

**DANIEL BOONE NATIONAL FOREST
MONITORING AND EVALUATION REPORT**
for
FISCAL YEAR 1999

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FOREST SUPERVISOR'S CERTIFICATION
DANIEL BOONE NATIONAL FOREST

My direction to the monitoring team was to document the findings from activities that occurred during fiscal year 1999 as they relate to noteworthy issues.

I have reviewed the monitoring results and recommendations in this Report. I have directed that the Action Plans developed to respond to these recommendations be implemented, as funding permits, according to the time frames indicated, unless new information or changed resource conditions warrant otherwise.

The proposed Forest Plan amendment for Special Habitat Needs and Silviculture (SHNS) was still being planned. Because the Plan contains deficiencies, and prior to completing a revised Plan or completing the SHNS amendment, the Forest Plan is insufficient to carry out a timber sale program. However, the Plan even though it is not a state-of-the-art document, is sufficient for implementing other activities designed to protect and /or improve the human environment. These activities may involve the incidental cutting of trees in order to achieve their stated objective.

With these completed changes, the Plan is sufficient to guide forest management for fiscal year 2000, until such time that the Plan is revised.



BENJAMIN T. WORTHINGTON
Forest Supervisor

April 22, 2001

Date

I. INTRODUCTION, M&E PROCESS, AND REPORT LAYOUT

The Daniel Boone National Forest identified noteworthy issues which were used to help focus the content of the monitoring and evaluation report. The issues identified include: threatened and endangered species specifically Indiana bats, red-cockaded woodpeckers, and aquatic species; off-highway vehicle use; vegetation management specifically prescribed burning, compliance with a Court ordered preliminary injunction from timbering activities, and herbicide use to control woody vegetation within utility rights-of-ways; and road access onto the National Forest.

Biological diversity was monitored by evaluating management indicator species (MIS) and proposed, endangered, threatened, and sensitive (PETS) species. The report does not contain any findings related to these species.

Forest and range health was monitored by evaluating air quality and fuel treatment conditions. Measurements indicate that areas on or near the National Forest do not exceed the standard for particulate matter (PM) 10 microns and less in diameter. With a recent change in the PM standard to less than 2.5 microns in diameter, the monitoring data should be available in 1999. Prescribed burning during specified environmental conditions has resulted in compliance with smoke management objectives.

Watershed conditions are monitored by evaluating soil disturbance and water quality. Standards for protecting and enhancing soil productivity have been effective. An issue still remains on determining the tolerable soil loss while still maintaining soil productivity. Fifteen watersheds across the forest were monitored using 20 locations for water sampling. Results indicate that the vast majority of streams on National Forest land are of the highest quality and that land management activities are not significantly degrading water quality.

Outdoor recreation opportunities are monitored by evaluating dispersed areas. Data was not available for consideration at this time.

Infrastructure consideration was evaluated using road maintenance, collector and local road construction and reconstruction. Data was not available for consideration at this time.

Timber resource monitoring was evaluated considering allowable sale quantity, and timber planning assumptions. Timber harvesting on the forest has been enjoined by a Court order. No new timber sale decision were made outside of approval by the Court. Removal of hazard trees to improve public health and safety in recreation areas and along roads did occur.

Economics were summarized in Table C.1 for areas that appear in the Forest Plan. This data was compiled for FY-98 as well as a 10-year average. Dollars were adjusted to 1988. A comparison of Forest Plan estimates with allocated expenditures indicate that funding has not kept pace with Forest Plan estimates. The result, is reduced service, accomplishments, and outputs from Forest Plan projections.

The Monitoring and Evaluation (M&E) Report is structured to correspond with Chapter VI of the Daniel Boone National Forest Land and Resource Management Plan (Forest Plan; Plan; FLMP). It is also structured to address the monitoring and evaluation requirements found in the National Forest Management Act (NFMA).

The purpose of this process is to document the results of the Forest Plan monitoring and evaluation for fiscal year 1998. Monitoring and evaluation of programs is done to determine the progress toward achieving management goals, objectives and applying standards and guidelines (S&G) for the Forest Plan.

Monitoring and evaluation is an ongoing process. It is documented through annual reviews made by the Forest Supervisor, Forest Staff Officers, District Rangers, and other Forest personnel. Information from these reviews is compiled into a comprehensive report after the fiscal year is completed. Monitoring indicates whether the management direction contained in the Forest Plan is being effectively carried out, and if any modification in direction is needed. It also indicates if the effects of implementing the Plan are occurring as predicted; whether the application of management area prescriptions are responding to public issues as well as management concerns; and if the costs of implementing the Plan are on target.

Organization of the Findings and Recommendations Section of this Report

Specific monitoring requirements are listed in Table VI-1, on pages VI-4 through VI-15 of the Forest Plan. Section II - DETAILED M&E RESULTS AND FINDINGS, of this report is formatted similar to this table and contains the following information:

Monitoring Item Description - The activity, practice, effect or resource being monitored, with a statement discussing the method used for monitoring and its objectives.

Variability which would initiate future action - The acceptable tolerance levels, beyond which some future action would be initiated.

Findings - Summary of findings.

Recommendations - Actions to take in response to the findings. Recommendations are made by Forest Staff Officers after they evaluate the findings. Possible recommendations include: 1) no action is needed; 2) continue Forest Plan implementation and monitoring; 3) amend the Forest Plan to clarify, revise, or improve resource management; 4) further study to determine the best action to take; 5) elimination of current monitoring item; or 6) inclusion of new items.

Section III - 1999 M&E ACTION PLAN, of this report summarizes recommendations from section II, and contains the following information:

Action - Summary of one or more recommendations.

Responsibility - The person or position responsible for this action.

Completion date - Anticipated completion date.

Over the years, points of contention on how the Daniel Boone National Forest should be managed have come and gone. Some of the more recent concerns are listed below. These points of contention have been identified to help focus monitoring and evaluation in areas appropriate to any controversy.

The following is a summary of NOTEWORTHY ISSUES for fiscal year 1999:

Threatened and Endangered Species

- Previous monitoring has indicated that all forested areas of the Daniel Boone National Forest are suitable summer habitat for the Indiana bat. Information concerning specific roost tree selection and habitat characteristics associated with these roost trees is needed.
- Red-cockaded woodpeckers are close to being extirpated from Kentucky. The few remaining birds in Kentucky are on National Forest System lands. Habitat management is critical in order to sustain the resident population and restock the populations of these woodpeckers to viable levels.
- Federally listed aquatic species are located primarily on the southern end of the Forest. Water quality is of primary concern for maintaining and improving habitat conditions.
- Most white-haired goldenrod is found only in and adjacent to rockshelters on the Forest. Recreational use in and near populations of white-haired goldenrod could affect the viability of this species.

Recreation

- Off-highway vehicle (OHV) use continues to be controversial.

Vegetation Management

- Prescribed burning is still not readily accepted as a management tool. Smoke management from controlled burns is a challenge because of the dissected ownership.
- The Forest is under a Federal Court Injunction pending amendment of the Forest Plan to incorporate protective measures and to consult with the US Fish and Wildlife Service.
- Herbicide use has always been controversial and has recently received attention because of a proposal to incorporate herbicides into a maintenance program for electric transmission and distribution lines owned by EKPC.

Facilities

- Road access into the National Forest continues to be controversial. Some want good access while others don't want roads. Proposals to construct roads into Roadless Areas has drawn much controversy nationally.

Storm Damage from 1998

- Increased fuels from storms has created hazardous conditions.

II. MONITORING RESULTS AND FINDINGS

A. Ecosystem Condition, Health and Sustainability

1. Biological Diversity

A.1.a Management indicator species (MIS)

A.1.a.1 Aquatic non-game MIS - Six stream fish species (blackside dace, arrow darter, fantail darter, rainbow darter, brindled madtom, and stoneroller) are identified to represent aquatic ecosystem conditions, and ensure that viable populations of all stream fish are maintained on the Forest.

Variability which would initiate future action: Significant reduction of species occurrence or habitat quality.

Blackside dace

Two graduate students from Eastern Kentucky University inventoried fish populations in the Red River watershed. This inventory was to evaluate the fish populations in comparison to an earlier study done in the 1960's. Two thesis' will be the result of this study, one of which has been recently finalized and the other will be completed as of December 2000.

Fish populations in the Licking River watershed were done jointly by the Department of Water (EPA) and Kentucky Department of Fish and Wildlife Resources on Forest Service management areas. This inventory was the first of its kind in this watershed. It will provide the basis from which future surveys can be evaluated. Additional fauna information was collected by both and by Forest Service personnel (fisheries/aquatics and hydrology resources).

A grant from the National Fish and Wildlife Foundation to the fisheries/aquatics section was used to collect base line data for various streams throughout the Forest. The work was done cooperatively through a challenge cost-share with Morehead State University and Eastern Kentucky University. This was a two-year project that should conclude at the end of 2000.

Findings: Data gathered from the above mentioned projects, have not been analyzed as to the effectiveness of the various objectives of the projects. Final completion for most of the above projects is expected to be available in early to mid 2001.

Monitoring is a never-ending project for any activity that occurs on the Forest Service public lands. Continued population inventory and analysis for the Forest is proposed in such a way as eventually the total of Forest streams have inventories both for fauna and habitat completed after which periodic inventorying and monitoring will occur. Due to the specific knowledge required for projects such as these, continuing the use of CCS with local universities and their fisheries/aquatics students for the monitoring work. This will eventually lead to the ability of evaluating past inventories to the present.

Recommendations: None.

A.1.a.2 Red-cockaded woodpecker MIS

Variability which would initiate future action: Significant reduction of active colonies or significant reduction of habitat below levels projected in the Forest Plan.

Findings: Populations and habitats are below levels, per 1994 Implementaion Guide and Regional RCW EIS recommendations. There were 20 structures placed for RCW, removal of midstory vegetation was completed on aproximately 240 acres, and 13 birds were translocated into cluster sites on the London and Stearns Districts, raising the population to 29. Prescribed burning was done on approximately 5,943 acres within the tentative RCW Habitat Management Area to initiate long-term habitat recovery.

Recommendations: 1) Amend the Forest Plan to incorporate recommendations of the Regional RCW EIS and the DBNF Implementation Guide. 2) Continue to translocate birds to increase the RCW population in Kentucky.

A.1.b Proposed, Endangered, Threatened, and Sensitive (PETS) Species - (Additions to Plan monitoring requirements)

Thirty-six federally listed species are identified as potentially occurring on or adjacent to the Daniel Boone National Forest. These species are listed in Table 1.

Table 1 – Federally listed threatened or endangered species, Daniel Boone National Forest

Group	Species	Common Name	Status	
Mammal	<i>Felis concolor</i>	Eastern Cougar	E	
	<i>Myotis grisescens</i>	Gray Bat	E	
	<i>Myotis sodalis</i>	Indiana Bat	E	
	<i>Plecotus townsendii virginianus</i>	Virginia Big-eared Bat	E	
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	T	
	<i>Picoides borealis</i>	Red-cockaded Woodpecker	E	
Fish	<i>Etheostoma percnurum</i>	Duskytail Darter	E	
	<i>Notropis albizonatus</i>	Palezone Shiner	E	
Mussel	<i>Phoxinus cumberlandensis</i>	Blackside Dace	T	
	<i>Alasmidonta atropurpurea</i>	Cumberland Elktoe	E	
	<i>Cyprogenia stegaria</i>	Fanshell	E	
	<i>Dromus dromas</i>	Dromedary Pearlmussel	E	
	<i>Epioblasma brevidens</i>	Cumberlandian Combshell	E	
	<i>Epioblasma capsaeformis</i>	Oyster Mussel	E	
	<i>Epioblasma florentina florentina</i>	Yellow Blossom	E	
	<i>Epioblasma florentina walkeri</i>	Tan Riffleshell	E	
	<i>Epioblasma obliquata obliquata</i>	Catspaw	E	
	<i>Epioblasma torulosa rangiana</i>	Northern Riffleshell	E	
	<i>Epioblasma torulosa torulosa</i>	Tubercled Blossom	E	
	<i>Hemistena lata</i>	Cracking Pearlmussel	E	
	<i>Lampsilis abrupta</i>	Pink Mucket	E	
	<i>Obovaria retusa</i>	Ring Pink	E	
	<i>Pegias fabula</i>	Little-wing Pearlmussel	E	
	<i>Plethobasus cicatricosus</i>	White Wartyback	E	
	<i>Plethobasus cooperianus</i>	Orange-footed pimpleback	E	
	<i>Pleurobema clava</i>	Clubshell	E	
	<i>Pleurobema plenum</i>	Rough Pigtoe	E	
	<i>Quadrula sparsa</i>	Appalachian Monkeyface	E	
	<i>Villosa trabilis</i>	Cumberland Bean	E	
	Plant	<i>Arenaria cumberlandensis</i>	Cumberland Sandwort	E
		<i>Conradina verticillata</i>	Cumberland Rosemary	T
<i>Helianthus eggertii</i>		Eggert's Sunflower	T	
<i>Schwalbea americana</i>		American Chaffseed	E	
<i>Solidago albopilosa</i>		White-haired Goldenrod	T	
<i>Spiraea virginiana</i>		Virginia Spiraea	T	
<i>Trifolium stoloniferum</i>		Running Buffalo Clover	E	

Status 'E' means the species is listed as 'Endangered' by USFWS.
 Status 'T' means the species is listed as 'Threatened' by USFWS.

Fifty-two (52) species are currently on the Regional Forester's Sensitive species list for the Daniel Boone National Forest, dated 18 September 1996. These species are listed below.

Table 2 – Forest sensitive species, Daniel Boone National Forest

Group	Species	Common Name	Status
Mammal	<i>Myotis leibii</i>	Eastern Small-footed bat	S
Bird	<i>Aimophila aestivalis</i>	Bachman's Sparrow	S
Fish	<i>Acipenser fulvescens</i>	Lake Sturgeon	S
	<i>Etheostoma cinerum</i>	Ashy Darter	S
	<i>Etheostoma maculatum</i>	Spotted Darter	S
	<i>Etheostoma nigrum susanae</i>	Cumberland Johnny Darter	S
	<i>Etheostoma (Ammocrypta) pellucidum</i>	Eastern Sand Darter	S
	<i>Etheostoma tippecanoe</i>	Tippecanoe Darter	S
	<i>Ichthyomyzon greeleyi</i>	Mountain Brook Lamprey	S
	<i>Notropis sp.</i>	Sawfin Shiner	S
	<i>Percina burtoni</i>	Blotchside Darter	S
	<i>Percina macrocephala</i>	Longhead Darter	S
	<i>Percina squamata</i>	Olive Darter	S
	<i>Typhlichthys subterraneus</i>	Southern Cavefish	S
	Mussel	<i>Cumberlandia monodonta</i>	Spectaclecase
<i>Epioblasma triquetra</i>		Snuffbox	S
<i>Obovaria subrotunda</i>		Round Hickorynut	S
<i>Plethobasus cyphus</i>		Sheepnose	S
<i>Pleurobema oviforme</i>		Tennessee Clubshell	S
<i>Simpsonaias ambigua</i>		Salamander Mussel	S
<i>Toxolasma lividus</i>		Purple Liliput	S
Gastropod	<i>Leptoxis praerosa</i>	Onyx Rocksnail	S
	<i>Paravitrea placentula</i>	Glossy Supercoil	S
	<i>Vertigo clappi</i>	Cupped Vertigo	S
Insect	<i>Manophylax butleri</i>	Cliff Caddisfly	S
	<i>Ophiogomphus howei</i>	Midget Snaketail Dragonfly	S
Crustacean	<i>Speyeria diana</i>	Diana Fritillary	S
	<i>Cambarus batchi</i>	Bluegrass Crayfish	S
Plant	<i>Cambarus bouchardi</i>	Big South Fork Crayfish	S
	<i>Aster saxicastellii</i>	Rockcastle Aster	S
	<i>Aureolaria patula</i>	Spreading False Foxglove	S
	<i>Calamagrostis porteri ssp. insperata</i>	Ofer Hollow Reed Grass	S
	<i>Cypripedium kentuckiense</i>	Kentucky Lady's-slipper	S
	<i>Dodecatheon frenchii</i>	French's Shooting Star	S
	<i>Elymus svensonii</i>	Svenson's Wild Rye	S
	<i>Eupatorium luciae-brauniae</i>	Lucy Braun's White Snakeroot	S
	<i>Gaylussacia brachycera</i>	Box Huckleberry	S
	<i>Hexastylis contracta</i>	Southern Heartleaf	S
	<i>Lesquerella globosa</i>	Short's Bladder-pod	S
	<i>Marshallia grandiflora</i>	Barbara's Buttons	S
	<i>Monotropsis odorata</i>	Sweet Pinesap	S
	<i>Paxistima canbyi</i>	Mountain-lover, Cliff-green	S
	<i>Platanthera integrilabia</i>	White-fringeless Orchid	S
	<i>Rhododendron cumberlandense</i>	Cumberland Azalea	S
	<i>Silene ovata</i>	Ovate Catchfly	S
	<i>Silene regia</i>	Royal Catchfly	S
	<i>Silphium wasiotense</i>	Cumberland Rosinweed	S
	<i>Thalictrum mirabile</i>	Little Mountain Meadow Rue	S
<i>Vitis rupestris</i>	Sand Grape	S	
Moss	<i>Bryoxiphium norvegicum</i>	Sword Moss	S
Liverwort	<i>Plagiochila austinii</i>	A Liverwort	S
	<i>Plagiochila sullivantii</i>	A Liverwort	S

A.1.b.1 Red-cockaded woodpecker

Variability which would initiate future action: Significant reduction of active colonies or significant reduction of habitat below levels projected in the Forest Plan.

Findings: Populations and habitats are below levels, per 1994 Implementaion Guide and Regional RCW EIS recommendations. There were 20 structures placed for RCW, removal of midstory vegetation was completed on aproximately 240 acres, and 13 birds were translocated into cluster sites on the London and Stearns Districts raising the population to 29. Prescribed burning was done on approximately 5,943 acres within the tentative RCW Habitat Management Area to initiate long-term habitat recovery.

Recommendations: 1) Amend the Forest Plan to incorporate recommendations of the Regional RCW EIS and the DBNF Implementation Guide. 2) Continue to translocate birds to increase the population in Kentucky.

A.1.b.2 White-haired goldenrod

Variability which would initiate future action: Significant reduction in number of sites or loss of viability of populations.

Findings: Monitoring indicates that many of the existing sites are currently being inadvertently impacted by dispersed recreational activities in and around the Red River Gorge area.

Recommendations: Work with Recreation staff to develop signs encouraging Forest visitors to stay out of white-haired goldenrod sites. Reroute trails where necessary and work with organized visitor groups to promote conservation education.

A 1.b.3 Blackside dace

Variability which would initiate future action: Significant reduction of species occurrence or habitat quality.

Findings: Ryan's' Creek was monitored by the fisheries/aquatic section for the 5th year for water quality in five different locations. This stream contains *Phoxinus cumberlandensis* (Blackside Dace – a Federally listed threatened species). This monitoring was done by collecting aquatic insects by a statistically valid methodology and was to indicate changes brought about through activities carried out in the watershed. The fisheries/aquatics biologist does this work or contracts out the identification of the insects via local specialized students or state individuals.

Prescribed burning in the RCW management areas often uses streams in the area to be natural firebreaks. Many of these streams contain *Phoxinus cumberlandensis* (Blackside Dace) or have suitable habitat for this Federally threatened fish. Five streams with various degrees of burning activity carried out around them are monitored via the fisheries/aquatics biologist. Three of these streams have the dace residing in them and the other two have habitat and are in close proximity to the three dace bearing streams. Water quality is done through chemical analysis and aquatic insect collections.

Horse Lick Creek is home to at least two federally listed mussels and several Forest sensitive along with two Forest sensitive fish. A dye-tracing project (partially funded by the fisheries/aquatics section) was initiated in 1999 and is to be finalized by spring 2001. The headwaters were the object of the project with tracing out the waterway and tracing back the origin of the headwaters. One Eastern Kentucky University geology graduate student is doing this project and it is hoped that other future grad students will carry on and complete the entire watershed.

A mussel survey was completed on Rock Creek for mussel beds that may or may not have been in the path of proposed crossings in conjunction with a salvage sale. Fisheries/aquatics and salvage resources funded this survey.

Findings: Findings for the projects above have not been analyzed as to the effectiveness of the various objectives of the projects. Final completion for most of the above projects are expected to be available in early to mid 2001 depending upon work load.

Monitoring is a never ending project for any activity that occurs on the Forest Service public lands. Continued population inventory and analysis for the Forest is proposed in such a way as eventually the total of Forest streams have inventories both for fauna and habitat completed after which periodic inventoring and monitoring will occur.

This will eventually lead to the ability of evaluating past inventories to the present.

Recommendations: None.

A.1.b.4 Indiana Bat

Variability which would initiate future action:

- 1) Meaningful long-term population declines at significant hibernacula (as determined during the biennial winter census conducted according to Recovery Plan guidelines).
- 2) Damage to cave gates on the Forest that have been constructed to limit unauthorized human access to caves that serve as significant Indiana bat hibernacula.
- 3) Damage, collapse, or blockage of cave entrances or passages which alters air flow regimes and negatively affect winter cave microclimate at significant hibernacula.
- 4) Evidence of vandalism or human disturbance at any of the significant ungated hibernacula, or vandalism to warning signs which have been posted to discourage unauthorized human entry during the hibernation season.
- 5) Declines in Indiana bat summer habitat suitability on the DBNF as defined by the Indiana Bat Summer Habitat Suitability Index Model (Romme et al., 1995).

Findings:

1. All of the significant (50 or more individuals) Indiana bat hibernacula on or adjacent to the DBNF were monitored according to a recommended biennial census methodology presented in the USFWS Indiana Bat Recovery Plan. The overall Indiana bat population in winter on the Forest has increased from about 8,910 in 1985 to about 10,500 in 1999. Data from all censuses were transmitted to the Indiana bat Recovery Team and to appropriate state agency officials in Kentucky.
2. All cave gates were visually inspected in 1998 and 1999. One gate was tunneled under during the fall of 1999.
3. All significant Indiana bat hibernacula were monitored by visual inspection during population census visits and cave microclimate data was also collected at this time.
4. High levels of human disturbance was noted at two significant Indiana bat caves. Scoping for a cave gate project was initiated for one of the above mentioned caves. Both of these caves had been signed to discourage human disturbance during the hibernation period.

Recommendations:

1. Continue biennial population censuses according to IBRP guidelines at all significant Indiana bat caves within the DBNF proclamation boundary
2. Monitor condition of all gated caves prior to the hibernation season.
3. Continue to monitor microclimates at significant Indiana bat hibernation sites with "Hobo DataLoggers" (temperature and humidity).
4. Continue to monitor ungated caves for evidence of human disturbance or vandalism of information signs.
5. Current literature dealing with Indiana bat summer habitat management should be monitored. Initiate Forest Plan amendment process to incorporate current best available information as "standards and guidelines" in the Forest Plan. Continue radio-telemetry study to determine habit preference and roost tree selection on the DBNF.

2. Forest Health

A.2.a Fuel Treatment - Evaluate the extent and effects of prescribed fire. Review prescribed fire plans before and after burning and on-site inspections of prescribed fires during the burn and post-burn to evaluate burning conditions, smoke behavior, smoke dispersal, and burn objectives.

Variability which would initiate future action: Objectives of prescribed fire are not being met.

Findings: Burn execution and short term fire effects are reviewed and documented by the Burn Boss on the site specific Burn Plan. These objectives are being met. Achievement of long term goals and objectives will be measured using guidelines established in the Forest prescribed Fire Monitoring Plan.

Recommendations: Conduct a conference on the effects of prescribed burning to better evaluate the effects central Appalachian hardwoods. Conduct a prescribed fire workshop to build implementation and monitoring skills.

A.2.b Insect and Disease - Determine extent of insect and disease activity. Assess effect of insect and disease occurrence on resources so that destructive insects and disease organisms do not increase to potentially damaging levels following management activities. Aerial and ground surveys, and forest pest management biological evaluation.

Variability which would initiate future action: Based on forest pest management biological evaluation.

Findings: Southern pine beetle were found on the Somerset district in an isolated occurrence. Their activity will be monitored by district personnel. At this time, their presence does not indicate that an epidemic will occur. However, some pine trees can be expected to die as trees are weakened and attacked by secondary diseases. Bill Sites from Forest Health has been on the Forest evaluating possible impacts to trees (pine and hardwood) that were damaged during the snow and wind storms of 1998. Localized occurrences of insect and disease may occur, but an epidemic build-up in populations is not expected.

Annual monitoring for gypsy moth is being done using pheromone traps located in high-use recreation and travel corridors. No gypsy moths were captured in these traps during 1998. The most recent issue of *Gypsy Moth News* is available on the internet at: <http://www.fsl.wvnet.edu/gmoth/gmnews/gmnews.html>.

Beginning in 1999, the USDA Forest Service, State partners, and other USDA agencies will use the Slow The Spread (STS) program along the 1,200 mile front which stretches from North Carolina to Wisconsin. Intensive monitoring will occur to identify recently established, low-level populations in the transition area for possible treatment. With the STS in place, gypsy moth populations are estimated to enter the northeastern portion of Kentucky by the year 2025. Without STS, all of Kentucky is estimated to have gypsy moth infestation.

Recommendations: None.

3. Watershed Conditions

A.3.a Soil Disturbing Activities - Determine if prescribed standards and guidelines, and mitigation measures are protecting soil productivity. Validate projected erosion rates and "T" factors for various management activities. Visual estimates and transects which monitor amounts and conditions of ground cover, nutrient status, soil bulk density. Use of special techniques will measure soil loss specifically related to individual management areas, soil mapping units, etc.

Variability which would initiate future action: Any deviation from Forest-wide standards and guidelines, and when actual erosion rates exceed projected erosion rates and "T" factors.

Findings: Insufficient documentation available to support a determination of how successful the Forest may or may not have been in protecting long-term soil productivity.

In addition, no actual nor predicted erosion rates have been developed to validate "T" factors or confirm predictions made in the Forest Plan concerning tolerable soil loss rates for interpreting effects of various kinds of disturbances on soil properties and qualities that are important for supporting management decisions involving future use and management of the soil resource.

Recommendations: No change in the FY 1998 M & E Report recommendations.

A.3.b Soil and Water Resource Improvements - Determine if the applied techniques were effective; if the projected outputs were or are being obtained; and if maintenance is needed. Monitor through project reviews and Management Attainment Report.

Variability which would initiate future action: 30% vegetation failure of project area, stability problems which affect productivity or use and management, or does not achieve acceptable water quality standards.

Findings: Based on field observations and limited water quality data, it is concluded that the Forest has successfully accomplished quality watershed improvement work on all but the more complex projects. Those complex projects which dealt with acid mine drainage haven't achieved the level of performance/improvement in water quality as desired. This has been due to a number of things involving design failures and lack of supporting project monitoring and maintenance.

Recommendations: None.

A.3.c Water Quality Monitoring at Swimming Areas - Ensure that the water quality is suitable for water contact sport activities. Monitor with water samples collected at swimming areas. Follow E.P.A approved technique for analysis.

Variability which would initiate future action: Exceeding minimum S.S. water quality standards. Reference FSM 2532.5, Region-8 Supplement No. 42, dated 11/87.

Findings: Eleven sites were regularly monitored at Laurel River Lake and three at Cave Run Lake for swimming water quality during 1999. All samples were in compliance.

Recommendations: None

A.3.d Effects of Activities on Water (Surface and Ground) Quality and Riparian Areas - Determine if management practices on analysis areas and drainage basins are affecting water quality. Verify predicted water yield and sediment rates in relation to beneficial use of water. Monitor projects using above, below or paired watershed sampling techniques. Select areas having a high potential for adverse impacts such as soils developing from Pennington shale.

Variability which would initiate future action: Activities not meeting State and Federal water quality standards or leading to possible long-term degradation of the watershed.

Findings: Results from past water quality monitoring has shown that a vast majority of streams on National Forest land are of the highest quality and land management activities are not significantly degrading water quality. Even though most of the streams on the Daniel Boone National Forest are of highest quality, there are still over 40 miles that are impacted by acid mine drainage from past coal mining activities and brine from old oil wells. Most of these streams are impacted from land use prior to Forest Service ownership, and do not meet state water quality standards or support aquatic life. Some of these streams are monitored in 1999. However, due to a limited monitoring budget the program was smaller than in past years. In 1999 a restoration project was complete in Wildcat Branch on the Somerset Ranger District in cooperation with the Office of Surface Mining. This project is being monitored to evaluate effectiveness and is part of larger watershed rehabilitation efforts that will take quite a few years to complete.

The DBNF has also been actively involved in the development of Forest and State-wide Watershed Management Frameworks. These frameworks will help guide monitoring, watershed assessment, and restoration into the next century. As part of these frameworks the forest cooperated with several other agencies and collected macroinvertebrates (aquatic insects) from 7 sites in the Licking River drainage. Currently the information has not been completely analyzed but it will give a general assessment of these watersheds and will help direct restoration efforts in the Licking River basin. The information will also be used during Forest Planning.

For the most part, research studies conducted by other federal and state agencies are being relied on for information on water yield and timing of flows (e.g. USGS, KY Geological Survey, and KY Division of Water).

Recommendations: None

A.3.e Trends for Water Quantity, Quality and Timing - Determine effect of plan on long-term trend for water quality, quantity and timing. Determined by specific sampling design, available data, and data to be collected. Monitor representative drainage basins with a mix of practices.

Variability which would initiate future action: Any downward trend or lack of progress in achieving stated goals and objectives.

Findings: Water quality in general are being met (See Section A.3.f). However, the exception to this are severely disturbed mining areas and acid mine drainage problems on acquired lands. Funding for trend analysis is limited.

Recommendations: None

B. Sustainable Multiple Forest Benefits

1. Outdoor Recreation Opportunities

B.1.a Developed Site Condition - To ensure that facilities and the general areas of developed sites are maintained in a safe and sanitary condition in accordance with appropriate management levels. These conditions are monitored annually through on-site inspections.

Variability which would initiate future action: Deterioration rates higher than historic patterns at heavily developed sites.

Findings: The desired uses, opportunities and aesthetic values are being achieved however, a lack of funding over the past five years has resulted in the creation of approximately \$1,500,000 in deferred maintenance cost in developed recreation sites and trails. We have attempted to address this problem in a variety of ways, a few of which are noted below. We have also highlighted some of the major efforts and issues on the Forest.

We have been able to maintain consistent levels of quality, developed recreation opportunities- particularly around Cave Run and Laurel River Lakes primarily through the Granger-Thye Concession permits. This year we developed a prospectus for a new permit for the Morehead Ranger District that greatly expands areas under GT permit and includes all campgrounds, a shooting range and two major picnic areas on the district.

We developed plans to introduce the Fee Demonstration Project in the coming year FY2000 for a few of our non-permit developed sites which should result in some added income to help address funding needs.

Public input from comment cards, our web site and personnel contacts has been mostly positive regarding the existing facilities and services we have provided at our developed sites. However, there are an increasing number of request for amenities such as RV hookups, better boat docks and improved bathroom/shower facilities.

Continue to monitor and pursue new opportunities for funding deferred maintenance backlog on the forest.

Recommendations: None.

B.1.b Dispersed Area Use - To determine the actual use and ensure that the level of use is acceptable. This is monitored through the Recreation Visitor Day (RVD) reports, which consider trail and traffic counts, and field observations.

Variability which would initiate future action: 20% change in Recreation Opportunity Spectrum (REVIEW OF SYSTEMS:) carrying capacity per acre over a 3-year period.

Findings: Dispersed use has increased in several areas. In particular there has been increased use on trails by horses, mountain bikes and OHV's (until closure). In addition, back country camping, rock climbing and rappelling use has increased considerably in the Red River Gorge Geological Area (RRGGA) in the past 5 years. Monitoring of such use has been by field observations by employees of numbers of vehicles and visitors and impacts to resources. Statistical, or actual counts of people, has not been done due to a lack of funding, personnel and adequate equipment. There have been some efforts made to use trail counters but these have been unsuccessful due to inadequate equipment design and problems with locating the equipment in places where it would not be stolen or vandalized. Trail registers for wildernesses and major trail heads are being used and while they provide some indication of user satisfaction, they do not provide adequate counts of use.

Recommendations:

- 1) In the RRGGA close or restrict use in areas experiencing increased activities that are causing adverse impacts.
- 2) In the RRGGA provide more camping and toilet facilities in less sensitive areas and restrict activities such as camping to those facilities.

- 3) Provide climbing opportunities outside the RRGGA in less sensitive areas and in areas with less use.
- 4) As funding allows hire back country rangers to monitor use and user satisfaction.

B.1.c Dispersed Area Condition - Identify problems and changing situations and conditions. Provide assistance in management of dispersed activities.

Variability which would initiate future action: When problem areas or situations are identified by an interdisciplinary team review or line officer.

Findings: Most dispersed areas where we experience concentrations of use, and trails, are field examined approximately every two years as part of our on-going maintenance program. And most areas are in good condition, or have needs that can be remedied through annual maintenance. However, as previously noted, some trails, and areas in the RRGGA are experiencing impacts that require management actions and maintenance/ restoration work beyond routine maintenance . In particular, some trails will require more specific monitoring of their impacts on PETS and some will require maintenance or reconstruction work beyond routine annual maintenance. The most serious impacts in the RRGGA are destruction or damage to cultural sites and White-haired goldenrod at the bases of cliff-lines. Concentrations of primitive campsites where vegetation is destroyed and bare, impacted ground is exposed and concentrations of human waste are also concerns in the RRGGA.

For trails, the impact of most concern is the sedimentation that could adversely affect aquatic PETS species on the southern-most districts of the Forest.

Recommendations: In addition to the recommendations for the RRGGA stated in B.1.b above, it will be necessary to:

- 1) Institute seasonal closures on some trails to reduce damage caused during the wet period of the year between December and April.
- 2) Provide more hardening of trail tread, especially near creek crossings and seeps.
- 3) Inventory and monitor aquatic PETS sites which have trails nearby.
- 4) Provide a formalized M&E system for reporting trail needs.

B.1.d Visual Quality Objectives (VQO) - Ensure compliance with visual quality objectives. Monitored by landscape architect involvement in proposed and actual projects.

Variability which would initiate future action: Failure to meet VQOs because of other resource priorities.

Findings: The project plans that were reviewed in FY1999 met the Scenic Integrity Objectives requirements.

Recommendations: Develop a GIS (Geographic Information System) layer to assist forest personnel in assessing Scenery Management Objectives.

B.1.e Off Highway Vehicles (OHV's) - To ensure that OHV trails and associated facilities are maintained in a condition where they will not cause unacceptable adverse impacts to natural resources, including PETS species and adjacent cultural sites.

Variability which would initiate further action: For adverse impacts to natural resources and sediment problem areas that impact PETS, are identified that would take more than routine maintenance to correct. For adjacent cultural sites, any situation or problem area that is identified.

Findings: In the past several years the Forest experienced similar dramatic increases in OHV use as did the rest of the nation. In some places, this use surpassed our ability to keep up with the adverse resource impacts and law enforcement problems created by it. Of particular concern were sediment impacts on aquatic PETS sites on the southern-most districts on the Forest. Efforts to remedy the problems were not successful and in 1998 a decision was made by the Forest Supervisor that amended the Plan and permitted OHV's only on designated trails. That decision reduced the miles of system trails open to OHV's from approximately 290 to 117 miles and closed over 500 miles of "user developed" trails. The option to add more trails to the system was included in this decision.

Although there is still a small amount of illegal OHV use, the closure has been very successful in significantly reducing OHV use on system trails and thus reducing impacts from such use. Most illegal use is now associated with remote areas adjacent to private lands and is primarily from local riders. From annual and biannual monitoring required by the Plan amendment few trail condition problems were found and all could be taken care of by routine maintenance to correct. No problems have been found on system trails adjacent to cultural sites.

The public demand for OHV opportunities is still high as large tracts of private lands suitable for OHV use are not available to the public.

Recommendations:

- 1) Continue law enforcement and other management efforts to thwart illegal OHV use on trails and in the general forest area.
- 2) Where possible, continue to add OHV loop trail systems of at least 20+miles.
- 3) Provide a formalized M&E system for reporting trail needs.

2. Infrastructure

B.2.a Local Road Obliteration (FLMP p. IV-44) - Ensure that unneeded roads are obliterated and returned to resource production by reviewing the Transportation Inventory System (TIS).

Variability which would initiate future action: Obliteration not accomplished within the required 10-year time frame.

Findings: The target for road obliteration was 12 miles. This target was accomplished in FY99.

Continue to target all roads that are not needed for future access to be obliterated.

Recommendations: None.

B.2.b Road Maintenance - Ensure that road maintenance estimates were correct, and protection of resources is adequate. Ensure that the amount of reconstruction is correct and accomplished as scheduled; that design standards are appropriate for management needs; and that estimated costs are correct. Review the Management Attainment Report, annual budgets, contracts and timber sale appraisals, and conduct field reviews for compliance.

Variability which would initiate future action: Average costs deviate from estimates by more than 25%. Road condition surveys show increase in maintenance needs (\$) of more than 20% from previous year. Deviation of +/- 25% from planned mileage.

Findings: Road maintenance was funded 25% less in FY99. The storm damage of FY98 coupled with the shortfall in funding has stretched our road maintenance dollars. Although there was a funding shortfall road maintenance is generally being preformed to and acceptable level to protect resources. Surface blading and roadside mowing are generally being met. Surface replacement, brushing, and project maintenance are not fully met, but are within a 20% deviation. Maintenance for Level 2 roads was not fully met and will have to be carried over into FY00.

Recommendations: None.

B.2.c Collector Road Construction/Reconstruction - Ensure that the amount of reconstruction is correct and accomplished as scheduled, and that road design standards are appropriate for management needs. Review the Management Attainment Report for compliance.

Variability which would initiate future action: Deviation of +/- 25% from assigned targets.

Findings: The target for road reconstruction was not met. The remaining 3.0 miles will have to be carried over into FY2000 due to NEPA work unable to be completed. All roads were reconstructed to meet design standards in the forest plan. The reduced level of road construction/reconstruction is due partially to a timber harvest below the plan level.

	FY98	Accomplished	FLMP/YR
Construct	0	0	74

Reconstruct 9.5 6.5 56

Recommendations: Revise the Forest Plan to reflect more accurate road needs.

B.2.d Local Road Construction/Reconstruction - Ensure that the density and amount of local roads needed is correct and construction/reconstruction is accomplished as scheduled. Ensure that design standards are appropriate for management needs and that cost estimates are correct. Monitor through the Management Attainment Report, field reviews, and contracts and timber sale appraisals.

Variability which would initiate future action: Deviation of +/- 25% from assigned targets.

Findings: At the present time the Forest Plan does not set road densities for the forest. The forest is in the process of loading our GIS roads data. This information will be used to determine our road densities based on land allocation objectives.

Recommendations: Revise the Forest Plan to reflect more accurate road needs.

3. Roadless Areas/Wilderness/Wild & Scenic Rivers

B.3.a Wilderness Use - To ensure that use does not exceed the carrying capacity for the Beaver Creek and Clifty Wilderness areas. This is monitored through the RIM system, voluntary registration, and field observations.

Variability which would initiate future action: Use at 90% of the identified carrying capacity. At concentrated use sites, loss of 50% vegetative ground cover.

Findings: While use has remained fairly stable in Beaver Creek Wilderness use has increased in several areas over the past few years in Clifty Wilderness. Back country camping, rock climbing and rappelling use has increased considerably in this wilderness in the past 5 years. Monitoring of such use has been by field observations by employees of numbers of vehicles at trailheads and visitors and impacts to resources. Statistical, or actual counts of people, has not been done due to a lack of funding, personnel and adequate equipment. There have been some efforts made to use trail counters but these have been unsuccessful due to inadequate equipment design and problems with locating the equipment in places where it would not be stolen or vandalized. Trail registers for major trail heads are being used and while they provide some indication of user satisfaction, they do not provide adequate counts of use.

Recommendations:

- 1) In the Clifty Wilderness close or restrict use in areas experiencing increased activities that are causing adverse impacts.
- 2) In the Clifty Wilderness close heavily impacted areas to activities such as camping and climbing.
- 3) Provide climbing opportunities outside the Clifty Wilderness in less sensitive areas and in areas with less use.
- 4) As funding allows continue to work on getting adequate trail counting devices and some trailhead interviews to determine trail use and user satisfaction.
- 5) As funding allows hire back country rangers to monitor use and user satisfaction.

4. Timber

B.4.a Allowable Sale Quantity - To track the chargeable yields during the planning period. This quantity is established as a quantity that could be sustained indefinitely, if not exceeded. Monitoring is provided for in the ten-year timber sale program, timber management information system (TMIS).

Variability which would initiate future action: Greater than 15% change from 5-year base harvest schedule. More than 10% of sales located outside of scheduled 10-year plan.

Findings: No timber was sold. The Forest continues to be inoined from selling timber until formal consultation with the USDI Fish and Wildlife Service, and amendment of the Forest Plan to include various direction to protect resources has been completed.

Recommendations: None.

B.4.b Timber Planning Assumptions - Acres of Regeneration Cutting by Management Area - To track the amount of regeneration and intermediate cutting by management area, chargeable/non-chargeable yields.

Variability which would initiate future action: More than 10% change.

Findings: Reforestation activities were at 23% of what was anticipated in the Forest Plan. A reduction in timber sale activity has resulted in a reduction in the reforestation program.

Recommendations: None.

B.4.c Reforestation Practices and Assumptions - To ensure that planting densities and survival rate are in range established by FLMP standards and guidelines; regeneration is obtained within five years; regeneration objectives are met; and scheduled planting is accomplished. Use CISC, plantation survival reports, and certification and field checks to monitor.

Variability which would initiate future action: Less than 100% accomplishment of scheduled natural site preparation or planting in five years. Less than 80% of accomplishment per year.

Findings: Survival and stocking exams indicate that reforestation is successfully occurring over the majority of areas receiving reforestation treatments. Some units have higher survival from others, which is expected because less emphasis is placed on pure yellowpine stands and more emphasis placed on mixed pine/hardwood stands. The 350 trees per acre planted in 1998 occur in combination with hardwood sprouts, but no distinction was made between purely pine and pine/hardwood units. Not every hardwood regeneration unit is evaluated for stocking. Sample cove and upland sites are checked for stands that are between 10 and 15 years of age. By this age, tree dominance is apparent and a better evaluation of species composition can be made.

	Restocking Standards No. of trees per acre, by level (FLMP IV-21)			Average survival No. trees per acre (1st and 3rd year reports)	
	Low	Target	Upper	Planted 1998	Planted 1996
Yellow pine	300	600	900	350	500
White pine	200	300	700	n/a	n/a
Hardwoods	150	250	1000	n/a	n/a
Pine/Hardwood	300	400-600	900	n/a	n/a

Recommendations: None.

5. Heritage Resources

B.5.a Heritage Resources - Ensure compliance with the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), Archaeological Resource Protection Act (ARPA), and Forest Plan standards and guidelines. Strive to meet Forest Plan goals for inventoried acres and sites evaluated for National Register of Historic Places. Compliance is monitored by field and office reviews of project plans and implementation.

Variability which would initiate future action: Non-compliance with applicable regulations and Plan standards and guidelines.

Findings: Dispersed recreation use, especially camping and fire building in rockshelters has dramatically increased. One National Register listed rock art site has been destroyed by these activities. Monitoring of rockshelter archaeological sites within the RRGGA indicate dispersed recreation activities are adversely impacting significant cultural resources, particularly through soil displacement and contamination of deposits. Forest plan goals for

inventoried acres and sites evaluated have not been met. The timetable for mitigating adverse impacted archaeological sites outlined in the 1994 Programatic Agreements has not been met.

Recommendations:

- 1) Close all rockshelters within the RRGGA to camping and fire building until the area can be systematically inventoried for cultural resources.
- 2) Concentrate cultural resource inventory within the Red River Gorge area.
- 3) Accelerate site mitigation projects identified in the 1994 Programatic Agreements.

C. Organizational Effectiveness

1. Accomplishments

**Table C.1 - FLMP Accomplishments 1999
 Daniel Boone National Forest**

MAR No.	Management Description	Unit of Measure	ANTICIPATED FLMP 10-year average	FY-1999 Accomplished
RECREATION				
26.0	Developed sites-ops & maint.	PAOT day	4,486,000	2,651,159
2602	Developed sites	PAOT day		2,839,189
21.0	Trail constr. ¹	mile	12.5	21
21.1	Trail maint.	mile	322	214
HERITAGE				
27.1	Surveys	acre	67,000	200
65.2	Site evaluation	each	5	1
65.3	Site interpreted	each		3
65.4	Site protected	each		1
VEGETATION				
77.0	Timber offered	mmcf	8.2	nom.
17.0		mmbf	45	1.1
18.0	Silviculture Px.	acre	66,413	n/a ⁴
19.1	Reforestation	acre	7,035	1,641
20.1	Timber stand imp	acre	4,035	691
18F4	Regen. MA 5:			
	Morehead	acre	57	0
	London	acre	64	0
	Somerset	acre	24	0
	TOTAL	acre	145	0
WILDLIFE				
66.2	Habitat imprv.	acre	450	962
37.2	Habitat structures	each	120	85
68.4	Fish hab. imprv.	acre	30	87
68.3	Fish structures	each	10	20
72.6	T&E hab. imprv.	acre	600	617
39.2	T&E structures	each	2	82
RANGE				
28.0	Grazing permitted	aum	100	0
29.0	Range non-struct.	each	50	0
30.0	Range structures	acre	2	0
SOIL, WATER & AIR				
13.0	Improvements	acre	144	153

¹Trail construction miles does not include construction of trail bridges.

MAR No.	Management Description	Unit of Measure	ANTICIPATED FLMP 10-year average	FY-1999 Accomplished
13.6	Improv. maint.	acre	495	n/a
MINERALS & GEOLOGY				
87.3	Energy Operation	each	720	551
LANDS				
32.0	Land exchange	acre	2,056	0
31.0	Land purchase	acre	300	507.4
33.0	Landline establish	mile	115	20
90.1	Landline maint.	mile	280	115
34.0	Right-of-way	cases	33	0
PROTECTION				
16.2	Fuel reduction	acre	5,830	5,868
FACILITIES				
91.2	Maintained	mile	1,144	1,095
93.x	Constr./reconstr.	mile	92	6.5
	Roads	mile	n/a	12
	Decommissioned			

III. 2000 ACTION PLAN

A. Actions NOT REQUIRING Forest Plan amendment or revision

1. **Action:** Continue to translocate birds to increase the RCW population in Kentucky. (See recommendation #(s) A.1.a.2; A.1.b.1)
Responsibility: Forest T&E coordinator
Completion Date: FY-2000
Status: To be completed in the FY-2000 M&E Report.
2. **Action:** Work with Recreation staff to develop signs encouraging Forest visitors to stay out of white-haired goldenrod sites. Reroute trails where necessary and work with organized visitor groups to promote conservation education. (See recommendation #(s) A.1.b.2)
Responsibility: Forest T&E Coordinator
Completion Date: Ongoing
Status: To be completed in the FY-2000 M&E Report.
3. **Action:**
 1. Continue biennial population censuses according to IBRP guidelines at all significant Indiana bat caves within the DBNF proclamation boundary
 2. Monitor condition of all gated caves prior to the hibernation season.
 3. Continue to monitor microclimates at significant Indiana bat hibernation sites with "Hobo DataLoggers" (temperature and humidity).
 4. Continue to monitor ungated caves for evidence of human disturbance or vandalism of information signs.
 5. Current literature dealing with Indiana bat summer habitat management should be monitored. Initiate Forest Plan amendment process to incorporate current best available information as "standards and guidelines" in the Forest Plan. Continue radio-telemetry study to determine habit preference and roost tree selection on the DBNF.**Responsibility:** Forest T&E Coordinator
Completion Date: Ongoing
Status: To be completed in the FY-2000 M&E Report.
4. **Action:** Conduct a conference on the effects of prescribed burning to better evaluate the effects central Appalachian hardwoods. Conduct a prescribed fire workshop to build implementation and monitoring skills. (See recommendation #(s) A.2.a)
Responsibility: Forest Fire Management Officer
Completion Date: FY-2000
Status: To be completed in the FY-2000 M&E Report.
5. **Action:**
 - 1) In the RRGGA close or restrict use in areas experiencing increased activities that are causing adverse impacts.
 - 2) In the RRGGA provide more camping and toilet facilities in less sensitive areas and restrict activities such as camping to those facilities.
 - 3) Provide climbing opportunities outside the RRGGA in less sensitive areas and in areas with less use.
 - 4) As funding allows hire back country rangers to monitor use and user satisfaction.(See recommendation #(s) B.1.b)
Responsibility: Recreation Staff Officer
Completion Date: FY-2000
Status: To be completed in the FY-2000 M&E Report.

6. Action:

- 1) Institute seasonal closures on some trails to reduce damage caused during the wet period of the year between December and April.
- 2) Provide more hardening of trail tread, especially near creek crossings and seeps.
- 3) Inventory and monitor aquatic PETS sites which have trails nearby.
- 4) Provide a formalized M&E system for reporting trail needs.
(See recommendation #(s) B.1.c)

Responsibility: Recreation Staff Officer

Completion Date: FY-2000

Status: To be completed in the FY-2000 M&E Report.

7. Action: Develop a GIS (Geographic Information System) layer to assist forest personnel in assessing Scenery Management Objectives. (See recommendation #(s) B.1.d)

Responsibility: Recreation Staff Officer

Completion Date: FY-2000

Status: To be completed in the FY-2000 M&E Report.

8. Action: .

- 1) Continue law enforcement and other management efforts to thwart illegal OHV use on trails and in the general forest area.
- 2) Where possible, continue to add OHV loop trail systems of at least 20+miles.
- 3) Provide a formalized M&E system for reporting trail needs.
(See recommendation #(s) B.1.e)

Responsibility: Recreation Staff Officer

Completion Date: FY-2000

Status: To be completed in the FY-2000 M&E Report.

9. Action: .

- 1) In the Clifty Wilderness close or restrict use in areas experiencing increased activities that are causing adverse impacts.
- 2) In the Clifty Wilderness close heavily impacted areas to activities such as camping and climbing.
- 3) Provide climbing opportunities outside the Clifty Wilderness in less sensitive areas and in areas with less use.
- 4) As funding allows continue to work on getting adequate trail counting devices and some trailhead interviews to determine trail use and user satisfaction.
- 5) As funding allows hire back country rangers to monitor use and user satisfaction.
(See recommendation #(s) B.3.a)

Responsibility: Recreation Staff Officer

Completion Date: FY-2000

Status: To be completed in the FY-2000 M&E Report.

10. Action: .

1. Close all rockshelters within the RRGGA to camping and fire building until the area can be systematically inventoried for cultural resources.
2. Concentrate cultural resource inventory within the Red River Gorge area.
3. Accelerate site mitigation projects identified in the 1994 Programatic Agreements.
(See recommendation #(s) B.5.a)

Responsibility: Recreation Staff Officer

Completion Date: FY-2000

Status: To be completed in the FY-2000 M&E Report.

B. Actions REQUIRING amendment or revision to the forest Plan

1. **Action:** Revise the Forest Plan to reflect more accurate road needs (See recommendation #(s) B.2.c)
Responsibility: Engineering Staff Officer
Completion Date: Concurrent with the Forest Plan Revision.
Status: To be completed in the FY-2000 M&E Report.

C. Amendments to be completed

1. **Action:** Special Habitat Needs and Silviculture (SHNS) Forest Plan Amendment (See recommendation #(s) A.1.a.2; A.1.b.1)
Amendment Description: Incorporate resource protective measures and standards and guidelines.
Responsibility: Forest Supervisor
Projected Completion Date: July 2000

D. Recommendations where No Action will be taken in FY-2000.

None.

APPENDICES

A. List of preparers

George Chalfant - Soil Scientist

Jon Walker - Hydrologist

Dave Mertz - Fire Management Officer

Mason Miller - Engineering/Recreation Staff Officer

Fred Marriott – Recreation Specialist

Kevin Lawrence - Forest Planner

Paul Finke - Implementation Coordinator / Silviculturist

B. Forest Plan amendments from, September 27, 1985 to October 31, 1999

Amendment No.	Date	Responsible Official	Amendment Description
1	04-06-87	Chief, Robertson	EIS/ROD Suppression of southern Pine Beetle
2	01-21-88	Forest Supervisor, Wengert	Updated implementation schedules for trail construction, timber sales, studies of rivers, Cave Run Lake botanical area.
3	07-27-89	Regional Forester, Alcock	Incorporation of methods and tools for use in the FEIS on Vegetation Management in the Appalachian Mountains
4	03-27-89	Regional Forester	Cutting policy within 3/4 mile of RCW colonies on existing timber sale contracts
5	May 1990	Regional Forester	Interim Standards and Guidelines for the Protection and Management of RCW Habitat within 3/4 mile of colony sites.
6	07-09-90	Forest Supervisor, Wengert	Direction for management of mixed types (pine-hardwood or hardwood-pine)
7	12-20-90	Forest Supervisor, Wengert	Changes to Standards and Guidelines for soil and water.
8	06-21-95	Regional Forester, Joslin	Designation of tentative HMA for suitable RCW habitat
9	06-19-95	Forest Supervisor, Powell	Removal of Two Gauging Stations from within the Beaver Creek Wilderness Area
10	04-24-98	Forest Supervisor, Worthington	OHV Management Direction

C. Status of 1999 recommendations and action plan

Actions NOT REQUIRING Forest Plan amendment or revision

1. Action: Replace Variability wording with "Particulate matter monitoring data for any area within or adjacent to the Forest is close to exceeding National or State ambient air quality standards". (See recommendation # A.1.a - Air Quality - Smoke Management)

Responsibility: Lands Staff Officer

Completion Date: FY-99 M&E Report

Status: No action has been taken. This should occur as part of the Forest Plan Revision.

2. Action: Improve data collection/documentation through monitoring to assess effects of management actions (disturbance) on soil properties and qualities, evaluate Forest Plan Standards and Guidelines, and validation of standards for allowable change for maintaining soil productivity. Validation of "T" factors has been identified as a research need in the Forest Plan (Chapter V-3). This validation process will require consultation and collaboration with Forest Service Research, other agencies, and the academic community. (See recommendation # A.2.a- Soil Disturbing Activities)

Responsibility: Lands Staff Officer

Completion Date: Concurrent with revision of the Forest Plan.

Status: No action has been taken.

B. Actions REQUIRING amendment or revision to the forest Plan

1. Action: Revise Forest Plan to reflect more accurate road needs (Monitoring Items B.2.b & B.2.c). The Forest Plan Revision is in progress.

C. Amendments to be completed

1. Action: Special Habitat and Silviculture (SHNS) Forest Plan amendment is in being prepared and the environmental assessment completed in 1999.

Amendment Description: The SHNS amendment to the Forest Plan adds standards that provide for specific protective measures for cliffline habitat, Indiana bat habitat, and red-cockaded woodpecker habitat. It also includes silvicultural tools for vegetation management.

Responsibility: Forest Supervisor

Projected Completion Date: July 2000

D. Recommendations where No Action will be taken in FY99.

1. Recommendation: None.