

CHAPTER 5

IMPLEMENTATION OF THE FOREST PLAN

IMPLEMENTATION DIRECTION

This Forest Plan provides the long-range management direction for the National Forests in Mississippi. Management direction is expressed in terms of both Forest Direction and Management Area Direction. Forest Direction consists of goals, objectives, and management requirements which are generally applicable to the entire Forest. Management Area Direction contains management requirements specific to individual areas within the Forest and are applied in addition to the Forest Direction Management Requirement. Management direction responds to public issues, management concerns, and opportunities within the availability, suitability, and capability of the land and resources.

Implementation of this direction is the key to translating the goals, objectives and management requirements stated in the Forest Plan to on-the-ground results. The Forest Plan is implemented through the program development and budgeting and annual work planning processes. These processes supplement the Forest Plan and make the annual adjustments and changes needed to reflect current priorities within the overall management direction contained in the Plan.

As soon as practicable after approval of the plan, the Forest Supervisor shall ensure that, subject to valid existing rights, all outstanding and future permits, contracts, cooperative agreements, and other instruments for occupancy and use of affected lands are consistent with the plan.

Subsequent administrative activities affecting such lands, including budget proposals, shall be based on the plan. The Forest Supervisor may change proposed implementation schedules to reflect differences between proposed annual budgets and appropriated funds. Such scheduled changes shall be considered an amendment to the Forest Plan, but shall not be considered a significant amendment, or require the preparation of an environmental impact statement, unless the changes significantly alter the long-term relationship between levels of multiple-use goods and services projected under planned budget proposals as compared to those projected under actual appropriations. Annual timber sale and regeneration plans may be adjusted as necessary to insure an even flow of products as well as a balanced program of work during the plan period.

The Forest Plan provides the management direction for developing multi-year implementation programs. The Plan's scheduled

practices, grouped as projects, are translated into multi-year program budget proposals which identify the needed expenditures. These processes complement the Forest planning process as vehicles for requesting and allocating the funds needed to carry out the planned management direction. The Forest's proposed annual program budget is the basis for the requested funding. Upon approval of a final budget for the Forest, the Annual Program of Work is finalized and carried out. The accomplishment of the Annual Program is the incremental implementation of the management direction of the Forest Plan.

Future environmental analyses associated or needed for projects on the National Forests in Mississippi will be tiered to this Forest Plan.

Projects and activities within the Forest Plan will be subjected to environmental analysis as they are planned for implementation. If the environmental analysis for a project shows that: (1) the management area prescription and standards can be complied with, and (2) experience has shown that little or no environmental effect are expected beyond those identified and documented in the Forest Plan, the analysis will result in a categorical exclusion.

*A biological evaluation of how a project may affect any species Federally listed as threatened, endangered, or proposed, or identified by the Forest Service as sensitive, is done as part of the site-specific environmental analysis. This evaluation considers all available inventories of threatened, endangered, proposed, and sensitive species populations and their habitat for the proposed treatment area. When adequate population inventory information is unavailable, it must be collected when the site has high potential for occupancy by a threatened, endangered, proposed, or sensitive species. Appendix D identifies potential adverse effects from vegetation management by species. When adverse effects are projected, mitigation measures specified in Appendix D and this chapter are used to prevent them.

*Requirements and measures for actions affecting threatened, endangered, or proposed species are detailed in species recovery plans and FSH 2609.23R. Recovery plans have been prepared for the southern bald eagle, red-cockaded woodpecker, wood stork, Mississippi sandhill crane, gray bat, Indiana bat, eastern indigo sanke, and Harpers beauty. Chapters in FSH 2609.23R have been prepared for red-cockaded woodpecker, southern bald eagle, Mississippi sandhill crane, and American alligator. Requirements and measures for actions affecting sensitive species are detailed in Forest Land and Resource Management Plans.

*If it is determined that the project may positively or negatively affect threatened, endangered, or proposed species, consultation is initiated with the Fish and Wildlife Service. If, during informal consultation, it is determined that the project is not likely to adversely affect listed species and the Fish and Wildlife Service so concurs in writing, consultation is terminated. However, it is

is determined that the project is likely to adversely affect listed species, formal consultation is initiated. Figure D-1 (Appendix D, Final EIS) outlines this process.

*When the evaluation indicates that a project may have an adverse effect on a sensitive species or its habitat, appropriate State wildlife agencies, natural heritage commissions, and other cooperators or species authorities are contacted to identify coordination measures. These measures are directed towards ensuring species viability and preventing negative population trends that would result in Federal listing.

*Integrated Pest Management (IPM) principles are used during site-specific analysis. IPM is a decision-making and action process which includes biological, economic, and environmental evaluation of pest-host systems to manage pest populations.

*IPM strategies apply to comprehensive systems approach to silvicultural, wildlife, range, recreation, and corridor management practices that emphasizes prevention of pest problems. These strategies consist of a biological, and chemical tools that may be used alone or in combination. Risk rating systems and pest incidence surveys are used during site-specific analysis. Further IPM direction is provided in FSM 3400, FSH 3409.11, and Forest Land and Resource Management Plans.

In each project, water quality is protected from nonpoint-source pollution through use of preventive "best management practices" (BMP's). Implementation of BMP's, monitoring and evaluation of their application and effectiveness, and adjustment of practices as needed are done to protect beneficial water uses and comply with State water quality laws. BMP's are applied to all activities. In each project, site-specific conditions must be assessed, and the BMP's needed to meet State water quality standards must be employed.

MONITORING AND EVALUATION

The purpose of monitoring and evaluating the implementation of the Forest Plan is to provide the decision-maker with information on the progress toward achieving the Plan's goals, objectives, and standards and guidelines.

Monitoring will determine:

- that the Management Area direction is applied as directed;
- that standards are being followed;
- that the Forest is achieving the objectives of the Plan;
- that the application of Management Area direction is responding to the issue topics (planning questions);
- that the effects of implementing the Plan are occurring as predicted.

Evaluation of the results of the site specific monitoring programs will be documented in an evaluation report. The significance of the results of monitoring programs will be analyzed and evaluated by the Forest Interdisciplinary Team.

Based on the evaluation, any need for further action will be recommended to the Forest Supervisor. These recommendations could include:

- no action needed: monitoring indicates goals, objectives and standards are achieved;
- refer recommended action to the appropriate line officer for improvement of application of Management Area direction;

- modify the Management Area direction as a Plan amendment;
- revise the projected schedule of outputs; or
- initiate revision of the Plan.

The documented file of the Forest Supervisor's decisions resulting from monitoring and evaluation is maintained for future use in amending or revising the Forest Plan. At least every five years, a Forest Plan evaluation will be completed and an evaluation report submitted with recommended actions to the Forest Supervisor for his consideration.

Monitoring plans for each of the Forest resources are detailed in Table 5-1. These include the following components:

1. Resource element -- identifier of the item to be monitored.
2. Actions, effects, or resources to be monitored -- a specific statement of what will be examined.
3. Data sources -- a description of monitoring techniques and sources of information to be employed.
4. Sample size -- the amount of examination needed to provide the level of precision and reliability necessary.
5. Frequency -- the schedule of sampling or review stated in years.
6. Responsibility -- the person who will coordinate the monitoring activity (Line responsibility rests with the Forest Supervisor, the District Rangers and the Forest Management Team. This responsibility may be delegated as necessary).
7. Intent -- the purpose of the monitoring activity.
8. Expected precision -- the variability with which data is collected. Precision is qualitatively rated as High (H), Moderate (M), and Low (L), and are relative terms which may vary between resources.
9. Expected reliability -- a measure of how dependable the sample or monitoring method is in reflecting the total Forest situation. A qualitative 3-class system is used to rate reliability: High (H), Moderate (M), and Low (L).

Table 5-1
Monitoring

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Facilities	Road Const.	Miles-MAR	Total	Yearly	Engineering Staff	To determine compliance w/objectives of Plan	H/H	15% variance in pre-prescriptions at the end of the first 4 yrs in arterial & collectors, & then every 5 yrs
	Tbr Purchaser	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Road Reconst	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Tbr Purchaser Road Reconst	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Rd Maintenance All Levels	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Rd Maintenance Level 1	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Rd Maintenance Level 2	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Rd Maintenance Level 3	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Rd Maintenance Level 4	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Rd Maintenance Level 5	Miles-MAR	Total	Yearly	Engineering Staff		H/H	
	Rd Management	Miles TIS O&M Plan Prescriptions Follow-up	Total	Yearly	Engineering & Resource Staffs	To determine compliance w/objective of Plan	H/H	15% variance in O&M Plan & prescriptions at the end of the first 4 yrs. & then every 5 yrs. for local roads
Recreation	VIS & Developed Recreation Sites	PAOT-MAR	Total	Annually	Recreation Staff	To determine objective attainment.	H/H	15% variance from assigned objectives

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Visual Resource Management	Compliance w/ Visual Quality	Field & office review of project prescription plans	Total	Continuous	Recreation Staff	Ensure compliance w/ assigned VQOs	Moderate	Failure to meet VQO
Recreation Opportunity Spectrum (ROS) Class	Recreation Opportunities	Transportation Plans, Compt Prescriptions, Field Observations	Total	Continuous	Recreation Staff	Ensure an adequate range of recreation opportunities are available & that class eligibility does not change without consideration of effects on recreation		
Forest Trails	Trail Conditions	RIM-MAR	Total	Annually	Recreation Staff	Ensure trail is maintained at desired maintenance level in accord with "Trails South."	Moderate	Conditions significantly below requirements for desired experience level
Cultural Resources	Resource Compliance & Protection	Field & Office Review of Project Plans & Prescriptions	Total	Continuous	Recreation Staff	Ensure compliance w/36 CFR 800 & Forest Standards & Guidelines Design & implement appropriate administrative & field procedures to protect significant cultural resource properties from being damaged or destroyed	High	Non-compliance w/36 CFR 800 & Forest Standards & Guidelines
Timber	Acres regenerated by Mgmt Area by Working Group by Age Class	Silvicultural Prescriptions	Total Annual Program	3yrs.	Timber Mgmt	Compliance to LMP.	H/H	± 20% Annually ± 5% over Plan Period
	Total Volume by Mgmt Area 1 Thinning 2 Regeneration	TMIS Cut & Sold Reports, Tbr Sale	Total Annual	Annually	Timber Mgmt	Compliance to LMP	H/H	+ 5% Annually - 15% Annually 110% Over Plan Period

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Timber (contd)		Accomplish. Report. Tbr. Sale Contracts.						
	Yields by age class by Working Group 1. Thinning 2. Regeneration	Silvicultural Prescriptions. Tbr. Sale Contracts.	100%	3 yrs.	Timber Mgmt.	If yields by BAC are as predicted.	1. L/M 2. H/H	± 20% Annually
	Land Class Change	Silvicultural Prescriptions	100%	5 yrs.	Timber Mgmt.	If land class changes, will affect outputs.	M/M	± 5% of Current Acreage
	Acres stocked 1st & 3rd yr.	PEP Program	100%	1st & 3rd yr. after reforestation.	Timber Mgmt.	If stocking goals are met.	M/M	5% or more failure to meet standards.
	Conversions: Pine-Hardwood Hardwood Longleaf	Silvicultural Prescriptions	100%	5 yrs.	Timber Mgmt.	If conversions are within guides.	H/H	± 5% Annually ± 5% over Plan period
	Prescriptions being carried out. a. Shelterwood b. Natural Regen. c. Artificial Regen.	Silvicultural Prescription Silva Report	100%	Annually	Timber Mgmt.	If natural regen. is within guides.	H/H	± 15% Annually ± 5% over Plan Period
	Size of Regeneration Areas	Silvicultural Prescriptions	100%	3 yrs. Currently	Timber Mgmt.	Compliance w/NFMA.	H/H	1% above maximum size without public notice & approval by Regional Forester.
	Abnormal Mortality from I&D or Catastrophic Damage	Aerial Detection Surveys	20%	Annually	Timber Mgmt.	Compliance w/NFMA.	M/H	Loss exceeding 10% of periodic harvest volume.
	Spatial Assump. by Age Class/WG	Silvicultural Prescriptions	Total Annual	3 yrs.	Timber Mgmt.	Planned regeneration if feasible.	H/H	+ 10% of the acres in any one age class.
	Mgmt. Practices Cost Assumptions	Annual Forest Av.	Ranger District Average	3 yrs	Timber Mgmt.	If cost relationships are in line w/those in the Plan.	L/M	± 20% from the estimated Forest Av. used in the Plan.

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Fire	Prescribed Fire	Total acres of understory burning (MIN-P-14&15).	Total	Yearly	Fire Staff	To determine objective attainment.	H/H	20% unless variance can be explained by weather or budget constraints
Economics Total Funds	Comparing actual cost, by activity, to those costs used in Planning	PAMAR	Total	Annual	ID Team	To determine compliance w/objectives of Plan	H/H	
Manpower		Full-Time Equivalents						
Timber, Recreation, Soil & Water, Erosion	Effects of logging equipment use during harvesting, effects of intensive site preparation methods, mechanical pre-commercial thinning equipment, prescribed burning on soil properties, & ORV use.	Measure soil conditions before & after activities for comparison of any changes. Photographic & written documentation of observed conditions. Analyze samples for macronutrients (N,P,K,Ca) & micronutrients. Proportions of each area determined by line transects. Placement of silt screens to collect & measure soil movement.	Sub-watersheds of stands within compartments. At least 3 selected sites that represent the land-forms. Soil series may be the same as or different depending on occurrence	Once monthly following rainfall of 1" or greater until re-vegetation completely covers the soil surface	Soil Scientist	To determine the amount of soil losses as relates to assigned tolerable loss coefficients, management practice needs, validate information for decision making, standards & guidelines, & for coefficients & for long-term trends. Determine if BMP's are applied	H/H	When revegetation by ground cover density (natural & planted) does not occur. When excess concentration of surface water run-off on the site causes rill or gully erosion with potential for off-site delivery of sediments into surrounding ecosystem habitats
Wetland - Wet Sites	Effects of harvesting & regeneration activities on water quality, flora & fauna within wetland areas & effects of vehicle activities on wet soils from logging & recreation	Sampling soil, water turbidity aquatic organisms & vegetative communities in wetlands. EA's & review of proposed activities	5 sample sites per area sampling or 3 selected sites within differing soil series	Sample once before, during, w/emphasis in wet periods & after on a monthly basis until revegetation completely covers the soil surface	Forest Soil Scientist & Watershed Specialist	Insure maintenance of soil hydrologic conductivity of the soils on site. Validate information for short & long term effects. Attainment of objectives for soil & water resource protection. Insure implementation of prescriptions & associated standards & guidelines.	H/H	Prolonged ponding caused by increased bulk density of the soils. Bulk density exceeds 10. on wet soils. Sedimentation of wetlands

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Riparian Areas	Effects of harvesting & regeneration & minerals activities on water quality & riparian zone management	Evaluate riparian area streamside buffer zones for filtering potentials before & after treatment Analyze grab samples for turbidity Photographic & written documentation of observed conditions EA's & review of proposed activities Water quality lab. for sodium at oil well sites Other samples for conductivity will be grab type	2 sales w/ streams (protected) adjacent to area being cut	Monthly for duration of sale & until revegetation completely covers the soil surface Monthly for the duration of minerals activity Data put on STORET system.	Forest Watershed Specialist	Insure management does not significantly affect long-term water quality Insure water quality compliance w/established standards	M/H	Activities not meeting State & Federal water quality standards or leading to long-term degradation of the watershed & changes in water yields that cause floods
Timber & Soil	Effects of fertilizer on wet or severely eroded, low production sites that are low in soil nutrients (N, P, K, Ca, and others)	Soil sampling before & after treatments of treated & untreated areas on poorly drained and/or severely eroded sites w/ little or no organic surface. Surface & subsoil samples will be analyzed by a qualified university or private soils lab Check compartment prescriptions, EA's for each proposed activity Proportions of each sample will be determined by line transects Tissue samples will also be taken for analysis	Two samples for each soil series sampled	Annually	Forest Soil Scientist	Insure soils fertilized produce economic returns	H/H	When an economic return is negative

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Timber/ Recreation	Water intended for human consumption & water used in recreational activities such as camping & swimming or wading.	Collect water samples. Drinking water sent to water testing lab. Bacterial analysis at field lab.	Swim Sites - At inflow area & one at activity area. Drinking water at wells.	Drinking water - according to Mississippi safe drinking water requirements- Swim sites- monthly during swim season. Lab data put on STORET system.	Watershed Specialist	1. Insure water quality complies w/established standards. 2. Safeguard public health 3. Determine trend over time. 4. Determine if BMP are applied.	H/H	When water sample analysis does not meet State standards.
Timber/ Water	Effects of system roads constructed- on water quality & riparian zone management.	Collection of water samples before & after treatment. Analyze samples for turbidity. Samples will be grab type.	2 sales w/ creeks adjacent to roads & area being cut.	Sample monthly during life of sale & until road drainage ditches become stabilized & vegetated.	Forest Watershed	Road system management does not significantly affect water quality Reduce roadside contributions of off-site sedimentation. Validate information for decision making.	Med./Mod	Activities not meeting State & Federal water quality standards or leading to long-term degradation.
Public Affairs	Achieving Objectives of Forest Plan- Evaluation, analysis & summarization of public reaction to Plan implementation	Data Sources - Letters, phone calls, formal & informal personal contacts. District, Supervisor's Office Records. Formal & informal official reports. <u>Monitoring Techniques-</u> Day-to-day process of documentation by Line & Staff Officers, Forest Planner, & Public Affairs Officer.	Forest-wide	Quarterly Line & Staff Review. Annual Summary gathered & prepared by the Forest Planner or Public Affairs Officer.	Line, Staff, & PAO	To measure positive or negative effects of implementation on the public. To identify new emerging issues & concerns To identify new potentially affected interests.	M/H	Significant increase in positive or negative reaction from the public to the implementation of the Plan.

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Public Affairs (contd)		Inclusion in annual information & Public Involvement Plan.						
		Incorporation of data gathered into planning records.						
Wildlife & Fish	Land Management Prescription	Silvicultural prescription & sales review process CISC inventory		Continuous	Wildlife Staff	Assure application of Land Management Prescriptions as directed	M/H	Observed deviation from management prescriptions
	Land Management Standards & Guidelines	Silvicultural prescription & sales review process, EA & EIS review. CISC data, W/L Hab. Mgmt Hdbk, F.S Manual.		Continuous		Assure proper application of management standards & guidelines	M/H	Observed deviation from management standards & guidelines.
	Management Issues & Concerns, effects on goals & objectives from adjacent land uses, effects of implementation on other agencies.	General management review process, wildlife & fisheries review process, CISC, MAR, & other storage or reporting systems MS Dept W/L Conservation (public listening sessions)		Continuous	Wildlife Staff	Determine & assure program responsiveness to public, private, & out-service agencies.	M/M	Significant variation from management goals, or unacceptable adverse impacts.
	Monitor Management Indicator species & their habitat trends Monitor populations & habitat trends of endangered, threatened, or sensitive species					Assure maintenance of plant & animal species diversity & viable populations of all existing native vertebrates Produce habitat capability for demand species as per management objectives Determine progress toward recovery of the species & maintenance of sensitive species		

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Wildlife & Fish (contd)	1. White-tailed Deer	Habitat CISC data & additional improvement information.		Annually	W/L Staff	(1) Deer (2) Turkey (3) Gray Squirrel (4) Fox Squirrel (5) Quail (6) Red Cockaded Woodpecker	High	A trend representing a statistically significant population decline or difference in comparing population & habitat trends
		Population Population estimates in WMA's will be determined by the MS Dept. W/L Conservation. Forest population estimates will be extrapolated		Annually	W/L Staff & MS Dept W/L Conservation	(7) Gopher Tortoise (8) Pileated Woodpecker (9) Bachman's Sparrow (10) E. Meadow Lark (11) Am. Kestrel (12) Rufous-sided Towhee	Med	
	2. Turkey	Habitat CISC data or additional improvement info.		Annually	W/L Staff	(13) Pine Warbler (14) Hooded Warbler (15) Screech Owl (16) Pitcherplant spp. (17) Lotic Fish Species (18) Lentic Fish	M/H	A trend representing a statistically significant departure, or conflicting habitat vs population data which is unexplainable
		Population Turkey population & harvest data MS Dept. W/L Conservation		Annually	W/L Staff & MS Dept W/L Conservation		L/M	
3. Gray Squirrel		Habitat/Population MS Dept. W/L Cons harvest data. Acres of bottomland hardwood 40 yrs. of age will be monitored to reflect capabilities.		Every 2 yrs	W/L Staff & MS Dept W/L Conservation		H/M	Any decline of bottomland hardwood habitat 40 yrs of age Popula-vs. habitat discrepancy.
4. Fox Squirrel		Habitat Monitor upland & bottomland hardwood component & acres associated w/long-leaf community		Every 2 yrs	W/L Staff			Significant decline of hardwood 40 yrs of age.

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Wildlife & Fish (contd)		<u>Population</u> MS Dept. W/L Conservation harvest statistics.		Every 2 yrs.	W/L Staff & MS Dept. W/L Conservation			
	5. Quail	<u>Habitat/Population</u> Harvest & population data MS Dept W/L Cons. Monitor acres of early age classes, 5 yrs. old in the predominate pine forest		Annually	W/L Staff & MS Dept. W/L Conservation		L/M	A trend representing a significant program departure from the Plan.
	6. Red-Cockaded Woodpecker *	<u>Habitat/Population</u> Population inventory & trend study, monitor suitable habitat		Every 2 yrs (Pop & Hab Inv.) Every 5 yrs (trend study)	W/L Staff		M/M-H H/H	Trend indicating population decline. A statistically significant decline.
	7 Gopher Tortoise *	<u>Habitat/Population</u> Monitor upland sandhill community (longleaf) & prescribe burn program. Inventory population & develop trends		Annually	W/L Staff		L/L	Population decline indicated over 3 consecutive years. Conversion or significant decline in suitable habitat.
	8. Pileated Woodpecker *	<u>Habitat</u> (a)CISC data for age/FT (b)Standards for area distribution.		Annually	W/L Staff		H/M	Significant deviation of habitat trends from plan projections or pop. levels near min. viable levels
		<u>Population</u> Habitat capability models or census for populations or habitat occupancy. 1/		Annually if near min. level, 2-5 yrs otherwise.	W/L Staff		L/M	

1, Population predicted from habitat capability models unless model or other data indicates populations near minimum levels -- then initiate censuses (by volunteers if possible)

* Monitoring cost will be above current budgets but are unknown at the present time

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Wildlife & Fish (contd)	9. Bachman's Sparrow *	<u>Habitat/Population</u> Bird census routes & monitor suitable habitat.		Every 2 yrs.	W/L Staff		L/L	A 30% population decline over 2 consecutive census periods, or a trend indicating decreased suitable habitat.
	10. E. Meadow Lark *							
	11. Am. Kestrel *							
	12. Rufous-sided Towhee *							
	13. Pine Warbler *	<u>Habitat/Population</u> Bird census routes & monitor suitable habitat.		Every 2 yrs.	W/L Staff		L/L	Decrease in suitable habitat indicating departure from the Forest Plan or a declining population trend representing a statistically significant departure from the Forest Plan.
	14. Hooded Warbler *							
	15. Screech Owl *							
	16. Pitcher plant spp. *	<u>Habitat/Population</u> Survey, inventory, record & map sites.		Continuous	W/L Staff		H/M	N/A. Retain & develop managed grassy, pitcher plant communities
	17. Lotic Fish spp.	<u>Habitat/Population</u> --Monitor habitat species populations by seining, electroshocking --Monitor habitat by macrobenthic sampling & physiochemical analysis.		Semi-Annual monitoring on a rotating basis of stream systems.	W/L Staff		H/H	Decrease in fish populations from previously reported levels (Ebert 1978-1984) for individual stream systems on Forest Service land. Absence of indicator Macrobenthic Invertebrates in the following groups (mayflies, caddis-flies, damselflies, crustacea or mollusca) where previously occurred. (MS Museum of Natural Science Resource).

* Monitoring cost will be above current budgets but are unknown at the present time

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Wildlife & Fish (contd)	18 Lentic Fish spp	Habitat/Population --Monitor species population levels by electroshocking, seining, & cove rotenones --Monitor habitat by water quality sampling & shoreline erosion analysis		Every 2 or 3 yrs.	W/L Staff		H/H	Population deviations from Swingle (1960) balances fish populations for lakes & ponds by more than 30% Deviation from current EPA water quality standards to unsuitable levels. (Standard methods, 1976).
Range	Range Condition & Trend	FSH 2209.21 On-ground analysis of primary & secondary range Review of allotment inspection reports	Variable Representative of allotment.	3-5 yrs	Range Staff	Monitor changes in ecological trend or Range resource.	H/H	+50% utilization on range sites, non-compliance w/permit distribution requirements, excessive seedling damage, change in species composition & vigor
	Forage Production & Utilization	FSH 2209 21 Measurement of forage production & utilization	Variable 2 per key allotments.	Annually	Range Staff	Monitor utilization on key forage plants on primary range	Ocular estimates L/L Clipped plots H/H	±50% utilization on total of all forage species.
Range (contd)	Allotment Management Plan	FSM 2210 FSH 2209 21 Periodic review to assure compliance. Review of allotment examination reports.	Key allotments	Annually	Range Staff	Insure compliance	M/M	Non-compliance of key of key planning elements.

Table 5-1 (Continued)

Resource Element	Actions, Effects, or Resources to be Monitored	Monitoring Techniques & Data Sources	Sample Size	Frequency of Measurement	Responsibility	Intent of Monitoring Activity	Expected Precision/Reliability	Variability Which Would Indicate Further Action
Range (contd)	Structural & Non-structural Improvement work.	Project effective analysis. FSH 2209.11 Economic, environment, social.	Project	All new projects	Range Staff	Evaluate project cost effectiveness.	H/H	See FSH 2209 11
	Term Grazing Permit	FSM 2230 Permit policies. FS RAMIS	20% of of permits random selection	Annually	Range Staff	Determine departure from authorized use to guide in planning further uses	M/M	+10% permitted number

AMENDMENTS AND REVISIONS

Amendment -- The Forest Supervisor may amend the Forest Plan. Based on an analysis of the objectives, guidelines, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the plan. If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

Revision -- A Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. This Forest Plan will be revised when necessary, but no later than October 1, 2000. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the plan have changed significantly or when changes in RPA policies, goals, or objectives would have a significant effect on forest level programs.

In the monitoring and evaluation process, the Interdisciplinary Team may recommend a revision of the Forest Plan at any time. Revisions are not effective until considered and approved in accordance with the requirements for the development and approval of a Forest Plan. The Forest Supervisor shall review the conditions on the land covered by the plan at least every five years to determine whether conditions or demands of the public have changed significantly.