement surveillance of active illegal trails in some areas as well as recently closed sites has provided increased effectiveness. Citations issued to violators have provided direct enforcement of the closures and deters other possible violations. One 'unofficial' OHV route was Rich Mountain Road on the Toccoa Ranger District. This route is covered under the Soil and Water section.

Despite these closures, new illegal trails continue to become established and some closures are breeched. While some of these trails are used a few times and abandoned, others have become heavily used. Violation notices continue to be issued for possession of an OHV off of the designated trail location. All OHV trail systems have been closed many times this season for excessive rain. The North Fork of the Broad River, located on the Chattooga District, is being impacted by the Locust Stake OHV

Trail system. Actions are being planned to remove active trails within the riparian corridor and restore conditions to a natural function.

Anderson Creek OHV Trails (near Ellijay, Georgia): Currently, there are approximately five miles of legal designated trails and approximately 15+ miles of illegal, poorly designed, user-created trails, which are continuously increasing. Trails often originate on adjacent private lands, making controls challenging.

Implementation of plans for this area began in fiscal year 2004. The current closure includes closing the entire trail system until not only the trails, but also the 'area' is completely rehabilitated, which includes rehabilitation of the riparian area, reconstruction of existing designated trails, closure of illegal trails, and environmental education.

> *Recommendation:* Continue effective closing of illegal trails that are directly impacting water quality or aquatic habitat. Maintenance will continue at all designated trail systems with a priority for treatment of the Anderson Creek OHV Trails.

A8 – Cultural Resources (Heritage Resources)

- Evaluate the progress and success of cultural heritage activities in relation to national forest management. This answers question 14.

Support Services: This section deals with the Section 106 activities that occurred on the Forest during these two years. During FY 2003 and FY 2004 the archeologists were involved with surveying for projects associated:

- prescribed burning
- wildfire plowlines
- southern pine beetle treatments
- recreation projects
- soil and water rehabilitation projects
- roads
- trails
- forest health
- wildlife
- special use permits
- land exchanges

During 2003-04, surveys and inventories were completed on hundreds of acres. Other areas reviewed were large blocks of prescribed burning that were not physically

surveyed. Many new sites were located and previously recorded sites protected within project areas or in the general forest.

Recommendation: Continue to evaluate and update the program and measure the success of cultural/heritage resources management activities in relation to national forest management. Make sure that the Heritage Program continues to guide, locate, monitor, evaluate, protect, educate, and enhance the cultural/heritage resources on the Chattahoochee-Oconee National Forests.

B1 – Wilderness

- Determine if overuse (improper use) problems are being eliminated. This answers question 11.

Law enforcement personnel have increased patrols in the area of existing wildernesses and have also posted more signs that mark the wilderness boundaries. In the Cohutta Wilderness, the Limits of Acceptable Change (LAC) process has begun to be implemented to reduce impacts by over-use. The LAC process is to be applied to other existing wildernesses.

Recommendation: Monitoring indicates that goals, objectives, and standards are being achieved. However, in some cases, prompt actions need to be taken to provide protection for Wilderness Areas. Continue with moving ahead with implementing the Limits of Acceptable Change criteria for Cohutta Wilderness.

C1 – Wildlife and Fisheries

- Ensure proper application of management standards. This will respond to question 19, 2, 3, 4, 7, and 8.

Crayfish Surveys

Eight locations in Georgia were surveyed hoping to reconfirm specific crayfish existence in the state. Gold Mine Creek was sampled at an upstream site and again near its confluence with Warwoman Creek but was unable to find *C. chaugaensis* at either location. Also surveyed was several Chattooga River (Rabun County) tributaries from Gold Mine Creek, south to Toccoa Creek, near Toccoa, Georgia, but was unable to find *C. chaugaensis*. This is contrary to Hobbs (1981) prediction that the species would turn up in additional tributaries to the Chattooga River. A Chauga River tributary in South Carolina was surveyed to see if the species could be found with the sampling technique being used; three specimens of *C. chaugaensis* were collected.

Gold Mine Creek appeared to be healthy and another crayfish species, *Cambarus* (*C.*) *bartonii* was abundant. Hobbs (1981) mentioned *C. bartonii* as a probable competitor with *C.* (*P.*) *georgiae*, a close relative of *C. chaugaensis*. Hobbs thought that *C.*

bartonii might out-compete *C. georgiae* in headwater areas in which the two species co-occurred. It is hard to say if this is the case in Gold Mine Creek, but offers one possible explanation for the absence of *C. chaugaensis*. It seems odd that the species would have occurred in only a single creek on the Georgia side of the Chattooga River, but put after many hours in several nice streams, only *C. bartonii* was collected.

Cambarus cymatilis was described from the "lawn and rose garden of Mr. Charles S. Dunn" in Chatsworth, Georgia by Hobbs (1970). It was historically known from only three Georgia localities and a single site in Tennessee. Skelton et al. (2001) reported it to still be extant in two of the three Georgia locations and found it at one new locality. *Cambarus cymatilis* is a primary burrowing species and is difficult to collect. During the current study, one historic locality was sampled in downtown Chatsworth, but the location had been altered since the previous visit. Burrows were excavated at three locations for *C. cymatilis* during the current study. No *C. cymatilis* were found, but two other common burrowing crayfish were found, *C.* (*T.*) *acanthura* and *C.* (*D.*) *striatus*.

This species is almost certainly more widely distributed than is currently known and additional survey work in the headwaters of Holly, Mill, and Sumac creeks are warranted.

*Cambarus extraneus (*Chickamauga crayfish) was described by Hagen (1870) and is considered to be endemic to the South Chickamauga Creek watershed in northwestern Georgia and southeastern Tennessee. Hobbs (1981) reported the species from 13 localities in Georgia. Four new sites were surveyed in the South Chickamauga watershed and found it at three of them (Fig. 1; sites 11, 12, 13). The fourth location surveyed was essentially a beaver swamp, and no crayfishes were collected there. The species is most common in small to medium-sized rocky streams.

It appears that the species is fairly common and doing well in the South Chickamauga Creek system. Portions of the headwaters of this creek are on CONF.

Cambarus (*Puncticambarus*) *georgiae (*Little Tennessee Crayfish) was described by Hobbs (1981) from the Little Tennessee River drainage in Georgia and North Carolina. In fact, it is known only from Macon County, North Carolina and Rabun County, Georgia. Hobbs (1981) reported the species from only a single site in Georgia, the Little Tennessee River at US 441, south of Dillard. Six locations were surveyed in the Little Tennessee River drainage during the current study. The only creek in which the species was found was Betty Creek at the US 441 crossing in Dillard, and approximately four miles upstream at Patterson Gap Road. The species was not common at either location. Hobbs (1981) suggested that *C. georgiae* is more common farther down in the Little Tennessee watershed where the river is larger and where it does not have to compete with *C. bartonii*. *Cambarus bartonii* was much more common in Betty Creek than *C. georgiae*.

One specimen was found in fairly swift water, while the remainder were collected in areas of slower moving water. Betty Creek appears to be in excellent condition as it supports trout year around and has an apparently healthy fish and aquatic insect assemblage. The headwaters of Betty Creek occur on National Forests in Georgia and North Carolina and there is a chance that it may occur there.

Cambarus parrishi was described by Hobbs (1981) from material collected in the Hiawassee River and its tributaries in Georgia and North Carolina. Hobbs (1981) reported the species from five localities in Georgia. Five locations were surveyed during the current study in the upper Hiawassee River system . *C. parrishi* was found at four of the five locations.

Two of the locations surveyed were close to historic sites and were on National Forest. Soapstone Creek flows through CONF for almost its entire length and appears to be in very good condition. *Cambarus parrishi* was not common at these sites, but was collected with little difficulty. *Cambarus parrishi* populations appear to be doing well at this time, but the species has such a small range, that the loss of a single population will significantly reduce its range and increase the chance of its extinction.

Cambarus speciosus was described by Hobbs (1981). Hobbs (1981) examined specimens from 10 localities and indicated that the species is likely endemic to the Coosawattee River system around Ellijay, Georgia. Surveys were not conducted for this species because a survey was recently completed by Schuster (2001). Schuster revisited four of Hobbs (1981) sites and found it present at all four. In addition, he found it at five new locations and indicated that it is doing well.

Most of the range of this species is well to the south of the Chattahoochee National Forest. Two to the locations where Schuster found the species are downstream of small tributaries on CONF.

Additional Species Encountered

During the crayfish surveys, five additional crayfish species were encountered. *Cambarus* (*C.*) *bartonii* was by far the most common species collected. This species lives in cool headwater streams and is often the dominant form in that type of habitat. This was the only species other than *C. parrishi* collected on CONF. The other species collected are fairly common and widespread. All five species were considered "currently stable" by Taylor et al. (1996).

Beloneuria Georgiana has two Georgia records; one from Rabun County, and one from Murray County. Both are on or near CONF. The Rabun County record is from somewhere near Rabun Bald. Several small streams were sampled on an approach trail to Rabun Bald in hopes of finding the species. Also a light trap was used one evening next to a stream fairly close to Rabun Bald. No success in collecting the species on either occasion.

Mussel (freshwater clam) surveys

During 2003, surveys for populations of freshwater mussels were continued in the Chattooga (Rabun County) and Toccoa rivers. Although a survey of the Ocmulgee River was initiated during July 2004, the survey could not be completed due to extremely turbid water.

Timed searches were completed with the use of a batiscope or snorkeling gear. In most situations, live mussels were collected within the surveyed reach. Mussels were counted, measured to the nearest mm (for rare species), and returned to appropriate habitats. Because long reaches of the Chattooga River below GA 28 were surveyed via canoe or raft, survey time was restricted to only a few minutes at each survey station. Surveys were completed while water levels were low, and water clarity good to excellent.

Twenty-five sites were surveyed for freshwater mussels during 2003 (see Appendix for site specific data). Four of these stations were surveyed in the Chattooga River from Burrells Ford down to GA 28 via hiking river trails during late July and early August 2003. (No GPS data could be collected because of topographic conditions limiting satellite reception.) No mussels or shells were seen in the Chattooga River from Burrells Ford down to an area just above GA 28.

Lanceolate elliptios (*E. angustata and E. producta*) occur in the North Fork Chattooga River (just above GA 28) and in the Chattooga River down to Tugaloo Reservoir. These taxa are continuously occurring throughout this reach. These species are reproducing and have viable populations. *Alasmidonta varicosa* exists in the Chattooga River from just below Warwoman Creek down to Tugaloo Reservoir (Fig. 2). This species should be considered continuously occurring throughout this reach. It is reproducing and has a viable population.

No additional taxa were found during surveys of the Toccoa River. However, an individual *Lampsilis fasciola* was found farther upriver in the Toccoa River, thus extending the known range of the species.

In addition to other aquatic sampling, 24 streams were sampled with the cooperation of GA DNR in 2004 for the management of the trout program on the forest.

Recommendation: Based upon our present understanding of *Alasmidonta varicosa*, the Chattooga River population is the best in the Southeast from Virginia through Georgia. No changes are needed in overall monitoring or management. Goals, objectives, and standards are being met.

C3 – Management Indicator Species and Their Habitats

- Ensure maintenance of plant and animal species diversity and viable populations of all existing vertebrate species. These are the new forest Management Indicator Species. These answer monitoring questions 2, 3, 4, 7, and 8.

The forest selected management indicator species (MIS) are to be used as appropriate on a forest-wide basis. The implementation process requires the selection of all forest-wide MIS that geographically occur within a project area. This procedure ensures that special habitat considerations are taken into account in meeting viability objectives. Habitat condition is a primary factor influencing population levels for these species. A valuable tool for evaluating habitat conditions is the Continuous Inventory of Stand Conditions (CISC) database, which is compiled from periodic field inventories throughout the forests.

Other sources of information that are utilized to monitor and evaluate MIS include, but are not limited to, annual harvest records of game species; statewide hunter surveys from Georgia Department of Natural Resources (GADNR), population estimates for various WMA provided by GADNR; bait station surveys for bears; bog turtle surveys in appropriate habitats; various occurrence records and references; electro-fishing surveys; water quality monitoring; and red-cockaded woodpecker annual monitoring by roost checks at clusters.

Forest personnel continue to gather songbird data for trend analysis. Data on occurrences of neotropical migratory and resident land birds is collected annually during the breeding season. This data is helping to build a nation-wide database that will detect changes in populations over time. Forest Service biologists have been active in the "Partners in Flight" program and continue to maintain close contact with professional ornithologists (GADNR, Cornell University) and other bird experts to keep current and knowledgeable on management of these species.

The new MIS for the forests are as follows:

Acadian flycatcher

The Acadian flycatcher is strongly tied to riparian areas on the forest. According to bird survey data that has been collected on the Chattahoochee-Oconee National Forest since 1992, the Acadian flycatcher population has remained fairly stable with some slight increases in abundance trends within the last four years. The statewide Breeding Bird Survey that is conducted each year by birding volunteers has also shown some slight in-

creases in trends from 1966-2003. Acres of riparian habitat are expected to remain constant in the future. The use of streamside and riparian protection standards provided in the revised forest plan will insure the quality and quantity of riparian corridor habitat needed for the Acadian flycatcher in the future.

Chestnut-sided warbler

The chestnut-side warbler is typically associated with high elevation, early successional habitat. This habitat is somewhat limited in Georgia. This bird species does not occur on the Occonee National Forest, but it is occasionally encountered on the Chattahoochee National Forest at elevations above 2,000 feet. The revised forest plan has addressed the need for creating some high elevation, early successional habitat for this MIS and other associated species requiring this limited habitat. According to bird monitoring surveys conducted annually on the forest since 1992, overall trends in abundance are relatively low, with most occurrences being reported from the Toccoa (Blue Ridge) Ranger District. The Breeding Bird Surveys also show that the chestnut-sided warbler has been experiencing some declining trends statewide over the past several decades. Wildlife improvement, timber harvest opportunities identified in the forest plan along some higher elevation locations will enhance habitat for this warbler.

Field sparrow

The field sparrow prefers old fields, idle croplands, brushy woodlots with deciduous edge, and it is associated with early successional habitat needs. This habitat is somewhat limited on the Chattahoochee National Forest. According to bird monitoring surveys conducted annually on the forest since 1992, population trends have fluctuated on the Oconee, with some slight increases occurring over the past few years. However, total abundance trend numbers are relatively low overall. The Breeding Bird Survey also shows slightly decreasing trends statewide. Some early successional habitat improvement project opportunities identified within the forest plan should enhance future habitat conditions for this sparrow and its associates.

Hooded warbler

Hooded warblers are found in mature, mixed hardwood forests that are structurally diverse. Bird monitoring survey data suggests that the hooded warbler population has increased slightly, both on the forest and statewide. The overall amount of preferred habitat of older hardwood stands has increased over the past decade, making more suitable habitat available for the hooded warbler. The forest plan provides for maintaining an abundance of mature hardwood sights preferred by this species and other late successional preferring fauna.

Ovenbird

The ovenbird is strongly associated with mature forests that contain interior forest habitat. It can be found in hardwoods, or mixed stands with a fairly closed canopy. It is much more common on the Chattahoochee than it is on the Oconee National Forest. Relative abundance trends from bird point-count monitoring data shows a high number of occurrences for this species. This would seem to indicate that mature, forest interior habitat is abundant on the Chattahoochee National Forest. Forest plan standards will help to insure an abundance of mature, late successional forested habitat will be maintained in the future.

Pine warbler

As its name implies, the pine warbler frequents mid to late successional pine forests throughout the year. Its abundance trend is somewhat higher on the Armuchee/Cohutta Ranger District and the Oconee National Forest, where there are more pine type stands available for them use. Overall, annual bird monitoring data for the pine warbler on the forest shows its numbers to be relatively stable since 1997. Prior to that time period, some pine stands were lost from southern pine beetle damage, around 1993-1997. No changes in pine forest habitat are expected from implementation of the revised forest plan.

Pileated woodpecker

The pileated woodpecker is found in a variety of forested habitats, from dense river bottoms to open upland forests of mixed forest types. It requires fairly large trees to produce snags that are used as nesting cavities, meaning that is also tied to more mature forest areas for reproduction. Bird monitoring survey data shows that this large woodpecker is doing well on the forest and statewide in Georgia. Forest plan provisions designed to maintain and retain numerous large snags for nesting structures are in place. This will insure that pileated woodpecker populations will continue to be maintained or even increased in the future.

Prairie warbler

The prairie warbler prefers to nest in shrub land habitats, usually associated with regeneration or thinning cuts (early successional habitat). Bird monitoring survey data for the forest suggests that abundance trends for this bird shows a relatively stable population, although some fluctuations occur from year to year. Opportunities to create early successional habitat needed for this species and its associates is pro-

vided for in the revised forest plan. This should help to insure its presence on the forest in the future.

Scarlet tanager

The scarlet tanager is mainly found in upland oak communities. According to bird monitoring trend abundance data, it is not very common on the Oconee National Forest, but it has a fairly high level of occurrences on the Chattahoochee National Forest. Statewide data from the Breeding Bird Surveys conducted annually reveal a positive trend for this forest bird. Forest plan standards are in place to make sure that upland oak habitat will be maintained in the future.

Swainson's warbler

The Swainson's warbler is found in early successional habitat in the Piedmont. Therefore, it would be expected to occur more often on the Oconee National Forest. It is mainly associated with canebrakes and thick understories in bottomland habitats that occur near water. There are specific provisions in the revised forest plan to actively manage and restore canebrake habitat where they historically or currently occur. The total number of occurrences reported from the bird monitoring surveys over the last 12 years is so low (only 4 occurrences) that an abundance trend has not been established on the forest. The statewide Breeding Bird Survey trend for the Swainson's warbler is positive, as abundance trends seem to be increasing in the Piedmont. Site specific management plans to restore canebreaks (Swainson's habitat) are being written for 2005.

Wood thrush

The wood trush is a forest bird found in moist deciduous or mixed stands. It occurs with somewhat more frequency on the Oconee National Forest than it does on the Chattahoochee National Forest. Overall, the wood thrush population trends have remained fairly stable over the past 12 years according to data from the bird monitoring surveys conducted annually. No significant increases or decreases were evident during this monitoring period. Statewide Breeding Bird Surveys show only a very slight decreasing trend in Georgia over the past few decades. The revised forest plan standards should continue to provide protection of moist forest type areas, and this will maintain or enhance suitable habitat conditions for this bird along with a wide array of other associated species.

Red-cockaded Woodpecker Endangered Species*

U.S. Fish & Wildlife Service
Photo by ©James F. Parnell

During the 2004 monitoring season, red-cockaded woodpecker numbers decreased slightly on the Oconee National Forest. This is the second year these numbers have decreased. The number of active cluster sites went from 16 to 14. 15 eggs were found in 10 nests. There were also 15 new cavity trees located. Annual monitoring of the population will continue, along with continued habitat maintenance and structural and nonstructural habitat improvements. An ongoing commitment to management of this species will help ensure its viability on the Oconee National Forest. Implementation of the RCW Recovery Plan is well under way with the new plan incorporating its guidance. In FY 2005, the forest will have approved approximately 4900 acres of RCW habitat thinnings, and about 11300 acres of habitat area improvements that includes first time thinnings and midstory reduction work. There will also be numerous artificial cavity nest boxes (inserts) placed throughout suitable habitat. Prescribed burning will also continue in these areas. We recommend no management direction change at this time and further implementation of the Recovery Plan.

Smooth Coneflower – T & E

Locations are known and protected on the forest. Inventories continued across the Chattahoochee for new locations of the smooth purple coneflower (Echinacea laevigata). No new sites of the species were found in 2004. Coneflower populations are presently stable on the Forest.

White-tailed Deer – Demand Species

Deer harvest data gathered by the Georgia Department of Natural Resources Game Biologists indicates that populations in the mountains and ridge and valley sections of the state (Chattahoochee National Forest) are stable. Some fluctuations in numbers do occur from year to year, and these differences are primarily due to differences in the annual mast crop. Piedmont (Oconee National Forest) harvest data show higher overall deer densities, and state regulations have been liberalized to help reduce population numbers in some locations. The forests will continue to monitor deer densities and deer populations are expected to remain relatively stable, or even slightly increasing in some cases. No need for management change is recommended.

Black Bear - Demand Species

The black bear population in north Georgia and the Chattahoochee National Forest has been steadily increasing for the past 25 years. Most suitable habitat is occupied by bears, while human population growth is increasing dramatically in north Georgia area. Consequently, bears are increasing being found in nuisance situations on the Forest (Georgia Department of Natural Resources Biologist Dave Gregory).

Visitation rates from the black bear bait-station survey that are conducted annually by Georgia DNR and Forest Service Biologists revealed another record high year of bear "hits" in 2003. A total of 59.7% bear visitations from a standard 519 stations scattered over the north Georgia bear habitat region was observed.

Bear hunting is an important part of Georgia's overall bear management program. Hunting helps regulate the Georgia mountain bear population and this in turn probably helps to limit associated nuisance problems overall. A total of 256 bears were harvested in north Georgia during the 2003 fall hunting season, another record harvest for the north Georgia population. The black bear population, from a management and habitat perspective, is expected to be maintained at current levels that are probably near carrying capacity over the life of the new revised Forest Plan.

D-1 – Range, Pastures – Oconee NF only

- Assess the utilization as well as capacity of production of forage in order to determine stocking rates and the overall grazing use.

Allotment management plans specify the animal units (AU's) for each allotment. The health of the forage is determined by on-site inspections and soil analyses, both of which are completed twice a year. Inspections include counting of livestock and evaluations of fencing, riparian areas and cattle guards.

Recommendation: No changes are needed. All allotment inspections have complied with management plans. Forage is healthy based on soil analyses and visual checks. The Ashley allotment has not been re-leased. It will now become part of the management prescription in which it is located and become a permanent wildlife opening. In March of 2005, the Smith, Uncle Remus, Redlands, and Hadaway allotments will become part of the management prescriptions in which they are located. All of these areas will become permanent wildlife openings.

E2 – Reforestation and Timber Stand Improvements

- Ensure that harvested areas are adequately restocked within 5 years and that scheduled reforestation and Timber Stand Improvements (TSI) are accomplished. This will respond to question 18.

During fiscal years 2003 and 2004, the 5-year restocking requirement was met. The forest has begun implementing wildlife habitat restorations through various silvicultural systems. There were no regeneration harvests. Some insect killed pine stands were planted. See P-4.

Recommendation: No changes are needed. A significant number of pine and pine-hardwood stands have been affected by the southern pine beetle epidemic, which lasted up to four years in some parts of the Forests. Reforestation plans are finalized and will take place in FY 2005.

E3 – Management Prescriptions and Silvicultural Standards

- Ensure that the following items are in compliance with the Forest Plan: size of openings, dispersal and shape of openings, timing of reentry, restocking standards, and systems of silviculture. This will respond to question 18 and 19.

There were no planned regeneration harvests during this time period. All other planned activities were well dispersed, timing of reentry was within bounds, and restocking standards were met.

There were some areas where southern pine beetle infestations have occurred. A number of these natural occurring spots were partially or entirely harvested to control the spread of the infestation; reduce the hazardous conditions of the dead trees along roads and in and adjacent to recreation areas; reduce the risk of intense wildland fires, and provide some raw materials to the local market.

Recommendation: No changes are needed.

E4 – Effects of Implementing management practices

- Compare actual timber outputs with those in the Forest Plan for 1) acreage cut by method of cutting; 2) acreage cut by age class and productivity class; and 3) evaluate yield predictions. This will respond to question 17.

During years 2003 and 2004 there have been some planned timber harvests related to wildlife habitat creation and improvement; but projections have not been within the 20 percent of planned goals as stated within the Forest Plan.

Recommendation: The Forests should continue to plan timber harvests consistent with ecosystem management principles and focused on wildlife (both

game and non-game) habitat improvements as well as restoration or maintenance of forest health. The new Plan has no planned timber harvests. All timber sales are by-products of other projects such as insect and disease prevention, wildlife habitat manipulations, storm salvage, or forest health thinnings.

E5 – Suitability of Silvicultural Systems, Especially Group Selection and Shelterwood Cutting Methods

- Assure treatments by all silvicultural systems are compatible with all resource values and with multiple-use management principles. This will respond to question 19, 7, and 18.

Group selection was being implemented for Cerulean Warbler habitat creation on the Brasstown Ranger District. Single tree selections were being implemented for early successional habitat creations on various locations on the forest, too. That system has been implemented to favor mature oaks and hickories. Visual quality is good with these types of silvicultural systems.

E6 – Forest-type conversions

No forest-type conversions have occurred.

F1 – Water Quality

- Ensure compliance with Federal, State, and local standards.

Water quality monitoring (other than swimming water) consisted mainly of implementation monitoring of ongoing projects and forest management activities. The focus of monitoring continues to be erosion and sedimentation, which can cause impacts to the stream system, aquatic habitats, and riparian areas.

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Primary methods used include visual inspections of project areas and evaluations of nearby streams and adjacent riparian areas. A short list of typical projects evaluated includes road maintenance and obliteration, recreation trail maintenance, and prescribed burning. The emphasis of monitoring was to assess the implementation of Georgia's Best Management Practices for Forestry, and track conditions of streams on Georgia's 303d list.

Recommendations: No changes needed; monitoring indicates that goals, objectives, management area direction, and standard and guideline implementation is being achieved.

F2 – Riparian Area Management

- Ensure compliance on wetlands, floodplains, and watercourse protection strips.

A review of potential impacts of projects in proximity to stream channels, 100-year floodplains, riparian areas, and wetlands was conducted on a small sample of projects. Forest management activities (such as road maintenance and obliteration, prescribed burning, trail construction and maintenance, and stream bank restoration) are evaluated during the planning phase, construction phase, and after project completion. Projects are designed to minimize or mitigate impacts.

Monitoring results continue to emphasis disconnecting roads and trails from watercourses using properly placed broad-based dips, water bars, cross-culverts, and lead-off ditches. Road maintenance continues the use of coarse-sized gravel that is free of fines in order to armor road surfaces and reduce erosion and sedimentation. As funding is available, culverts are replaced to meet standards set by Best Management Practices for Forestry.

Monitoring Question 15 (new plan). 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?

Watersheds with streams identified on the Georgia 303(d) list (not meeting water quality standards) have been delineated in a Forest Plan management prescription titled Watershed Restoration Areas (9A3). Under the revised Forest Plan these watersheds will receive emphasis on improving conditions that degrade water quality. Typically these watersheds have been identified due to past land uses, e.g. old roads that contribute sediment or other impairment agents. One example of a watershed in this prescription is the North Fork of the Broad River, located on the Chattooga District. The stream segment on National Forest being impacted is included within the Locust Stake OHV Area. Actions are being planned to remove active trails within the riparian corridor and restore conditions to a natural function.

The revised Forest Plan also established 5th level hydrologic units (HUCs) as management areas for the Forest, including both National Forest and private lands. This format allows the Forest to conduct assessments within a delineated boundary, and identify probable sources of impact to be restored. Watershed assessments will also be undertaken at a watershed level within these HUCs to develop strategies at the project level for improving overall watershed conditions.

Stream surveys have been undertaken in several sub-watersheds on the Forest to determine existing, baseline conditions including macroinvertebrate populations, streambed conditions, and other physical parameters of the riparian corridor that provide indications of watershed health.

Monitoring Question 16 (new plan). What are the conditions and trends of riparian area, wetland and floodplain functions and values?

The revised Forest Plan provides direction on the management and protection of riparian areas primarily through the implementation of Management Prescription 11, Riparian Corridors. A desired condition for the resources within this corridor is to minimize the impacts of human activities on riparian functions and values, and maintain or enhance natural processes. Water quality is a primary concern, often impacted by sediment output from roads, trails, and dispersed recreation sites. As the revised Plan is implemented the lands within the riparian corridor will be evaluated for impacts and restoration undertaken.

One management activity being undertaken to improve riparian corridor conditions is the closure and restoration of unauthorized recreation uses, e.g. illegal OHV trails. Approximately seven (7) miles of illegal trails were closed to vehicle use and rehabilitated within the Anderson Creek watershed on the Toccoa Ranger District.

Recommendation: No changes needed; monitoring indicates that goals, objectives, and standards are being achieved. The new forest plan management prescription 11, addresses riparian corridors in particular.

G1 – Minerals

- Evaluate effects of minerals and energy activity. This will respond to question 19.

Mineral activity remained at a low level on the forests during fiscal years 2003 and 2004. The demand for oil and gas leases is nonexistent. Most activity is recreational-type mineral exploration (gold panning) and common variety mineral sales.

Recommendation: No changes are needed; monitoring indicates that goals, objectives, management area direction, and standards and guidelines are being achieved.

K2 – Erosion Control Compliance

- Ensure success of erosion control practices on timber sale areas, roads, wildlife improvements, and construction sites. Responds to question 16.

Field evaluations of soil disturbance areas were conducted to assess the installation and effectiveness of erosion control practices in use.

Evaluations were conducted mainly on road maintenance and obliteration projects, illegal OHV trail closures, watershed restoration projects, prescribed burns and wildland fires.

Rich Mountain Road

The current road is not in a desirable condition. The road prism does not allow for adequate drainage for overland flows and stream crossings are inadequate to minimize sediment movement into the stream channels.

Segments of the road prism hold water in the roadbed and does not drain. The retention of water in the roadbed creates large mud holes that are typified by the picture at left.

Erosion is a major concern. The road does not comply with best management practices for erosion control and as a result of the water activity on the road prism, many sections of the roadbed are deeply rutted and not safe for driving. In an attempt to avoid saturated sections of roadbed, users have created new travel ways. These bypasses increase the disturbed area and the potential for erosion.

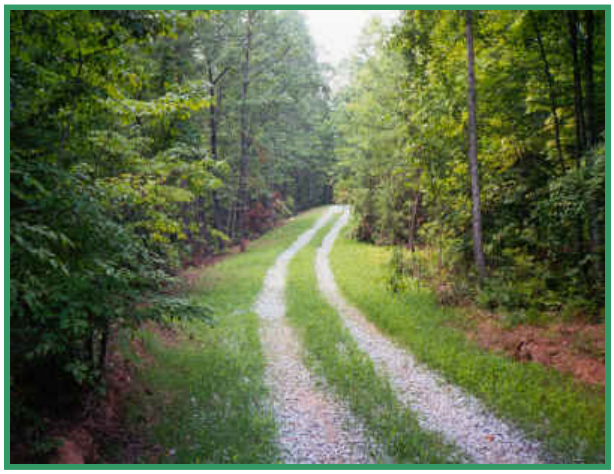
The road prism itself has become the intermittent stream channel. The side slopes also have several seeps and springs, which drain directly onto the roadbed, and either flows across the road prism or along the road prism before flowing down stream.

Recommendation: Monitoring is constantly on-going. The Rich Mountain Road has had a service contract let for complete maintenance and rehabilitation in fiscal year 2005. 3 Segments will be rebuilt, one segment is to be closed entirely after stabilization. No changes in the Plan are recommended.

L2 – Road Standards Compliance

- Ensure road construction, reconstruction, and maintenance complies with standards.

All road construction, reconstruction, and maintenance activities comply with Forest Plan standards throughout all project phases. Supervisory personnel monitor compliance with standards during field inspections as part of the project implementation. There are 1547 miles maintained forest roads and 52 bridges. These are examined annually. Hurricane Ivan has impacted the road system of some ranger districts. These roads are being assessed.



Recommendation: No changes needed; monitoring indicates that goals, objectives, management are direction, and standards are being achieved.

P-1 – Wildland Fire

- Acres and number of wildland fires by cause. Evaluate the extent and effects of wildland fires on national forest lands.

During 2004, there were 48 fires on the Forest burning 633 acres of National Forest System lands. This was a sharp decline over the past two years due to getting ample rainfall in fall and winter of 2003 (October – March). Arson, debris burning, railroads, lightening and campfires make up the fire causes. There were some fires undetermined.

Rainfall from mid-2002 to late summer of 2004 has been closer to normal based the historical averages.

Fire in the urban interface continue to be a concern. Development of mountain top properties that are adjacent to National Forest System lands is increasing. Narrow, single-lane access roads and limited water supplies are factors that make protecting these homes from an uphill fire run very difficult. There are some interface areas being assessed for fuel loading reductions on both forests. These are mainly where private homes are adjacent to the forest boundaries.

Forest fuel loading, for the past four years, has increased due to severe southern pine beetle infestations along with storm damage. These sites will present a significant challenge to our wildfire suppression efforts due to greatly increased fuel load-

ing and difficult access and fireline construction conditions. Fires in the next several years may be larger and more difficult to contain given the changing conditions.

Recommendation: Goals, objectives, and standards were achieved during this time period.

P-2 – Prescribed Fire

- Acres burned with prescribed fire. Evaluate the extent and effects of prescribed fire on national forest lands. Will respond to questions15, 18, 19, and other habitat related management.

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In 2003, 27,253 acres were prescribe burned, with 17,832 of the acreage burned on the Oconee National Forest.

Post burn evaluations completed for all of these prescribe burns document that most of the burns fully achieved the objectives set by the interdisciplinary team during the planning of the treatment.

Salamander/Fire Surveys

The purpose of this project is to measure and compare salamander density and diversity in response to prescribed winter burns on the Oconee National Forest and the Tallulah Ranger District of the Chattahoochee-Oconee National Forest. The 2004 survey season is complete. Identical surveys are planned for 2005. Salamander surveys were conducted in units that were burned several years ago (1999-2000), more recent burns (2002-2004), as well as in unburned control units. Three replicates were used in each burn class for each forest (9 units total).

Surveys within burn units included two upland stands per unit and two riparian (Tallulah)/wetland plots (Oconee) per unit (four plots per unit). Surveys were time-constrained (20 minutes per plot). We also conducted dipnet surveys for Ambystomatid larvae on the Oconee National Forest where habitat data is being collected. Where significant differences in abundance and diversity among stands are found, we will use multiple linear regression methods in order to determine which habitat variables (i.e. burn history, microhabitat measurements, and stand measurements) are contributing to differences.

Salamander/Fire Surveys 2004 Survey Results/Preliminary Observations

Mean Capture Numbers (standard deviation)

	Unburned	1999-2000 Burns	2002-2004 Burns
Tallulah District			
Upland	2 (3.20)	0 (0.52)	1 (1.17)
Riparian	15 (5.19)	17 (5.19)	14 (4.87)
Oconee N.F.			
Upland	5 (4.07)	4 (4.08)	5 (4.50)
Wetland	1 (1.03)	4 (1.87)	3 (2.40)

Number of Species Captured

	Unburned	1999-2000 Burns	2002-2004 Burns
Tallulah District			
Upland	4	1	2
Riparian	6	6	7
Oconee N.F.			
Upland	3	2	2
Wetland	4	5	4

Recommendation: Plan burning strategically with public involvement as a program per District or per zone to address locations to include or exclude, burning cycle length, burn timing (dormant or growing season), monitoring items, and project-specific mitigations needed. Enter post-burn evaluation data in a corporate database with GIS display capability for long-term and large-scale analysis.

P-3 – Air Quality

- Report on Air Quality Management Program and assure compliance with air quality standards for prescribed burning. Will respond to question 19.

All prescribed burn plans identify acceptable values for mixing heights and transport winds. Acceptable transport wind directions are those that avoid carrying smoke toward identified smoke-sensitive areas. Smoke screening maps are prepared for each particular burn plan. An overall smoke screening map is prepared, updated, and posted on each district. Predicted mixing heights and transport winds in the weather forecast for the day of the burn are compared to the acceptable values of the burning plan.

When prescription parameters are in range, a burning permit number is requested from the Georgia Forestry Commission prior to ignition. This permit is granted or denied primarily on the basis of air quality. Ignition does not occur without this permit.

We expect that soon, after baseline data has been taken, the US EPA will be issuing particulate matter emission budgets. The Forest Service will have to apply for an emission amount which would then be compiled and adjusted with all other applications. We would be issued a budget and EPA air quality monitoring stations would be used to check how successfully the system is working. If budgets are cumulatively exceeded, new budgets would be drawn up by EPA and the Forest Service would get a new budgeted amount. Prescribed fire will be affected because the particulate sizes targeted by this procedure are a significant component of prescribed fire smoke.

Recommendation: Begin burning earlier in the dormant season when burning on private lands is less likely in order to avoid cumulative smoke problems. Begin burning earlier in the day to reduce the amount of smoldering material contributing smokes as humidity rises with darkness. Continue to work cooperatively with regulatory agencies, cooperating agencies, and the public on smoke management issues. Continue and increase the use of fire information personnel contacting the public prior to and during large burns to explain the use of prescribed fire and answer questions. When growing season burns are required, work with the Georgia Forestry Commission in assuring air quality compliance.

P4 – Insect and Disease

- Determine acres and volumes of timber affected, and assess effect of forest management on insect and disease occurrence. Will respond to question 6.

Southern pine beetle: Infestations increased in the late summer of 2001 and peaked during the growing season of 2002. An estimated 6,500 acres of mostly southern yellow pine have been killed by an estimated 2,500 infestations across the Forests.

During fiscal years 2001 and 2002 there were small volumes of timber salvaged and a few direct control efforts of active infestations.

Using the aerial survey of existing SPB spots taken from previous detection flights by the GA Forestry Commission and US Forest Service, we re-visited the majority of those spots to determine the feasibility of restoring the sites to pine or pine/hardwood regeneration areas. We used the following criteria to determine the feasibility:

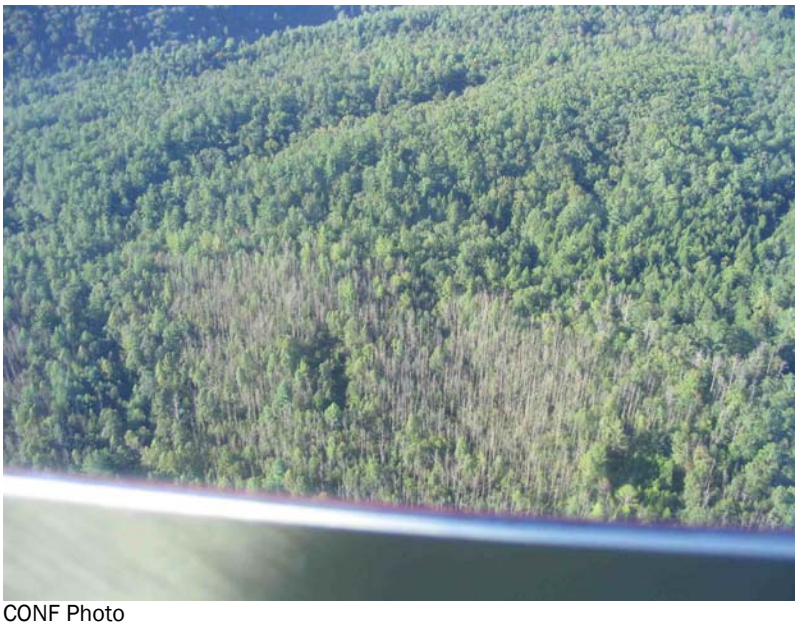
- Location. Spots within Management Prescriptions 8.1.A, 8.A.2, and 9.H are better candidates for restoration.
- Size. Spots had to be at least 5 acres before restoration would be considered.
- Accessibility. Spots should be within ½ mile of an existing road.

- Pre-existing forest type. Spots that were originally pine or pine/hardwood stands are better candidates for restoration.
- Age of Mortality. The more recent SPB mortality makes a greater likelihood of successful restoration.

Using the above criteria, we found 52 potential candidate stands for Southern Pine Beetle restoration. However, each of these stands should be examined on the ground before the final decision is made to restore them. It may be likely that natural regeneration has been established making restoration unnecessary. Other stands may be typed as hardwood or hardwood/pine stands and left to regenerate naturally.

CONF Photo

Patches of SPB killed pines



CONF Photo

Patches of SPB killed pines

Close coordination continues with Forest Health Protection in determining the best strategy for control of the Southern Pine beetle. Districts continue to monitor and remove infested timber that are hazardous to roads, recreation areas, and facilities. Restoration of impacted forest stands will be ongoing.

Gypsy moth: Monitoring shows no outbreaks anywhere across the two Forests.

Hemlock woolly adelgid (HWA): The HWA has infested hemlock trees in Rabun County on the Tallulah Ranger District and also in portions of Towns County on the Brasstown and Tallulah Ranger Districts. The very northeast part of this area have heavy infestations, including some acreage within the Ellicott Rock Wilderness Area.

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HWA Egg Masses (white specks)from a Hemlock near Satolah

The HWA feeds on plant fluids at all life stages of eastern hemlock and can kill a mature hemlock tree in about five to seven years. This insect is non-native and therefore has no natural enemies. The Tallulah Ranger District has released predator beetles that feed on the HWA and reduce their populations, but there is no method currently known to eradicate the adelgid. This is being done in cooperation with Georgia Forestry Commission and USFS Research.

We concentrated the bulk of the aerial survey in the Upper Chattooga River watershed. It became obvious that many Eastern Hemlocks are dead or dying from the Hemlock Wooly Adelgid. The trees appear gray to yellow from the needle cast, and some trees were completely denuded of needles. As expected, the majority of affected trees were along the Chattooga River or up tributaries to the river.

CONF Photo

CONF Photo

CONF Photo

In 2003, USFS-Forest Health Protection initiated a pilot survey to develop sampling and diagnostic methods for early detection of Oak Dieback (*P. ramorum)* introductions. This work was coordinated with the state forestry agencies in Georgia, North Carolina, South Carolina, Tennessee and Virginia. About 150 locations were surveyed and nearly 10,000 samples were processed. No *P. ramorum* was detected.

Recommendation: Continue close monitoring coordination with Forest Health Protection and the Georgia Forestry Commission. Continue predator beetle releases. Processing of decisions in compliance with NEPA need to be planned so the Forest can react in a timely manner to insect and disease epidemics. In addition, preventative efforts should be taken to reduce the risk of insect and disease damage across the Forests.

P5 – Status of Law Enforcement Problems, Especially at Parking Areas near Wilderness

- Determine if concerns of personal safety and property security are improving. Will respond to questions 9, 10, and 19.

Parking areas at most wilderness sites on the forest have continued to have a low level of law enforcement problems. However, several of the trailhead parking lots at some of the most popular wildernesses continue to experience high levels of vandalism and theft. Law enforcement officers (LEOs) have conducted extensive investigations and increased surveillance at these parking areas. See B-1.

Chattahoochee-Oconee Recreation Fee Demo Program involves adding fee stations. These have created additional vandalism or theft of monies deposited in the fee tubes.

Recommendations: Monitoring indicates that goals, objectives, and standards are being achieved. Increased surveillance will continue at the problem areas until the break-ins of vehicles and vandalism of fee tubes subside. More law enforcement presence is needed in these areas, but is not currently available because of staffing levels. The Forest should consider having district staff in these areas during high visitation times, and collecting fees in a timely manner. Additionally, older fee tubes need to be replaced with current designs that prevent theft.

P6 – Status of Total Law Enforcement Program

- Evaluate effectiveness of law enforcement efforts in resolving concerns identified in Plan issues.

The forest law enforcement program operates under three primary emphasis areas:

1. Public safety;

2. Property protection, including protection of resources, personal and government property, marijuana detection and eradication; and

3. Occupancy enforcement, including trespass cases.

Law enforcement levels and priorities are meeting the needs of the visiting public to the extent possible with current level of LEOs/Agents.

Recommendations: Monitoring indicates that goals, objectives, area direction, and standards are being achieved within current staffing capabilities. More LEO presence at OHV/ATV trail systems has reduced illegal off-trail use. Increased visitation and increased crime statistics on the Forest has created a need for additional law enforcement staff. The continued cooperation with State, local, and other Federal law enforcement agencies has helped with the increased burden on law enforcement staff.

RESEARCH

Forest Monitoring Studies and Research

The Forests have numerous on-going projects either designed specifically to give answers to monitoring questions or which provide monitoring data as part of wider objectives. Most, if not all are multiyear research projects and thus results are not available at this time.

Bat surveys will continue on both forests. These are conducted both by USFS – Research, and the University of Georgia. West Nile Virus bird netting is done by the University of Georgia.

RESPONSE/FEEDBACK

Attached is a form you can use to give us your thoughts or comments on this report or on the subject of Forest Plan monitoring in general. Your comments can help us to do a better job. Send to: *Forest Supervisor, 1755 Cleveland Highway, Gainesville, GA 30501*. To reach us, you may call telephone number 770/297-3000.

Please visit our web site at: http://www.fs.fed.us/conf for further information and forest news.

MONITORING AND QUALITY REVIEW

Response/Feedback FY 2003-2004

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