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Department of
Agriculture

Forest Service
Southern Region

Fiscal Year 2006
Monitoring and Evaluation Report
Chattahoochee-Oconee National Forests

Jones Creek Impoundment, Lumpkin County GA

September 30, 2007

2006
Monitoring and Evaluation Report
Chattahoochee-Oconee National Forests

Exact observations and demonstrated truths.

September 30, 2007

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FOREST SUPERVISOR'S ADEQUACY STATEMENT

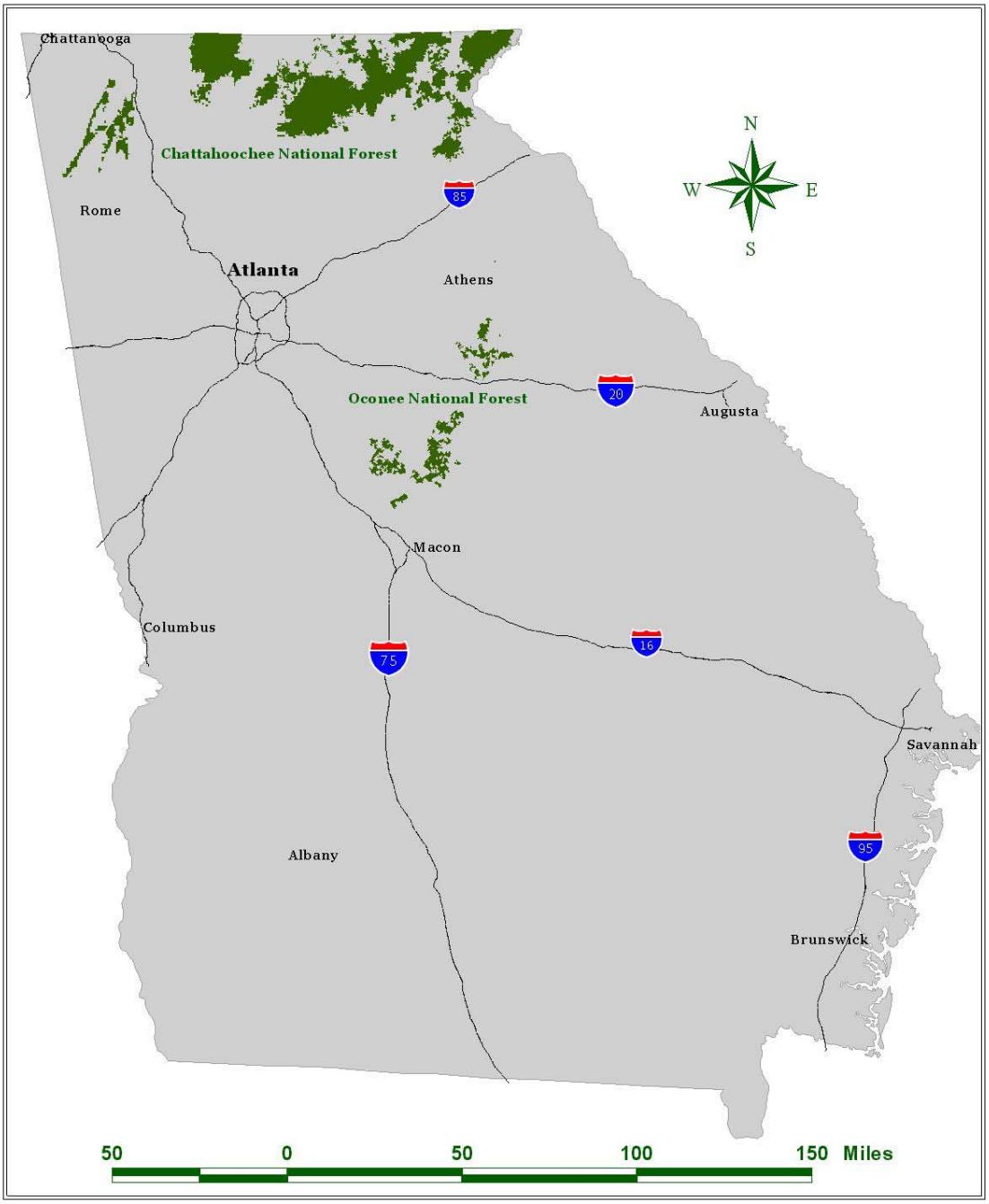
I have evaluated the monitoring results and recommendations in this report. The recommendations will be implemented, unless new information or changed resource conditions justify a change. I have considered and am making funding shifts in the budget necessary to implement these actions. In addition, 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/ George M. Bain

GEORGE M. BAIN
Forest Supervisor

Date
September 30, 2007


Chattanooga
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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 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.

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 has begun 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 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
Year 2006

Monitoring Question.	Brief Description	Meeting Plan Intent	Need clarification/ improvement					
			Management Prescription	Standard	Management Direction	Allocations	Outputs	Goals Identified
1	Rare Communities	Yes						
2	Landscape level composition	Mostly						
3	Key Successional Habitats	Yes						
4	Terrestrial Habitats	Yes						
5	Aquatic Habitats	Yes						
6	Forest Health Threats	Yes						
7	Federally listed and Viability Concerns	Yes						
8	Demand Species	Yes						
9	Recreation Experience	Yes						
10	Recreation Impacts on Environment	mostly						
11	Wilderness Character	Yes						
12	Wild and Scenic River Condition	Yes						
13	Scenery and Recreation Settings	yes						
14	Cultural	Yes						
15	Watersheds: Maintained and Restored	Yes						
16	Conditions: Wetland, Floodplain, Riparian	Yes						
17	Outputs Compare with Projected	Yes						
18	Silvicultural Requirements	Yes						
19	Plan Objectives and Standards Meeting Purpose	Most						

The following are possible recommendations:

- No changes needed; monitoring indicates that goals, objectives, management prescriptions, and standards are being achieved.
- Refer recommended action to the appropriate line officer for improvement in application of management area direction and standards interpretation.
- Forest Plan Objectives not being met.
- Forest Plan Amendment required.
- Modify or clarify the goals, objectives, standards or management prescriptions.
- Revise the schedule of outputs.

DETAILED MONITORING AND EVALUATION REPORT

The evaluation of findings under the following Monitoring Questions will lead forest managers to these determinations.

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

Element : Trends in the conditions of each known rare community type

a. Seven bogs on the Chattahoochee-Oconee NF are being protected, and are in various stages of maintenance and restoration. (This includes one additional bog not addressed in the last report). Maintenance and restoration of the open character and hydrology of these sites are being accomplished through removal of woody vegetation by hand tools, girdling of trees, and limited prescribed burning. In addition, the removal of a large population of Nepal grass (*Microstegium vimineum*) has begun in one of the larger bog restoration sites. Many of these activities are being accomplished with the assistance of the Georgia Plant Conservation Alliance, an organization comprised of federal and state agencies, NGO's, and universities.

Two of the bogs contain the rare bog turtle; one is naturally occurring and the other one which is in the current range of the turtle has had radio-tagged turtles placed in it through the efforts of the USFS, Georgia DNR non-game biologists, and the Chattahoochee Nature Center. Several of the bogs are serving as in-situ conservation sites for rare plants, including the federally listed swamp pink (*Helonia bullata*) and the locally rare mountain purple pitcher plant (*Sarracenia pupurea*) and the Carolina sheep laurel (Kalmia Carolina). For these sites, plants are propagated at the Atlanta

Botanical Gardens and State Botanical Gardens of Georgia from local genetic stock, and then planted into some of the bogs where appropriate.

b. Cliffs and rock outcrops, as well as caves and mines, are being protected and maintained by following the associated LMP standards.

c. The best examples of canebrakes occur on the Oconee District, where they are being protected, maintained, and restored through prescribed burning. Other Districts with small canebrakes are in the process of completing NEPA for projects that include maintenance and restoration of canebrake communities.

d. Table mountain pine restoration is an ongoing project on the Tallulah portion of the Chattooga River District, through thinning and prescribed burning. The Blue Ridge Ranger District also is working on a project addressing table mountain pine restoration.

e. The pine-oak woodlands found in the upper Piedmont portion of the Chattooga River District are in the process of being restored through thinning and prescribed burning. The associated plant communities, including the federally listed smooth coneflower (*Echinacea laevigata*) are being augmented with plants propagated from seed collected on site. Out-planting is scheduled to occur in November, 2007. Several monitoring plots have been established in FY 2007 to monitor the effects of the management.

Because of the protection, management and restoration activities briefly described above, as well as both forest-wide and community-specific standards present in the LMP, the trend in the conditions of these rare communities is one of significant improvement.

Element : Acres and/or number of occurrences of rare communities treated to maintain or restore desired conditions.

a. As stated above, 7 mountain bogs are receiving treatment to improve and restore their bog characteristics. This is one additional bog compared to the previous report.

b. Rock outcrops, cliffs, caves and mines are fixed features on the Forest landscape. It would be difficult to estimate the acreage or number of sites of this habitat. However, protection through LMP standards is maintaining the desired condition in all of these communities.

c. In addition to the Oconee canebrake acreage mentioned in previous reports; through plant inventories conducted for proposed projects on the Chattahoochee, additional cane acreage has been identified and proposed for management to restore and expand these communities.

d. Within the past few years A few hundred acres of table mountain pine have been thinned and burned on the Tallulah portion of the Chattooga River Ranger District. Researchers are currently monitoring these acres. Also, the Blue Ridge Ranger District has completed NEPA for a proposal that includes restoration of approximately 108 acres of table mountain pine by removal of dense mid and understory, thinning, and prescribed burning.

e. Acres thinned and burned for pine-oak woodland restoration on the Chattooga River District in FY 2006 and 2007 were approximately 1000 acres.

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

Success in maintaining and restoring composition, structure, and function of forest ecosystems within desired ranges of variability is reflected by both changes in forest condition and by levels of management and other effects that are shaping these communities. Monitoring will include tracking the abundance of major forest cover/community types and levels of management activities conducted to maintain and restore desired conditions. Population trends and habitats of Management Indicator Species are monitored to indicate effects of national forest management within selected communities.

There were 33,150 acres prescribe burned on the Oconee and the Chattahoochee.

At landscape scale, the short answer is 'no' for the Chattahoochee and generally 'yes' for the Oconee.

On the Chattahoochee, the most common fire regime condition class is a '3' meaning significant departure from historic fire regimes and a high risk of loss of key ecosystem components. Overstory canopies are typically closed on all sites with strong competition for growth resources and very limited habitat niches for some herbaceous species. Forest Inventory and Analysis (FIA) data shows an average of between about 350 to 450 understory stems per acre within natural pine, pine-hardwood, and upland oak forest cover types. These are typically of fire-intolerant and shade tolerant species. They are the competitors to new regeneration of the overstory trees in either planned reforestation or – more especially – in response to natural disturbance. Pine mortality caused by southern pine beetle has altered composition and structure on upland sites and hemlock mortality caused by hemlock woolly adelgid is now in the process of altering composition and structure of riparian forest communities.

On the Oconee the prescribed burning program of approximately 20,000 acres/year (or about one-fifth of the District) has managed hardwood understories well enough that natural loblolly regeneration at least does establish and compete while the competitive status of existing oak and hickory is enhanced. First-time commercial thinning and pre-commercial thinning in young pine stands is accelerating the develop-

ment of RCW foraging habitat while simultaneously reducing the SPB hazard. Sweetgum on the uplands is still too common and aggressive. In the riparian areas privet is precluding other native species, including river cane.

Except for fire use, no tool we use operationally covers enough ground fast enough to restore conditions that will ensure the predictable regeneration of our intolerant overstory species when they are lost to natural or un-natural events. The pace of restoration of degraded ecosystems is glacial in comparison to the need and likely so just in comparison to the known threats.

Population Trends and Habitats of MIS to be monitored

Indicator	Reasons for Selection
Hooded Warbler (Wlsonia citrina)	Changes in presence and abundance of hooded warblers in mature mesic deciduous forests will be used to help indicate the effectiveness of management at providing dense understory and midstory structure within these forest communities.
Red-cockaded Woodpecker (Picoides borealis)	Trends in populations of this species will be used to help indicate the effectiveness of management at maintaining mature pine forests in open, fire-maintained conditions. (See also Monitoring Question 7.)
Red-cockaded Woodpecker (Picoides borealis)	Trends in presence and abundance of these species in mature pine forest will be used to help indicate effectiveness of management at maintaining these communities in open fire-maintained conditions.
Field Sparrow (Spizella pusilla)	Trends in presence and abundance of these species in areas restored to woodlands, savannas, and grasslands would be used to help indicate effectiveness of management at establishing desired conditions in these restoration areas.

Element : Trends in hooded warbler occurrence in relationship to mature mesic, deciduous forests.

The hooded warbler is monitored annually on the forest during the R8 Bird Point Counts that occur forest-wide during spring breeding season. A recent data analysis program showed that the hooded warbler occurrences were showing a 2.75% annual increase. However, this species only showed up on 8 points on the forest, making a strong correlation or trend not possible. Preferred habitat of mesic deciduous forest with dense understory and midstory is relatively common on the Chattahoochee National Forest.

Element : Trends in red-cockaded woodpecker (RCW) populations in relationship to mature pine forests.

The Red-cockaded Woodpecker (RCW) is not found on the Chattahoochee National Forest, but it occurs and is being actively managed on the Oconee National Forest. The population is low in numbers but it has a fairly stable trend over the past few years. There are 17 active cluster sites, two more than last year. Fourteen of those had nests this past summer. The Forest is currently experiencing a serious southern pine beetle outbreak within portions of the District that started in May, 2007. We are in consultation with the U.S. Fish and Wildlife Service to address this issue, as

foraging habitat is being evaluated and pro-active management initiatives are being implemented.

Element : Trends in field sparrow occurrence in relationship to woodlands, savannas, and grasslands.

Field sparrow numbers are down by 11.3% where they occur on the Oconee National Forest. However, because they only occurred on 11 points, this is not to be considered strong evidence that the species is declining. Woodlands are fairly common is association with managed RCW habitat management and prescribed fire regime, and although savanna type habitats and grasslands are being protected, they are not common on the Forest.

3. Are key successional stage habitats being provided?

The Trail Ridge Timber Sale was recently completed. Several visits to ensure that stands that were harvested within that sale are meeting the Objective 3.8 under Goal 3 were conducted throughout this past year. This objective provides a key successional stage habitat for a variety of birds that occur in the area. With early successional habitat (ESH) that occurs at higher elevation being regionally limited, a few birds that require this habitat for nesting and foraging are experiencing overall declines in numbers. The plan provides for the creation and maintenance of an annual average of 300 acres of ESH above 3,000 feet elevation to help offset and eventually reverse these declines. The Trail Ridge ESH area is an example of a habitat improvement project that complies with the Land and Resource Management Plan direction.

Continued progress is being made. Treated acres are up in FY06 in comparison to FY05. Additional early-successional habitat generally, and at high elevation specifically, was created in FY06. The Songbird Management Area on Grassy Mountain on the Cohutta District at about 3200 feet elevation was burned, re-setting succession once again on about 175 acres within a 362-acre burn unit. The Trail Ridge sale on the Chattooga District created approximately 73 acres of early-succesional habitat around 3000 feet elevation. The Ivylog, Duncan Ridge, and Fanny Gap sales on the Brasstown created 131 acres of canopy gaps. However, the amount being provided yet lags the need. Localized areas, typically 6th level watersheds, have great improvement but large areas of the forest continue to have little or no early-successional habitat.

Element: Trends in abundance and conditions of high elevation early successional habitats.

Progress is being made at restoring the historic early-successional habitat (ESH) component on the Forest. In particular ESH at elevations > 2500 feet on the Chattahoochee is being provided and the bird response has been very positive.

Population Trends of MIS Monitored for Successional Habitat Status

Indicator	Reasons for Selection
Prairie Warbler (Dendroica discolor)	Trends in presence and abundance of this species in early-successional forests will be used to help indicate the effectiveness of management in achieving desired conditions within these habitats.
Chestnut-sided Warbler (Dendroica pensylvanica)	Changes in presence of this species in areas that provide high elevation early-successional habitats will be used to indicate effectiveness of management in achieving desired conditions within these sites.
Acadian flycatcher (Empidonax virescens)	Trends in presence and abundance of this species in mature riparian forests will be used to help indicate the effectiveness of management in achieving desired conditions within these habitats.
Ovenbird (Seiurus aurocapillus)-Chattahoochee NF; Wood Thrush (Hylocichla mustelina)-Oconee NF	Trends in presence and abundance of this species in mature deciduous forests will be used to help indicate the effectiveness of management in maintaining desired condition relative to forest interior habitats.
Scarlet Tanager (Piranga olivacea)	To indicate trends in presence and abundance of this species in the upland oak community, the scarlet tanager is selected to help indicate the effectiveness of management.
Swainson's Warbler (*Limnothlypis swainsonii*)	To indicate trends in early-successional riparian areas, the Swainson's warbler is selected to represent early-successional riparian habitats in the Piedmont (Oconee NF). It is strongly associated with canebrakes, tangles, and thick shrubby understories of open bottomland hardwoods and mixed forests.
Pine Warbler (*Dendroica pinus*)	The pine warbler is closely associated with pine and pine-oak forests, generally occurring only where some pine component is present. It therefore is an appropriate indicator of the effects of management in restoring and maintaining pine forests

Element : Trends in prairie warbler occurrence in relationship to early successional habitat.

The prairie warbler percent annual change analysis shows an increase of only 0.98% with 23 points where this bird was reported during FY 2007. This shows that the species is stable for the short term, but early successional habitat remains in short supply for this and other species over the entire forest.

Element : Trends in chestnut-sided warbler occurrence in relationship to high elevation early successional habitat.

Because of the chestnut warbler only being found on one bird point in 2007, numbers are too low to project a trend. This species is uncommon on the forest, as is its preferred habitat of early successional at high elevation (over 3,000 feet).

Element : Trends in Acadian flycatcher occurrence in relationship to mature riparian forests.

The percent annual change for the Acadian flycatcher on the forest was a plus 2.5 % for 2007. It should be noted however, that only 9 points for this bird were recorded, making significant trend prediction difficult. This species does show up where riparian habitats are near monitoring points. The Forests are maintaining riparian habitats, and monitoring will continue to insure these habitats are maintained and protected on the forest.

Element : Trends in ovenbird occurrence in relationship to mountain forest interior communities.

Ovenbirds were found to occur on 35 points for 2007. Trends are slightly down for annual percentage changes, but not significantly. The habitat for this mountain interior bird is stable and protected on the Chattahoochee National Forest and no significant change is expected.

Element : Trends in wood thrush occurrence in relationship to Piedmont forest interior communities.

Wood thrush are normally fond of moist deciduous or mixed forest stands. They occur more frequently on the Oconee National Forest. Overall, trends continue to remain fairly stable over the past 15 years. The wood thrush occurrences are showing no significant increases or decreases on the forest. The forest plan standards should continue to provide ideal habitat for the wood thrush and associated species that favor moist and forested lands on the forest.

Element : Trends in scarlet tanager occurrence in relationship to upland oak communities.

Occurrence data for the scarlet tanager has been down somewhat in recent years. We are not sure why numbers seem to be declining, but lose of preferred habitat should not be considered a factor because acres of upland oak stands on the Chattahoochee National Forest have not declined over the same time period. The Forest Plan provides for plenty of upland oak habitat to be maintained in the future, and we will continue to monitor the status of the scarlet tanager on the forest

Element : Trends in Swainson's warbler occurrence in relationship to Piedmont riparian habitat, canebrakes and thickets.

Although we are creating some Swainson's warbler habitat on the Oconee National Forest where Piedmont riparian habitat is found, we have not recording any occurrences of the Swainson's warbler in the last few years. There have been only 4 occurrences over the past 15 years. We will continue to monitor this warbler, and we will continue to actively manage and restore canebrake habitat throughout the forest. Swainson's were recorded along the Oconee River, but not within the permanent breeding bird plots.

Element : Trends in pine warbler occurrence in relationship to pine and pine-oak forests.

The pine warbler prefers mid to late successional pine forests throughout the year. Its occurrence frequency is fairly high, with more abundant numbers on the Oconee and Conasauga Ranger Districts. In spite of southern pine beetle out breaks on the

forest, the pine warbler numbers are stable to increasing across most of Georgia. We may see some slight declines in pine habitat on the Oconee National Forest (at least in the short term) due to recent southern pine beetle infestation that has already affected about 1,000 acres. However, there are still lots of pine and pine-oak habitat for this bird and associated species.

Element : Trends in acres of wildlife openings.

There was a slight increase in acres of wildlife openings on the Chattahoochee-Oconee National Forest for 2007. The Blue Ridge Ranger District had a 4 acre expansion of wildlife openings on the Blue Ridge Wildlife Management Area, with cooperative work with the Georgia Department of Natural Recourses. The Conasauga Ranger District gained 3 acres in wildlife openings though a KV project. There were 2 one acre wildlife openings established with assistance from the National Wild Turkey Federation on the Oconee Ranger District. In addition, 200 acres of un-leased cattle range allotments will be maintained as wildlife openings, with no future grazing, only maintenance of the areas to encourage native grasses and wildlife.

Element : Trends in abundance and distribution of landscapes important for forest interior birds.

Interior forest is plentiful on the forest and it is unlikely that this key habitat type will be reduced in abundance during the life of the current plan. All of the bird MIS that are linked to interior habitat needs are increasing or stable in occurrence and abundance.

Element: Trends in other permanent openings.

None to report.

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

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

MIS Monitored for Key Terrestrial Habitat Attributes

Indicator	Reasons for Selection
Pileated woodpecker (Dryocopus pileatus)	Trends in presence and abundance of this species across the forest will be used to help indicate the effectiveness of management in maintaining desired condition relative to abundance of snags.

Element : Trends in pileated woodpecker occurrence as an indicator of 'snag' abundance.

Pileated woodpeckers require snags for both foraging and nesting substrate. Snags are standing dead trees, with a variety of sizes and tree species types. Recent southern pine beetle outbreaks have created an abundance of dead pine trees which are being utilized by the pileated woodpeckers and other cavity nesting animals. In addition, and unfortunately for the most part, we are also seeing in increase in eastern hemlock snags because of the hemlock woolly adelgid infestation that is occurring throughout most the range of the hemlock. Snag dependant species will continue to have adequate and even abundant habitat as a result of these insect infestations, and the normal amount of snags that are created by natural death and lightning strikes across the forest.

Element: Trends in hard mast production.

No data this year

Element: Acres of vegetation management in riparian areas.

None to report

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

Since the forest plan provides for the protection of riparian ecosystems, and at the same time allows 1-2% of the riparian corridor in early successional forest (ESH) condition (Objective 4.1 under Goal 4), it is necessary to do pre-disturbance and post-disturbance monitoring on areas where we are planning to manage for disturbance dependant wildlife species. This monitoring is occurring on the Flat Branch ESH project on the Tallulah Ranger District. Several field visits with Biologists and Soil and Water Specialists were made to this area, and monitoring protocol has been established.

Element: Conditions and trends in the overall health of streams

Water Quality Monitoring at Swim Beaches

Fecal coliform, temperature, and turbidity were measured on forest swim beaches to ensure safety for swimming. These water quality parameters were measured on Lake Winfield Scott, Lake Russell, Lake Conasauga, Lake Blue Ridge (Morganton Point), Lake Rabun, and Lake Sinclair once a week beginning the week of May 20 through the week of August 26.

Reference Reach Study

In the summer of 2006, physical data were collected on 40 stream reaches in the Blue Ridge Mountain ecological section of the Chattahoochee National Forest. This ecological region encompasses the northern portion of the Chattooga River district (formerly the Tallulah District), the Blue Ridge District, and the eastern portion of the Conasauga District (formerly the Cohutta District). Both the Ridge and Valley and Piedmont sections of the forest were excluded from the study, because this was not meant to be an exhaustive survey of streams on the forest. These data were collected as a research project for Kate Metzger's master thesis in the Department of

Geography at the University of Oregon. Analysis of data was completed in December of 2006.

The purpose of the study was to document physical stream characteristics in reaches that had various degrees of both past and present land disturbance, including heavy recreation impacts and high watershed road density. Throughout the study, the healthiest streams are referred to as reference, while the most disturbed stream reaches are referred to as managed.[1] Data from this study were also used to determine the physical stream variables that differ between streams in the two subsections located in the Blue Ridge ecological region on the forest; the Southern Blue Ridge subsection, and the Metasedimentary Mountain subsection. Conclusions from this study are being used to target stream reaches for restoration as well as to determine the location of permanent reference reaches on the forest.

Streams were chosen for the study based primarily on past and present disturbance. Reference reaches were generally located in watersheds located entirely within the forest boundary with low road densities, and were often in designated wilderness areas. Managed reaches were generally located in watersheds that had a history of human disturbance, a high density of roads, and concentrated recreation impacts in the riparian corridor.

Table 1 of Appendix A shows the variables collected in this study. Tables 2 through 7 show how these variables were collected or calculated. The data set is included with this report in a separate spreadsheet.

This study found that percent embeddedness in riffles was lower in reference reaches, while the number of pieces of 'Large Woody Debris', bank cover, and stability were all higher in reference reaches than managed reaches. None of the measurements describing channel dimensions were found to be reliable predictors of channel health. Based on the analysis, the healthiest and most impacted reaches were determined (Tables 1a and 2a).

Table 1a. Healthiest streams from the study (reference or least impacted reaches)

Stream Name	District
Addie Branch	Chattooga River
Beech Creek	Conasauga
Blood Mountain Creek	Blue Ridge
Penitentiary Branch	Conasauga
Rough Creek	Conasauga
Indian Camp Creek	Blue Ridge

[1] Reference reaches are considered to be the least impacted reaches on the Chattahoochee National Forest and are difficult to identify based on past land disturbances across the forest. Based on this disturbance, the reference reaches from the study do not necessarily represent "pristine" stream conditions. Therefore, the reference reaches from this study should only be compared to other streams in this region with a similar pattern of past disturbance.

Table 2a. Most impacted streams from the study

Stream Name	District
Bear Creek	Conasauga
Boggs Creek	Blue Ridge
Jasus Creek	Chattooga River
Jigger Creek	Conasuaga

The study also found that there were differences between stream reaches in the Southern Blue Ridge and the Metasedimentary Mountain ecological subsections. In Southern Blue Ridge Mountain streams, embeddedness, riffle volume per km, and the D84 (see appendix for abbreviations), were higher; while bank cover and stability were lower than Metasedimentary Mountain streams.

This thesis is available in its entirety by emailing katemetzger@fs.fed.us.

Chattooga River Flow Monitoring

Two Global water level recorders were installed in the North and West forks of the Chattooga River to determine flow characteristics. The North Fork data logger was installed at Burrell's Ford in June 2006 to monitor water level and flow in support of the Upper Chattooga River Environmental Assessment. The West Fork data logger was installed at Warwoman Road in August 2006 to collect baseline flow data and produce a stage/discharge rating curve for this river. These data loggers record water level every 15 minutes and are downloaded periodically. The data record for the North Fork gauge is from June 2006 to present. The data record for the West Fork gauge is from August 2006 to present. These water level recorders will continue to collect data as needed or as funding permits.

Site visits to previous watershed improvement projects

Several visits to determine the effectiveness of watershed improvement projects across the forest were conducted throughout the year. Both completed in the summer of 2006, the Glade Road obliteration and Holly Creek bank stabilization project were visited in May 2007 to determine the effectiveness of the work. Erosion control measures taken on the Glade Road were found to be effective and have reduced erosion sources from the road prism. The bank stabilization measures on Holly Creek were also found to be effective at reducing overland and bank erosion at the project site. Several bank stabilization projects and one road obliteration project on the Nicholson Tract of the West Fork Chattooga were also visited. Work on these projects was completed in 2003. Most of the bank stabilization work on the West Fork of the Chattooga has been effective at reducing point sources of erosion from unstable banks. The road obliteration project on the Nicholson tract has been very successful with virtually no sediment leaving the project site. The area now hosts many early successional species.

Element: Trends in water quality parameters and physical habitat conditions in relationship to aquatic communities.

25 streams were sampled in conjunction with GA DNR. Purpose was to identify health, numbers and species of trout populations.

The Conasauga watershed was sampled by snorkeling and electro-fishing. Both fish and mussels were sampled.

Shocked the Ocmulgee River in conjunction with GA DNR. Shocked over several hundred fish; Of the ones taken were 116 shoal bass (20 inches, weighing 6lbs and more), 50 largemouth bass(largest bass was 7 lbs), 10 snail bullheads, and hundreds of sunfish spp. Good reproduction on the bass (spotted, shoal, and Largemouth) and sunfish (Bream, redear,etc) many suckers and gars were showing up as well.

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

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

Low to moderate Southern Pine Beetle (SPB) is forecast for summer 2007 based on routine annual monitoring with baited traps. (late spring of 2007 had the SPB population on southern Oconee explode). Gypsy moth baited traps have not detected any new occurrences and no control is planned. Hemlock wooly adelgid (HWA) suppression using both biological control by release of predator beetles and systemic insecticide by soil injection continue. The HWA has spread through an estimated 50% of the natural range of hemlock in Georgia.

The spread of non-native invasive plant species is of concern. In 2006 the first occurrence of Chinese bittersweet *Celastrus orbiculatus* on the Forest was found in Rabun County. Privet continues to expand and has pre-empted other species over a large area; especially in riparian areas and in the Piedmont and foothills of the Blue Ridge.

More subtle forest health threats continue to worsen. Advanced age and/or over-stocked stand conditions are stress factors within most of our forest cover types. The Oconee pre-commercially thinned 220 acres of pine seedlings and saplings in FY06, helping to reduce SPB hazard. More is needed.

There is a concern that loblolly greater than 80 years of age is at risk to root disease, including littleleaf, southern pine beetle, *Ips* beetle, turpentine beetle, *Leptographium* fungus, and a host of other threats on the Oconee and especially within the Sub-Habitat Management Area (HMA) for the RCW. A mortality rate in this stratum that is substantially higher than in younger, more vigorous loblolly stands could affect the quality and availability of RCW nesting

habitat. If a trend of increasing mortality develops, RCW habitat conditions could deteriorate rapidly.

Element: Native and non-native insect occurrence and control.

The hemlock woolly adelgid continues to progress westward across Georgia and is expected to sweep throughout the hemlock range in the southeast. In 2005 the Southern Regional Forester decided to allow suppression throughout the Chattahoochee within about 144 areas encompassing about 20,000 acres to conserve genetic diversity. Pre-commercial and commercial thinning projects in young pine stands have reduced the SPB risk but activity continues to lag the need and one or more SPB outbreaks can be expected before the 'backlog' is caught up.

Non-native invasive species are widespread on both the Chattahoochee and Oconee. A few small scale projects have begun to test eradication tools and techniques for Nepalese brown top grass and Chinese privet. The conversion in FY05 to FSVeg as the Forest Service national vegetation database provides a much greater ability to collection data on these species and to share it widely. Co-operative work is underway with the American Chestnut Foundation to develop blight resistant chestnut for out planting.

Element : Trends in the number of occurrences and/or acreage of selected non-native species.

Japanese stiltgrass (*Microstegium vimineum*) appears to be increasing, primarily along road banks. It is seen in many types of habitat across the Forest and can tolerate shaded conditions, unlike many grass species. It occurs seemingly "in the middle of nowhere" including areas with no recent ground disturbance. Even with a concerted effort to rid areas of this grass, it is so pervasive both on Forest and on private land, it is doubtful this species can be eradicated.

Sericea lespedeza (*Lespedeza cuneata*) is no longer used on the Forest for erosion and revegetation projects. However, it is still commonly used by highway departments and easily invades adjoining Forest Service lands. Occurrences seem to be stable or in some areas, increasing, and will not likely decrease without the use of herbicide.

Japanese knotweed (*Polygonum cuspidatum*) is known only from one site on Forest Service land. It occurs along a road in a 50 ft. x 20 ft. area. This plant is common on private land in the surrounding area, especially around Copperhill, TN.

Chinese Privet is widespread throughout the stream courses (riparian corridors) of streams on the Oconee Ranger District.

Element: Effectiveness of treatments to eliminate or control non-native invasive species.

Study ongoing with Southern Experiment Station on the Oconee Ranger District to ascertain the most economical method of privet control.

7. What are the status and trends of federally listed species and species with viability concerns on the forest?

Element: Population trends in red-cockaded woodpecker (RCW) as an indicator of effectiveness of recovery of the species.

The Red-cockaded Woodpecker (RCW) population on the Oconee National Forest has increased from 11 active clans in 1985, (down to 1 bird in 92), to 17 active family units in 2007. Fourteen of those 17 had successful nesting. There was 12,000 acres of prescribed burning, 15 new inserts (artificial cavities inserted inside the pine trees for recruitment and nesting/roosting potential) installed, 250 acres of needed pine thinnings, and intensive monitoring carried out this past year. The forest experienced a southern pine beetle (SPB) infestation on the Oconee National Forest this year, and about 900 acres of RCW foraging (and even some nesting habitat) have already been negatively impacted. The overall affect of this year's SPB outbreak on the RCW population is currently being evaluated, and we are working with the U.S. Fish and Wildlife Service to mitigate as much habitat loss as possible. An Incident Command System (ICS) has been establish on the Oconee, where around 30 qualified emergency workers are currently engaged in marking and cutting buffers and removing infested trees where possible. As we continue to monitor and assess foraging and nesting habitat conditions on the forest, we are optimistic that the population will be able to sustain itself and hopefully prosper in the future.

Stand set to be thinned for potential RCW habitat

Element: Status and trends of Smooth coneflower.

The smooth coneflower is a federally listed plant that occurs in Georgia only on the Chattooga River Ranger District in Habersham and Stephens Counties. It occurs primarily along roadsides and utility corridors, with a few natural populations occurring in open woods. Optimal habitat for the coneflower is open and sunny with little herbaceous competition. Therefore, the forest has a planning objective to expand the populations of coneflower and associated species by restoring and maintaining habitat through thinning, controlled burning, and hand tool removal of encroaching and competing vegetation.

A management plan for the smooth coneflower was completed in January 2007. Several hundred acres were burned in 2006 to begin restoration of the woodland/savanna habitat preferred by the coneflower. Approximately 110 additional acres of restoration was begun in 2007 through burning and hand removal of encroaching vegetation to expand populations. This included sites where the coneflower currently occurs. Despite severe drought, coneflower numbers appeared to have increased in 2007, as indicated by field trips with cooperative botanists from several outside agencies, hosted by the forest. Through cooperative management with U.S. Fish and Wildlife Service, Georgia Department of Natural Resources and other agencies and organizations, habitat for the species is increasing on the Chattooga River District. We will continue to work aggressively with

these agencies and organizations to encourage expansion of the coneflower habitat where appropriate.

Monitoring for Threatened and Endangered Species

Indicator	Reasons for Selection
Red-cockaded Woodpecker (Picoides borealis)	Trends in populations of this species will be used to indicate effectiveness of management activities designed specifically to meet recovery objectives for this species. (See also Monitoring Question 2.)
Smooth coneflower	Trends in populations of this species will be used to indicate effectiveness of management activities designed specifically to meet recovery objectives for this species.
Georgia aster	Trends in populations of this species will be used to indicate effectiveness of management activities designed specifically to meet recovery objectives for this species.

Maintaining habitat capable of supporting viable populations of native and desired non-native species is also an important goal of the Forest Plan. Many objectives and standards are designed to meet this goal. Monitoring will focus on trends for populations and/or habitats of species of viability concern. Where feasible, species monitoring will often be accomplished by monitoring communities of species (e.g., fish, bats, birds). Individual Management Indicator Species have been selected because their viability is critically dependent on national forest management.

Element : Status and trends of cerulean warbler.

Cerulean warblers were heard singing last spring near previously treated habitat areas (know as canopy gaps) at Ivylog on the Blue Ridge Ranger District. Because of an unusually late freeze and frosts in April, normal monitoring techniques were not as effective in 2007. Atlanta Audubon Society has agreed to assist the District with monitoring this uncommon neotropical migrant in 2008.

Element : Status and trends of golden-winged warbler.

Golden-winged warblers were heard on Brawley Mountain again the year in some small opening that were created by Hurricane Opal and the subsequent salvage that followed. We have plans to create more high elevation thinnings and openings for this early successional associated species within the Brawley Mountain area. We will continue to monitor this important species to evaluate the effectiveness of the habitat creation project.

Element : Status and trends of selected bat communities.

A few years ago, bat research specialist Dr. Susan Loeb with the Forest Service Research Station at Clemson, South Carolina conducted bat inventories across the forest. Mist netting and Anabat electronic call and identification survey methods were carried out for 40

nights at 18 different locations on the forest. Big brown bats, red bats, little brown bats, small-footed bats, northern long-eared bats, evening bats, and eastern pipistrelles were identified during the survey. Although this variety of bats was impressive, these are fairly common within their respected ranges. However, 4 male gray bats were also located near a known bachelor cave located on private land. Also, a follow up survey also found the common bats listed above, plus 1 Rafinesque's big-eared bat and 1 hoary bat.

This data seemed to indicate that a healthy and diverse bat population was doing quite well on the forest. Forest plan standards and objectives should help ensure that the continued existence of native bat communities are maintained on the forest. We also are planning on hosting an extensive follow-up bat survey (known regionally as the Bat Blitz) on the Chattahoochee-Oconee National Forest in 2009.

Element : Status and trends of selected plant communities.

No change

Element: Status and trends of other federally listed and viability concern species.

No change from previous years

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

The Forests provide large public ownership with opportunities for hunting, fishing, wildlife viewing, and collection of special forest products. Monitoring of some game species populations and/or harvest levels are done in coordination with the GA DNR. Some of these species are selected as Management Indicator Species where effects of national forest management are important to meeting public demand. Some species that are collected as special forest products will be monitored through management of the permitting process.

MIS Monitored for Demand Species

Indicator	Reason for Selection
Black Bear, White-Tailed Deer	Trends in harvest levels and hunting demand will be used to help indicate effectiveness of management in meeting public demand for these species.

White-tailed deer management by harvest regulations and habitat management techniques such as forest harvesting, thinning, prescribed burning and wildlife opening creation and maintenance has created some good deer populations in Georgia. However, according to DNR Biologist Ken Riddleberger, white-tailed deer harvest has decreased on the Chattahoochee National Forest during the last 5 years. He cites the decrease in some measure to a declining number of hunters participating, but he said more likely it is attributable to declining early successional habitat within the forest. This past deer season

was a 10 year low in buck harvest for the Blue Ridge and Lake Russell WMAs, which are both on National Forest lands (Riddleberger, personal comm., 2007).

Piedmont harvest levels are a bit higher. As we increase prescribed burning, thinnings and timber harvesting on the forest, we should see an upward response in white-tailed deer numbers as more browse and soft mast foods are increased by increasing the amount of sunlight reaching the ground. Overall, population level should remain fairly stable in the near future.

The **black bear** population in North Georgia has been steadily increasing for the past several decades, but harvest records have recently leveled off and become fairly stable. However, bait station index data for 2006 showed a record number of hits from bears on the bait stations that have been annually monitored for over 20 years now. We continue to experience increases in human population growth (Wild Land Urban Interface) near black bear habitat. This results in increased bear-human interactions (even in campgrounds). We are working cooperatively with the DNR to educate the public on how to avoid creating or causing bear problems, both within the recreation sites they frequent, and their home sites located close to the forest. We will continue to monitor the black bear populations, but overall, all indications seem to suggest that adequate habitat is currently available the bears.

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

Element: Results and trends in user satisfaction ratings [36 CFR 291.21(a)]

Wilderness use continued to be down in years preceding 2006. Current 2006 use trends in terms of District wilderness use has been stable with use figures consistent with 2005. This fluctuation in use, prior to 2006, may be in response to the District's Limits of Acceptable Change mgt plan. Suggestions for better response to this monitoring question as related to Forest Plan Goals and Objectives.

Objective 31.1 – Use Cordell and San Dimas research to identify new recreation trends yearly and evaluate compatibility with Forest niche and evaluate possible changes. Complete any needed changes within that FY. Work with pubic affairs to create user surveys to be distributed to sites.

Element: Backlog of facility and trail maintenance needs and trends

Through the Infra database operations/applications condition surveys are performed for facilities as they relate to the Forest's developed recreation program of work. The same application of Infra database techniques is also performed with respect to current condition/deferred maintenance backlogs trail maintenance through condition surveys. Condition surveys for developed recreation facilities, and trails are completed on a 5 year interval. F A & O buildings/sites are inspected annually with ongoing maintenance/ improvement needs identified at that time. The resulting maintenance/improvement needs are entered in the Infra database.

As part of the Chattahoochee-Oconee National Forest's trail analysis process for determining new construction criteria, trail maintenance criteria, and development of a policy to support the Forest's " No Net Gain Philosophy " with respect to current Forest trail mileage, all trails on the Forest were inventoried beginning in Fiscal Year 2004 and ending in mid -Fiscal Year 2006. The underlying premise of the field oriented inventorying was to accrue accurate trail mileage in a GPS data dictionary format to for assessing both maintenance needs and to verify actual trail mileage. Based on this inventory and the data dictionary information complied from each trail, maintenance needs have been identified both at a current and deferred maintenance level. Pending development of a revised Infra condition survey process , these trail needs will be tracked in the Infra data base as are the developed recreation sites with their associated features, i.e. fire rings, picnic tables , and building infrastructures. In 2006, 22.3 miles were field verified in the Forest's condition survey process. Use type (hiking, horse, bike, and OHV) were recorded. The condition survey review afforded the individual inventorying the respective trail to record condition surveys as related to waterbar, stream crossing impact, side slope erosion, camping impacts, step/stairway "side stepping" as well as other general overall trail conditions.

Developed recreation condition surveys have been completed for Fiscal Year 2006 for thirty three developed recreation sites ranging from campgrounds, boating launches, picnic sites, documentary, observation, and interpretative sites. The completion of these surveys affords the Forest a 100 percent attainment for condition survey reporting with respect to developed recreation sites for five year interval reporting. Beginning in Fiscal Year 2007, condition surveys for developed recreation sites will begin again. The rule for recreation condition surveys is that these sites must be surveyed once over a five year period. Theoretically, over a five year period, 20 percent of the Forest's 86 developed recreation sites will be inventoried. The condition survey target for Fiscal Year 2007 is 23 developed recreation sites- roughly four sites per District.
Chattooga-Tallulah RD

Martins Branch Dispersed Recreation Site improvement - restoration of heavily used dispersed recreation site. Location - Chattahoochee River at Forest Service Road 178 bridge.

District implemented restoration of worn-out dispersed recreation site at Martin's Branch bridge over Chattahoochee River. Placed large native stone along FS road to restrict vehicle entry, revegetated area to re-establish vegetation ground cover. Project implemented to improve watershed condition and move recreation impacts to suitable locations in watershed, off main channel of River. Site visit March 2006. Project complies with Forest Plan direction for desired conditions of Management Prescription 11 and standards for site restoration.

Chattooga-Tallulah District -

Anna Ruby Falls wastewater line - installation of gravity flow wastewater line. Location - Anna Ruby Falls Visitor Center to Unicoi State Park along FS Road 242 and Smith Creek.

Forest Service project to provide wastewater treatment for Visitor Center facilities and discontinue use of on-site septic tank system. Installation required construction of trench in paved road shoulder, 3 miles total distance, to provide hook-up to existing wastewater lines in Unicoi State Park property. Several trench segments within 100 feet of Smith Creek, designated primary trout stream. District & S.O. staff worked with local county erosion & sediment office to secure land disturbing permit, and with GA Environmental Protection Division to secure trout variance. Project involved construction of trench using phased opening and closing of trench on daily basis with revegetation measures on same day. Construction design and implementation in compliance with Forest Plan, State law requirements and local erosion & sedimentation control ordinance. Site visits in October 2005, February and March 2006. Installation completed in March-April 2006.

Element: Trends in health and safety associated with recreation programs

Chattahoochee River Road - hazard tree and daylighting proposal. Location - Chattahoochee River Road, FS Road 44, from private land on south end to Unicoi Gap intersection with GA Hiway 17/75 on north end. District proposal to remove trees within road R-O-W to improve daylighting conditions and remove potential hazard trees. Stream side areas visited to evaluate effects of tree removal on shade, erosion and water quality. Site visits in February & July 2006. Project complies with Forest Plan direction.

Element: Changes in the amount and kind of opportunities provided

No Changes this period

Element: Changes in accessibility of developed sites and facilities

No changes

Element: User impacts, conflicts and effects within the A.T. corridor

Certain areas of the Appalachian Trail in Georgia demonstrate impacts to soil and vegetation from overuse. Typically, the impacted areas suffer from "campsite sprawl", where tent sites and fire rings have trampled vegetation and ground cover. Parking areas adjacent to roads also tend to create an increasing sprawl.

The Chattahoochee-Oconee National Forests and Georgia Appalachian Trail Club have taken steps to curb campsite sprawl, and old wore out trail sections at some locations. Tent pads have been built into the side of slopes to discourage camping anywhere else in the area. These designated tent sites have been constructed at Springer Mountain, the Gooch Mountain shelter, and at Slaughter Spring (to replace camping at Slaughter Gap, which has been closed and revegetated).

Remaining impacted areas can be divided into three principal categories: riparian areas, roadside areas, and campsites in gaps with relatively flat terrain.

Riparian Areas: Impacts from overuse are clearly visible at Stover Creek near the hiker's shelter (NOTE: This problem will be alleviated in 2006-2007 by a trail relocation away from the flat terrain near the creek and the construction of a new shelter at a different location). This project will entail the relocation of 2 miles of hiking trail to the relocated Stover Creek trail shelter and privy site. An associated approach trail from the Appalachian Trail to the shelter/privy site approximately 500 feet will be constructed. Supervisor's Office Outdoor Recreation Planner reviewed the progress of construction on the Stover Creek shelter and associated moldering privy on 6/28/2006. Appalachian Trail Conservancy personnel were on site to conducting an accessibility review of the shelter. Several accessibility issues were discussed to bring the shelter into standard with ADA rules. Additional impacts of camping overuse are noted along Long Creek north of FS 58 at Three Forks, at the Justus Creek crossing, and at Lance Creek (located in the Blood Mountain wilderness). Future plans are to rehabilitate the Justus and Lance Creek sites. The outdoor recreation planner on the Brasstown Ranger District made two visits, 6/30/2006 and 8/3/2006, looking at a reroute proposal from the Georgia Appalachian Trail Club. This project proposal would move a 1.75 mile section of the Appalachian Trail away from Justus Creek. The outdoor recreation planner also looked at the camping overuse along Justus and Lance Creeks during these field visits.

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

Element: Trends in illegal or unauthorized recreational uses observed and the effects of these uses.

Historically, the Chattahoochee-Oconee National Forest has had its share of problems with incendiary and game violations. Although these problems remain, the Forest has seen a marked increase in other violations. Recreation use offenses, land occupancy and trespasses, theft and vandalism of government and private property, arson, damage to natural resources, mostly caused by illegal use of off road vehicles, possession of marijuana, methamphetamine and cocaine, archaeological resource theft, timber and firewood theft, litter and trash dumping. Violations of Georgia State Law reference to illegal hunting, fishing, under-age drinking, revoked or suspended license are among violations with the greatest increase. These violations represent a growing threat to forest officers enforcing our laws and regulations and can deteriorate the safe, family type environment enjoyed by our visitors.

As Land Resource Managers, we have certain statutory responsibilities for fulfilling and maintaining ample law enforcement personal to handle the increase in law enforcement issues and demands. The Chattahoochee-Oconee Forest consists of over 865, 000 acres, 4 ranger districts lying within twenty-seven counties, and 12 million visitors annually. This Forest ranks second in number of violations occurring in the Southern Region. Because of the drastic increase in visitor's annually, law enforcement actions are stretched beyond the capacity to deal with the demand. Due to reduction in LE&I budgets, there has been a reduction or lack of LEO positions filled,

thus public safety, resource and property protection problems for visitors and employees are of great concern.

The Forest currently has a law enforcement program that consists of one (1) Patrol Captain, two (2) Special Agents (including trainee), one (1) Program Assistant with shared services between the Zone/Forest, seven (7) full-time LEO's. LEOs are currently responsible for patrolling areas that exceed 108,000+ acres each. The large number of acres in each area of responsibility drastically reduces law enforcement's ability to adequately address forest problems and is a serious concern with Forest management.
Continued cooperation with State, local, and other Federal agencies has significantly reduced the increased burden on law enforcement staff within the bounds of public recreation and sequential law enforcement intervention to enforce Forest policies.

Off Highway Vehicles (OHV's) is a continued problem facing the forest and Law Enforcement. The presence of LEOs (Law Enforcement Officers) and FPOs (Forest Protection Officers) at the District's OHV trail systems has had a positive influence in reducing illegal off trail use for these areas. Evidence of illegal OHV use across the forest is still high and remains a priority for Law Enforcement. Difficulty is faced with enforcement due to the mobility of the vehicles and vast expanse of land covered by the officers. Education of the forest visitor to provide for social change in attitudes should be the main tool in combating this problem.

Under the new Forest Plan equestrian were restricted to designated routes. This decision has been stayed for further review in order to provide analysis for the decision. The expectation that this decision will culminate in horses being restricted to designated roads and trail in the near future will place additional burdens on an already lean Law Enforcement program. As with OHVs, education of the public is paramount in achieving compliance with new regulations.

The new restructured management of existing recreation areas to private concessions has been accomplished over the last two years. Concerns and confusion from both the concessionaires and Law Enforcement over responsibilities of enforcement of laws and regulations in these areas has presented a challenge. There is a concern that now LEOs and FPOs will not enter these areas on a regular patrol basis as there is no longer a fee compliance entity attached to the site. The concern exists that undesirable forest visitor cliental will begin frequenting these "free use" areas contributing to the potential for a crime element to ensue. Many of these concerns have been worked through and resulted in a successful transition of management for these areas.

Theft from self service fee stations is still a priority concern. Due to the very nature of this fee collection method, it allows for criminal elements to have the advantage in opportunity. These fee sites can become attractive and repetitive targets if enforcement action is not taken. Law Enforcement is difficult on these crimes unless pattern behavior can be established. Paramount in the discouraging these thefts is collect-

ing fees in a timely manner so there is low reward for this activity and fee station designs that make theft difficult.

Increases in interface with wildlife, bears in particular, have resulted in Law enforcement involvement. With the high visitation allowing for increased interaction between the public and wildlife, has resulted in issues relation to proper food storage. Over the past several years there has been a steady increase in aggressive actions of bears in campgrounds. Enforcement of food storage regulations adopted to combat this problem has added an additional burden to the LE staff.

Areas of the forest are seeing activity associated with gangs. Once just an urban problem, this activity has now stretched to the rural areas and is having an impact on the forest. These gangs can pose a significant security risk to officers, employees, and visitors.

Marijuana cultivation continues to be a concern to Law Enforcement. The trend that appears to have spread across the country and has now been found on the eastern forest is cultivation associated with Mexican drug trafficking organizations (DTO's). DTO's have a significant security risk associated with them because they are many times protected by armed individuals. They also have a significant impact on the natural resources caused by activities associated with large cultivation sites. These included litter, cut timber, and water quality issues.

Each year officers issue approximately 3,500 incidents, violations and warnings each year (2,300 violation notices, 500 Incident Reports, and 700 warnings). Most offense violations are misdemeanor offenses.

There is an alarming increase in the amount of resource and property damage caused by illegal use of ATV/OHV vehicles in closed areas and on high traffic roads and areas previously inaccessible by all vehicles. This illegal traffic has caused millions of dollars in property and resource damage. In 2001, 275 violations; 2002, 430 violations; 2003, 281 violations, 2004, 339 violations, 2005, 241, and in 2006, 224 violations were written for illegal ATV/OHV vehicles use. In 2007, 103 violations for off road use of motor vehicles were issued.

Element: Recreation activities contribution to the degradation of terrestrial, aquatic, rare or riparian areas or adversely affecting water quality.

Recreation use classified as dispersed recreation continues to occur throughout the general forest area and often presents challenges to maintaining watershed condition in areas where road and stream use is high. Typically these areas are heavily used when trout season is open, alternating with periods of "rest and restoration" in the off season. A management challenge has been controlling the expansion of areas which are experiencing soil compaction, loss of vegetation cover, and erosion. Districts are working to identify locations with unacceptable conditions and projects

to restore normal function and characteristics, with a goal of minimizing impacts to water quality and aquatic habitat.

OHV also continues to be a challenge, particularly in the unauthorized trail segments that typically lack design and controls. Several projects have been implemented across the Forest to close these areas before they degrade water quality. The Forest has also completed maintenance, trail closure or trail relocation in designated OHV use areas. Whissenhunt, Locust Stake, Beasley Knob, Roberts Bike Camp and Houston Valley have all received periodic maintenance. Trail relocation is being planned and designed for the Oakey Mountain-Chastain Branch complex with several segments of decommissioning planned to reduce impacts to water quality. Closures of unauthorized trails in the Anderson Creek area have been successful in restoring watershed function.

Element: Continued validity of plan decisions regarding OHV use designation and determining whether an area is open or closed to OHV use.

Anderson Creek OHV Trails (near Ellijay, Georgia) 2005 saw noted improvements within Anderson Creek. This area had been closed to the public since 2003. Originally set up for the OHV enthusiast as a recreational site with 5 miles of trails, illegal trail riding had expanded the trails system to 20 miles of trail – 15 miles of which were recorded as illegal. Six miles of illegal trails were closed permanently within the Anderson Creek OHV trail system in Fiscal Year 2005. Anderson Creek OHV trail Systems remains closed to the public as further resource mitigation activities are being performed in the area. Mitigation measures include mapping of illegal trails, rehabilitation including seeding and mulching of existing trails deemed inappropriate in terms of meeting the Forest's Land Management Plan standards and guidelines. This is in view of the fact that these illegal trails correlate directly to soil and water land resources integrity concerns. . In July 2007, draft of the Environmental Assessment for the Anderson Creek OHV Trail System Project was presented to the Forest by the contracted preparer.

Recommendation: Continue the closing of illegal trails that are directly impacting water quality or aquatic habitat. Maintenance will continue at all designated trail systems.

With respect to the existing network of designated OHV trails, specifically the OHV trail systems (113 miles) maintained for ATV's and motorcycles, these trails are groomed annually when the trails are closed seasonally (January- March) . Maintenance of these trails entails reshaping earthen waterbars, filling in rutted sections of trail and performing trail hardening measures as needed. The use of monies acquired through the Georgia Recreational Trails Program has augmented the Forest's declining appropriated trail maintenance funding. This trails grant funding has provided an avenue to aggressively address the high associated maintenance costs of these vital public OHV riding areas.

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

Wilderness character is comprised of both human and biophysical elements. Monitoring the human elements requires monitoring trends in the human experiences, i.e. solitude, crowding, etc., as well as trends in the use patterns and visitor impacts. User monitoring and surveys will allow for tracking trends among visitors to wilderness, while trailhead use and identification of sites with impacts will allow us to track movement and activities within wilderness and relationships to biophysical effects. Monitoring physical elements is important for tracking changes to the natural systems due to natural and human influences within and outside the wilderness. Although there are many components to the physical element, air quality is viewed as a basic indicator of wilderness health. Additionally, changes that are occurring in wilderness due to the fire regime, especially in fire dependent communities, will be monitored. Monitoring will also be accomplished as under number 9, previously.

Element: Is wilderness visitor use within limits that do not impair the values for which the wilderness was established? [36 CFR 219.18(a)]

Wilderness areas receive heavy use along the Appalachian Trail corridor and its' associated feeder trails. One hundred- forty- nine-campsites have been inventoried along the trail corridor within the Blood Mountain Wilderness in conjunction with the 10 Year Wilderness Stewardship Challenge Strategic Plan- Element 6 (wilderness recreation site inventory) Overuse in this wilderness was apparent at Slaughter Gap with the convergence of the Appalachian Trail, Coosa, Duncan Ridge, and Slaughter Creek Trails. A project was untaken beginning in 2002 to reroute these trails out of Slaughter Gap- rehabilitate the large impacted area, and establish campsites in more suitable locations. This project was completed in the fall of 2004 (early Fiscal Year 2005). Jarrard Gap, the summit of Blood Mountain, and the area around Lance Creek are heavily impacted as well. Rehabilitation measures are planned for Jarrard and Lance Creek through a combination of trail reroutes and construction of low impact camping sites in the vicinity of these locations beginning in Fiscal Year 2008 and are expected to continue on into Fiscal Year 2009. Use of Blood Mountain is primarily day use in impact, with hikers departing from B.H. Reese Memorial Trailhead near Neels Gap on U.S. Highway 129 and traversing the Appalachian Trail to Blood Mountain.

Further campsite inventory in the Blood Mountain Wilderness in association with the 10 Year Stewardship Challenge initiative during Fiscal Year 2007 recorded the following campsites along the trail network within the Blood Mountain Wilderness:

Trail Name	Number of Campsites
Appalachian Trail	149
Bear Hair Trail	2
Byron Herbert Reese Trail	7
Bryon Herbert Reese Trailhead	12
Coosa Backcountry Trail	5
Dockery Lake Trail	7
Duncan Ridge Trail	6
Rocky Mountain Trail	1
Slaughter Creek Trail	6
Upper Desoto Falls Trail	1
Total	**196**

Additionally within the Blood Mountain Wilderness Area, 6 campsites were inventoried at Blood Mountain Cove and 1 campsite recorded at Daniel Camp.

A campfire ban is in effect along a portion of the Appalachian Trail corridor across Blood Mountain to protect the character of the area and to discourage some overnight camping continues to be partially effective. Intensive efforts are required by volunteers and administrative personnel to remove any illegal fire rings. One limiting factor with respect to this ongoing issue of illegal campfires is the lack of both administrative and enforcement personnel to cover the area in a timely manner. Day use on the portion of the Appalachian Trail between Neels Gap and Woody Gap appears to be increasing. Working with the Georgia Department of Transportation , a no- parking area has been established along U.S. Highway 129 between Neels Gap and B.H. Reese Memorial Trail parking area. Plans have been developed to limit the number of vehicles that can park at the trailhead. This action was identified in the Limits of Acceptable Change (LAC) process for the Blood Mountain Wilderness. The Dicks Creek corridor along Forest Service Road # 34 receives heavy use, and part of this corridor forms the boundary for the Blood Mountain Wilderness. Heavy use of campsites along Dicks Creek due to easy vehicle access and the popularity of the stream and its' associated waterfalls has resulted in the establishment of no – camping zones along the wilderness portion of the streamside. These campsites have been rehabilitated.

Illegal mountain bike use occurs on the Wagon Train Road within the Brasstown Wilderness. Annual boundary line monitoring around Bald Mountain Park and other private developments that adjoin this wilderness is ongoing with respect to the possibility of encroachment and illegal vehicular use. During Fiscal Year 2007, 39 campsites have been inventoried within the Brasstown Wilderness-18 along the Arkaquah Trail; 15 along the Jacks Knob Trail; and 6 along the Wagon Train Trail- all within the Brasstown Wilderness- all within the realm of the 10 Year Wilderness Stewardship initiative.

The Chattahoochee National Forest's largest wilderness, the Cohutta, continues to receive very intense overuse. District personnel have inventoried over 350 campsites. This inventory is in part a mandate to meet the Forest Service Chief's 10 Year Wilderness Stewardship Challenge Strategic Plan. Element 6 (wilderness recreation site inventory) of the 10 wilderness stewardship elements is addressed through this on- site inventory process. Ground cover loss and /or soil compaction is prevalent at a major portion of the inventoried sites. Overused areas in the Cohutta Wilderness include Beech Bottom and Jacks River Falls; Brayfield, above Panther Creek Falls, segments of Jacks River and Conasauga River trail corridors; and portions of the Hickory Creek Trail corridor. Heavy visitor presence, along with improper disposal and storage of food items has resulted in increased interaction between humans and bears, which lead to a temporary closure of Beech Bottoms in the spring/summer of 2000.

The District administering the Cohutta Wilderness has completed the Limits of Acceptable Change planning process. The proposed process was developed from the recommendations of a citizen- based wilderness task force. The general description of the proposed action is as follows:

1.) Manage the Cohutta Wilderness as three distinct Opportunity Classes, I, II, and III. These Opportunity Classes would provide a range of experiences from the most primitive, Opportunity Class I to the least primitive, Opportunity Class III.
2.) Within the three Opportunity Classes, apply limits on use to reduce human impacts on the wilderness resource and restore the wilderness environment.
3.) Within the Jacks River Falls area, establish area- specific prohibitions to reverse overuse, to reduce activities contributing to significant resource impacts, and to restore the wilderness environment.
4.) Implement a non- restrictive, mandatory permit system for the purpose of more accurate visitor's counts, wilderness education, and public information.

The purpose of the proposed action is to both preserve the wilderness character and provide for the enjoyment of an unimpaired wilderness for present and future generations of wilderness users. This proposed action was needed to reverse patterns of overuse, reduce human activities contributing to resource impacts, restore the wilderness environment, and provide more opportunities for solitude and a true wilderness experience.

The district has continued to increase efforts to correct overuse problems and minimize potential bear/ human interactions. This has been achieved through expanded information and education program aimed at the infrequent forest user, with the use of volunteers and increased wilderness patrols. Trail volunteers and U.S. Forest Service personnel are continually rehabilitating heavily used campsites. A wilderness and backcountry " Leave No Trace" message is conveyed through newspaper articles/ Recreational Equipment, Inc.(REI) in Atlanta, district volunteer newsletter , sign-

ing, bulletin board posting, wilderness visitor contacts, Regional and District brochures, formal presentations at schools, clubs, and organizational meetings.

The Mark Trail Wilderness continues to receive heavy use along the Appalachian Trail corridor and along the Chattahoochee River Road. The Bear Den Creek area has seen a drop in use due to the relocation of the Raven cliffs parking lot from along the Richard Russell Scenic Highway 348 to its' current location. A total of 145 campsites have been inventoried within this wilderness area.

Wilderness use with Raven Cliffs has declined slightly due to the closure of the area to rappelling and the relocation and upgrading of the parking area. Before the closure of the area to rappelling, the use was around 15,000 visitors per year. After the closure, use has dropped to about 12,000 visitors per year. A total of 500 campsites have been inventoried within this wilderness area.

Rich Mountain Wilderness continues to receive minimal use with most occurring during big game hunts. Illegal all- terrain vehicle use in the area along with litter on the north boundary (county road) still continues to pose a problem. Additionally, the south end of the Rich Mountain Wilderness has experienced a lot of residential development on the adjoining private lands. Law enforcement personnel have increased patrols in the area and have posted signs closing illegal trails and displaying wilderness boundaries. As part of the 10 Year Wilderness Stewardship Challenge Strategic Plan, 3 campsites were recorded in this wilderness. Principal use of these campsites is by hunters during the managed hunt season.

Southern Nantahala and Tray Mountain wildernesses receive most use along the Appalachian Trail. There are no associated spur trails with the Appalachian Trail as it traverses these wilderness areas. If such spur trails were in place, additional interest in these wilderness areas may be generated. A limited amount of campsite inventorying has been performed to date within these areas.

Big Frog and Elliott Rock wilderness areas receive very little use due to limited formal trail development within the Georgia sections of these wildernesses.

Based on estimated wilderness visitor use totals of 245,000/ year on the Chattahoochee-Oconee National Forests, - survey results indicate that males comprise 53 percent, while females make up 47 percent of the individuals seeking wilderness recreational pursuits. The greatest age group seeking a wilderness recreation experience is between 40- 49 years (30.37 percent) of age followed by 30- 39 (15.49 percent), and 20-29 (14.92 percent).

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

The two main elements in determining the eligibility and suitability of a river for inclusion in the National Wild and Scenic Rivers System are a free-flowing

condition and the presence of Outstandingly Remarkable Values. Rivers determined to be eligible, or eligible and suitable that have not yet been designated by Congress must have those elements protected until a further designation is assigned. Monitoring changes to these elements will help us evaluate our management of these rivers on our forests. Monitoring (recreation use) for these streams will also be tied to number 9, previously discussed.

The Chattahoochee- Oconee National Forests continues to manage the Chattooga River to protect and enhance the outstandingly remarkable values of the river and its surroundings. The Sumter National Forest continues to have the lead authority for all boating/ floating use (commercially – guided and self- guided) on the Chattooga River when it involves the main channel from Burrell's Ford to Lake Tugaloo, as well as the West Fork. As part of the Chattooga Watershed Initiative, the Tallulah Ranger District has, in past years, performed road closure on 7 acres of development road including Old Burrells Road, Glade Road and Hicks Tract. The Tallulah Ranger District will continue close/ restore old roads within the Chattooga River watershed corridor in order to mitigate soil and water concerns.

Condition surveys initiated through watershed assessment procedures will serve as a way of identifying and performing corrective actions as it relates to the resource management principles affecting the Chattooga Wild and Scenic River. The Chattahoochee-Oconee National Forests assisted the Francis Marion and Sumter National Forests in the Chattooga River EA. While the Sumter National Forest has the administrative lead with respect to the Chattooga River, the Chattahoochee – Oconee National Forests' (natural resources and recreation sections) assisted in the environmental assessment from the water and social affects aspect. This EA was pursuant to analysis with respect to possibly allowing boaters to float this river section above the Highway 28 Bridge – a section of the Chattooga River where they are not currently allowed.

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

The scenic and recreational resources of both forests are changing. This is due in a larger part to the realignment of our recreation resources.

There has been a move away from lesser used areas in an effort to improve operational efficiency with dwindling budgets. The forests have decommissioned the following Level 2 Campgrounds: Peeples Lake, Ocmulgee Primitive River Campground, and Murray's Lake. The forests have decommissioned the following Level 3 Campgrounds: Water's Creek, Lake Chatuge, and Hidden Creek, and Overflow. The forests have decommissioned one Level 4 campground, Lake Blue Ridge Campground. The forests have also decommissioned family picnic sites, observation sites, and trailheads. What remains are lower level use areas, usually without any amenities except a parking are and the trails. The settings are becoming more primitive or at least moving from rural to roaded natural.

With these changes, the forests are now better able to concentrate on our niche of dispersed use and long distance trail opportunities. The recreation areas that remain will continue to do so as long as the use remains active and they provide unique opportunities, such as high mountain lake experience.
There continues to be a lack of vegetative treatment in recreation areas. There is a need to open up the overstory and thin the understory in these areas, as well as trailheads. This would provide a feeling of psychological and physical security which would increase use.

The scenic resources are being recognized as important on the forest. This resource is being included in planning of future projects. During the first part of FY 2007, the scenic resource continued to move in the right direction, towards assigned Scenic Integrity Objectives within Scenic Classes per Management Prescriptions.

However, the overall scenic trend on the forest, if depending on silvicultural treatments, is towards overgrowth and unmanaged appearance. Even small projects, such as the construction of a toilet, seem to suffer for not being able to be more aggressive in timber treatment

Suggestions for better response to this monitoring question as related to Forest Plan Goals and Objectives:

Goal 29

- Objective 29.1 – Use GIS, update areas where projects might have changed settings, ensure that GIS coverage is up to date.

Element: Amount of National Forest Land that meet or exceed established scenic quality objectives and changes over time [36 CFR 219.27(6), 36 CFR 219.27(d)(1)

The Scenic Quality Objectives (SIOs) are listed in each Management Prescription found in the Plan and every National Forest acre is assigned a SIO. Therefore every project on the forest should have Scenic input on how to continue to achieve scenery settings and landscape character. Because of this input from the Forest Landscape Architect, projects are set up to meet established SIOs through recommended vegetation mitigation measures. Few of these projects have been implemented. These projects should be reviewed over time to see if the mitigation measures recommended are followed and if they are producing the settings desired. The basis for input was the "Scenery Treatment Guide", dated 02-07-2005, and the "Guidelines and Techniques to achieve Scenic Integrity Objectives and Landscape Character in Southern Region National Forests". These guidelines are currently under review by the Regional Office.

An improvement to the current system of requesting input for scenery settings could be to include the Landscape Architect as a member of project teams. Because scenery falls under the broad umbrella of Recreation, it sometimes gets left out until a project is in the last stages of development. At that point all the scenery resource can do is to be reactive instead of proactive. So while the for-

ests may be achieving SIOs, no projects are being generated specifically for the achievement of scenery settings, just as an afterthought to support wildlife/health/SUP projects.

- **Method of collection: Track changes that result from management activities**

Requests were made from the districts and input was supplied by the Forest Landscape Architect for scenery settings on wildlife, special use permits, forest health, decommissioning road projects, watershed projects and recreation site improvement projects, but very few of the projects have been implemented.

Suggestions for better response to this monitoring question as related to Forest Plan Goals and Objectives:

Goal 29

- Objective 29.2 – Make list of nationally designated trails, evaluate accuracy/completion of GIS coverage and use 3D software to map "seen" areas.
- Objective 29.3 – Written incorrectly, needs to be rewritten, then create a plan for increasing scenic values over the next ten years in areas that have a high scenic class but low existing integrity.
- Objective 29.4 – Rank high use areas, vista points and interpretive trails by level of use and create a list to have amenity improvements. Divide work across 10 years, give district a checklist of things to be improved at their sites for the year at the beginning of the FY.

Goal 33

- What are regional Forester Scenic Areas? Find out and work with forest specialists to create a work list for these sites. Distribute to districts and set yearly accomplishment goals for the sites.

14. Are heritage sites being protected?

Compliance with the National Historic Preservation Act is essential during implementation of this Forest Plan. The requirement that sites eligible for the National Register of Historic Places be identified and protected before ground disturbing activities occur must be met. Monitoring will be done to assess how well sites are being identified for protection and whether site protection measures are effective in preventing site loss.

Two historic properties were impacted by ground disturbance activities on the Chattahoochee-Oconee National Forests during fiscal year 2006. One property was damaged during fire suppression on the Armuchee District. The fire suppression activities were unplanned and carried out by a state agency. A damage assessment was conducted by Forest Service archaeologists. Damage to the property was minimal and did not require rehabilitation.

The second historic property was impacted during timber management operations. The property was located near, but not within the project area. The damage appears to be moderate and will require documentation and full assessment.

Less than five percent of all ground disturbing activities during fiscal year 2006 were monitored after project completion. Two monitoring reports were prepared for completed projects on the Oconee Ranger District. Mitigation measures were effective in protecting historic properties located within both project areas.

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

This Forest Plan provides for management of watersheds to provide resilient and stable conditions to support the quality and quantity of water necessary to protect ecological functions and support intended beneficial water uses. Numerous best management practices are established as standards for practices to be carrying out during implementation of the Forest Plan. Watershed condition, improvement needs, water quality, and implementation of best management practices will be monitored.

Element: Status and trend of impaired streams

Based on the 2006 EPD impaired stream list, an updated forest-wide list of streams impaired for sediment has been produced.

On July 26, there was a meeting with GA EPD, EPA, the Chattahoochee-Oconee NF, the Southern Regional Office, and a representative of State and Private forestry regarding a possible change in status of streams on the Forest through re-sampling and monitoring. Work on this project is ongoing.

Element: Application of Forest Standards to protect and maintain soil and water resources

<u>Stream Monitoring Early Successional Habitat sale area</u>
Several stream channel parameters were collected on a second-order, unnamed stream reach flowing through the Wildcat section of the Flat Branch ESH project timber sale on the Chattooga River Ranger District. Parameters to measure the physical health of the stream channel including bank condition, substrate particle size, pool and riffle characteristics, large woody debris, channel gradient, and sinuosity were collected at this site in August and September, 2007. Although the time scale at which the majority of these parameters change is much longer than that of a timber sale, certain parameters including channel substrate and bank condition are sensitive to watershed perturbations and may indicate disturbance in the watershed. Currently baseline data have been collected and analyzed for this reach. A subset of these measurements will be collected during and after timber sale operations to de-

termine if BMPs used on this project were effective at protecting physical stream quality parameters. A detailed report on this analysis is available in the Flat Branch ESH project file.

Site Visits

March 27, 2007. Visit to the John's Creek timber sale on the Conasauga District (old Armuchee District) to assess sale layout in a cutting unit with a trout stream and multiple ephemeral and intermittent channels.

July, 2007 Visit to Flat Branch ESH sale on the Chattooga River District to determine sale layout and location of equipment limitation zone.

June-August, 2007. Multiple site visits to the Etowah River project on the Blue Ridge District were conducted to determine the location of stands along Two Run Creek to minimize water quality impacts, and to assess the condition of FS road 880 (which runs adjacent to the creek).

August 1. Site visit to Mountaintown Creek on the Conasauga District to examine the impacts of a trail running adjacent to the Creek. The soil and water impacts of a potential trail reroute were also assessed on this visit.

Element: Effectiveness of Forest Standards in minimizing non-point source pollution

Conasauga Ranger District

Jacks River Bridge & Ford Project – Fannin County completed a new bridge over Jacks River in the spring of 2007 providing upgraded access to this portion of the Forest and reducing impacts to the River at the crossing. A temporary ford was constructed downstream of the bridge site to facilitate access for several local residents, and has been restored to normal after the completion of the bridge.

Dodd Tract restoration – stream bank restoration project initiated in 2006 is showing effectiveness at restoring stream banks and reducing impacts from vehicle use. This recent acquisition on Holly Creek is a working example of restoring riparian condition and function concurrently with providing public access to stream use.

Blue Ridge Ranger District

Waters Creek Recreation Area Decommission – this developed recreation site located on Dicks Creek and FS Road 34 was closed and all recreation improvements removed in 2006. Although still available for day use fishing the site has been restored to vegetation and is improving riparian corridor conditions in the area.

Lake Chatuge Recreation Area Decommission – this developed campground located on Lake Chatuge was decommissioned in 2006 with all recreation improvements removed. The area is open to foot travel day use and is re-establishing a more natural watershed condition along the lake as native grasses emerge in the restored sites.

Highway 75 Fuel Spill Site Restoration – cleanup and restoration of a site impacted in April 2005 by the accidental spill of a petroleum tanker was completed in September 2007. The site was monitored for presence of petroleum products under the direction of EPA through 2006 and 2007 using monitoring wells. Final site restoration involved removal of small catch basins, access roads and removal of a metal culvert in one stream crossing.

Low Creek Road – a road easement project with Union County this short segment of road located near Davenport Mountain off GA 325 was completed in the summer of 2007. The project involved widening an existing roadway. Two small intermittent streams and one spring were crossed by the road. Mitigations during construction controlled erosion and sediment. The site has been completed to Forest Plan standards and Best Management Practices.

Etowah River Vegetation Project – a project proposed in 2007, located in proximity to Camp Merrill in Lumpkin County, will provide an opportunity to improve several existing system roads in the Etowah River headwaters in addition to vegetation treatments. Four roads, FS 880, FS 98, FS 141 and FS 142 would receive improvements to drainage, road surfacing and stream crossings under the proposal, helping the overall watershed condition of the watershed.

Chattooga River Ranger District

Trail Ridge Timber Sale – thinned to create early successional habitat this sale area was completed in 2006 with minimal impact to riparian corridors. No stream crossings occur in the sale area boundary. Sale access complies with Forest Plan and Georgia BMPs for Forestry.

Flat Branch Timber Sale – project began in late summer 2007 to thin a white pine stand for early successional habitat. Sale layout involves harvest in the riparian corridor to remove white pine and enhance conditions for hardwood species. Coweeta Research Lab personnel are assisting with monitoring of Flat Branch in the sale area. A large culvert is planned for replacement under this sale project. System Road 54A received maintenance and added road surfacing in 2006 prior to sale operations. Additional monitoring is planned for the project area.

Highway 76 Bridge Replacement – South Carolina DOT and Georgia DOT completed construction of a new concrete bridge across the Chattooga River in 2007. Erosion control measures have been in place and were effective throughout the construction

activities. Slopes beneath and adjacent to the structure have been reshaped, revegetated and/or armored to provide stable slopes above the River.

16. What are the conditions and trends of riparian areas, wetlands, and floodplain functions and values?

Riparian ecosystems restoration and management is important to maintain aquatic resources and values. Desired conditions, including the composition and structure of vegetation, equipment limitations, maintaining ground cover and stable stream-banks are established in the Forest Plan. Floodplains and wetlands are to be protected. Riparian management practices and standards, ground cover, stream-bank stability, wetland and floodplain status will be monitored.

Prescribed Burn Reviews

Effects of prescribed burning to riparian and water resources were monitored on all four districts. Primarily, the effects of these burns on riparian corridors and streambank stability were monitored. On all of the burns, there were no discernable negative effects to soil productivity and stability, the riparian corridor and, streambank stability.

Armuchee-Cohutta District

Riparian Corridor Management & Recreation - discussion on proposed treatments and management within riparian corridor on Cohutta portion of District. Location - Dodd tract on Holly Creek (FS Road 18) and Bear Creek Recreation Area (FS Road 241).

Dodd Tract acquired by Forest in 2005 land acquisition, portion of tract adjoins main channel of Holly Creek with access to year-round county road. Tract conditions included open user created roads, stream banks with erosion & loss of vegetation. District project implemented in FY 06 to close roads on tract and restore streambanks with bioengineering treatments; proposal complies with Forest Plan direction.

Bear Creek Recreation Area - isolated dispersed recreation area at end of FS Road 241. District proposal to identify available dispersed recreation zone with signing to denote riparian corridor, off-limits to overnight camping. S.O. staff visited site with District staff to discuss Forest Plan direction and identify areas suitable for camping designations. Proposal in compliance with Forest Plan direction.

USN Crash Site Restoration Project – site of USN crash, site rehab and restoration. Location: north of Pocket Rec. Area, located in riparian area, tributary to Johns Creek.

Site restoration required excavation of about one-half acre with restoration accomplished by creating small pond and revegetating to grass and legumes. Access roads for site clean-up used existing temporary use road – used to haul excavated material from site to off-Forest disposal area. Road closure and restoration required drainage and revegetation. Project actions comply with Forest Plan standards. Visit early summer of '07 showed heavy vegetative cover on all exposed soil.

Crash site just beyond trees

LITTLE CREEK WETLAND ENHANCEMENT on the Tallulah

Using partnership labor from the U.S. Probation Office in Atlanta along with a contract with an operator using a "Superhoe," ten (10) small pits were constructed in the former pond bed to enhance this high elevation opening. These pits will improve the wildlife and fish habitat by providing needed habitat for amphibians (frogs and salamanders), reptiles (including the Forest Sensitive bog turtle), and fish (rainbow trout).

Land Exchanges

Three reports (Poss, Phillips, Dunn) were completed in 2006 related to wetland and floodplains involved in proposed land exchanges. Combined the three proposed exchanges resulted in a net gain of 100 year floodplains of 7.5 acres, all on streams in the Chattahoochee portion of the Forests. Wetlands involved in the exchanges resulted in a net gain of 2 acres, also in the Blue Ridge mountains portion of the Forests. These proposed land exchanges are in compliance with Executive Orders 11988 and 11990, and the Forest Plan standards.

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

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

Element: Adequacy of constructed roads for the planned uses and revegetation following the completion of use. [36 CFR 219.27 a (10), 36 CFR 219.27 b (7)]

The Chattahoochee-Oconee National Forests implement FSM 7703.1 and 7712.1 which requires that Roads Analysis be completed for road management decisions made after January 2001. The Forests have performed Road Analysis during Fiscal Year 2007 on the following: lands which it has acquired during the fiscal year; special use permits to individuals in which the permit affects the forest road system; decommissioning of roads on national forest system lands, both system roads and non-system roads. The soil that is disturbed during road decommissioning and road construction, have been seeded with native grasses.

Element: Adequacy of designated transportation and utility corridors.

There are several projects located on the Forest which involve special use permits and right of ways. These projects include replacing two state highway bridges, and replacing of culverts and bridges on county roads. The Forests' resource specialists and engineering personnel have been involved in the review of these projects and development of permit stipulations and designs acceptable to all parties concerned.

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

The 1982 NFMA implementing regulations also require monitoring of specific silvicultural requirements. Silvicultural practices, harvest methods, harvest unit size, regen-

eration establishment, and land suitability for timber productions will be monitored and evaluated to determine if and when changes may be needed.

FY06 saw the advent of FACTS (Forest Activity Tracking System), the Forest Service corporate database, for accomplishment reporting. The FACTS program links the NEPA decision to those projects and activities that implement it, ensuring that ties are systematically maintained all the way through. The FACTS program also links treated areas with their Plan Management Prescription. Silvicultural prescription preparation is an activity in FACTS also. In total, the FACTS program provides a tightly-woven whole for tracking projects from beginning to end.

Reforestation

The First Year Survival report for seedlings planted in FY05 and the Third Year Stocking report for seedlings planted in FY03 show that we had no stands in either case that would fail to meet Plan re-stocking standards for at least one corresponding forest type and Forest Plan objective, even though survival in some planted stands was inadequate to meet the objective initially chosen. The planting program is being negatively affected by consolidations and its small size that prevents us from having economies of scale. The Oconee is planning to restore longleaf within certain southern pine beetle spots in the RCW sub-HMA.

Harvest unit sizes

The Plan constrains unit sizes only for "*regeneration harvests*" and then only on "*lands classified as suitable for timber production".* Where these applied, FACTS reports show that timber harvest unit sizes in FY06 did not exceed the 40-acre Plan limitation.

Harvest methods

Our Forest Plan does not preclude the use of any harvest method so this is not an issue. Most of the harvesting to date has been thinning. The Central Zone of the Chattahoochee (Brasstown and Toccoa Districts) reported 171 acres of 'wildlife habitat non-structural improvement' that is inclusive of early-successional forest habitat and canopy gap creation. In FY06 the Oconee reported 650 acres of thinning, all in pine cover types, and 86 acres in the Concord Salvage, a blowdown caused by a spin-off storm from Hurricane Katrina.

Silvicultural systems and land suitability

There remain challenges in terms of silvicultural systems and land suitability for timber harvest in relation to what NFMA envisioned.

Regarding suitability, our Plan has no timber production objective. Timber is produced as a by-product of meeting other resource objectives. Some management prescriptions and objectives provide a framework with enough regular, periodic need for activity that a sustained yield timber production paradigm can be matched with them. Other management prescriptions do not.

Rather they can be expected to have episodic timber production that will not be completely predictable in amount, type, distribution, etc.

Regarding silvicultural systems, some of our objectives; such as woodland creation or canopy gap creation, are about wildlife habitat structural and vegetation composition characteristics and not about regenerating a forest cover. Traditional silvicultural terms and concepts do not apply well to these. Fortunately FACTS allows the user to choose either a 'wildlife habitat intermediate cut' code or a 'wildlife habitat regeneration cut' code. In the latter case, reforestation under NFMA is not required.

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

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

Yes. The one area being looked into is horse use throughout the forest. Whether to keep horse use to designated trail systems or to continue to allow riding off trail, anywhere on the forest. This is on-going during FY 06-07. Meetings with concerned groups are still being conducted.

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

This area of the Forest Plan is having the slowest level of implementation. The forests are working with their constituents to have collaborative projects that achieve these forest plan goals and objectives.

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.

Hemlock Woolly Adelgid research is on-going. A new laboratory on the UGA campus is being established.

A Bat blitz (large monitoring effort) is being planned for FY 09.

Chinese privet is still under study by Forest Research on the Oconee.

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 2005

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