CHAPTER 2

ANALYSIS OF THE MANAGEMENT SITUATION SUMMARY

Chapter 2 briefly summarizes the supply and demand conditions for significant market and nonmarket goods and services associated with the planning area. Special conditions affecting supply or demand are briefly described in this chapter.

The material presented in this chapter is based on an earlier step in the planning process in which the NFMA regulations 36 CFR 219.12(e) require that an extensive Analysis of the Management Situation (AMS) be made to determine the ability of the Forest to supply goods and services in response to society's demands. This determination provides the basis for decisions to change management emphasis, and guides the direction and extent of those changes.

SUPPLY CONDITIONS

Table 2-1 summary displays the constrained maximum physical and biological production potentials for significant individual goods and services (maximum resource level benchmarks) identified in the AMS document. Also included are displays of the production levels which are attainable under current management direction. The definitions for each of the production levels are as follows:

Maximum Production Potential

The highest level of a particular output or use that could be produced over time with regard for legal and other requirements.

Current Management Direction Production (No-Action Alternative)

The level of goods and services provided under current management direction, as constrained by current Forest budgets, and the most likely level of goods and services expected to be provided under probable budgets if current management direction continues.

Current Management is the level of outputs and uses provided by presently approved resource plans. In the case of recreation outputs, current management is shown as the theoretical capacity in thousand recreation visitor days (MRVD). Benchmark levels indicate what could be attained on a resource by resource basis, looking strictly at individual resource plans with no attempts to resolve conflicts. (See Table 2-1).

With regard to current and potential supply of visual resources, it is anticipated that the high visual absorption capability of the land, i.e., productive soils, plentiful rainfall and rapid revegetation will support acceptable levels of management in each management alternative.

The supply condition for cultural resources is considered to be those sites or related themes available for interpretation. Currently, the Turkey Fork Campsite at Turkey Fork Recreation Area has a series of posters depicting the prehistoric occupation and excavations which occured there. A thematic poster for trails, focusing on prehistoric use of trails, has been developed for use at trailheads mainly on the De Soto National Forest. Opportunities exist for developing interpretive materials at the Owl Creek Mounds, a National Register property; the old lumber town of Marathon at Marathon Recreation Area; at the old mill community at Shongelo Recreation Area; the recreated Indian mound at Chewalla Lake Recreation Area; the POW Camp on the Tuxachanie Trail; the Rodriquez homesite on the Homochitto National Forest; and the Robinson Road on the Tombigbee National forest. There are also the remains of several CCC camps located on nearly every district which could be recognized interpretively, and which are of great interest locally. The "Who Passed This Way" poster (Form P23-46) will be used where appropriate.

The supply potential or maximum resource outputs are the maximum capability of the Forest to provide single resource emphasis levels with associated costs and outputs, but which assume that management direction complies with minimum standards of applicable laws and regulations, including prevention of significant or permanent impairment of long-term productivity of the land.

DEMAND CONDITIONS

Demand trends are the level of outputs, uses, and services expected to be needed or desired in the future. Also displayed in Table 2-1 are projected demands for the significant goods and services as these have been addressed to the AMS. In addition, the following brief demand summaries for major resources are offered.

Recreation - Currently there is an adequate supply of recreation opportunities on National Forest land. Presently, statewide developed facilities are being used at 10-15 percent of available capacity yearlong. Forty percent is considered optimum use. Clear Springs in southwest Mississippi is the one area that is being used in excess of 40% of available capacity.

With the current rate of increase for developed sites, the demand should reach 700 MRVD's by 2030; this would be about optimum use at current capacity. The demand for dispersed use would reach maximum capability at about the same time.

The production potential for developed recreation is about 800 MRVD's with the development of one additional site in southwest Mississippi. Without this additional site it is 706 MRVD's. The dispersed recreation production potential is about 4,212 MRVD's.

Trails - There are 133 miles of horse and hiking trails on the National Forests in Mississippi. Current capacity exceeds demands;

however, the SCORP (State Comprehensive Outdoor Recreation Plan) shows demand exceeding supply in the 2nd period.

Cultural Resources - Very little demand for interpretive cultural resources have been expressed publicly, although concerned entities have expressed a desire that cultural resources be considered and protected during management activities. Requests for information on the Owl Creek Mounds are made occasionally, and copies of an article appearing in "Mississippi Archaeology", which was devoted to the site, are given to those who request information. The state of Mississippi, on the whole, possesses a diversified mix of interpretive historical and archaeological sites, such as those provided along the Natchez Trace, and the current supply of interpretive sites within the state are probably sufficient to meet public demand both at the present time, and in the future.

Visual Quality - The demand for visual quality should be expressed by the public; however, during the public involvement segment of the planning process, no input was given on this subject by the public. Input was made in the inventory process by district personnel who are familiar with the type and amount of public use on all travel corridors and seen areas. This input was an estimate of the public's sensitivity for the landscape's visual attractiveness (measured as high, medium, low).

Range - Presently there are 11,099 AUM's of use on the three De Soto Districts that make up all grazing allotments on the National Forests in Mississippi. There is a large surplus of capacity that is unused.

By the year 2030 it is projected that there will be a demand for about 20,000 AUM's. It appears that production will greatly exceed demand under all alternatives.

Water - Local demand for surface water is low. The primary uses are for wildlife, recreation, and livestock. Indications are that there will be no significant increase in local demand, except for the Gulf Coast.

Wilderness - There are two wilderness areas, Black Creek and Leaf, totaling 5500 acres. This acreage will produce 13.0 MRVD's of use.

The projected demand will not meet the maximum supply potential by the year 2030; there will be an estimated 3,000 RVD's unused capacity at that time.

Wildlife - Indications are that the demand will not exceed supply for cavity nesters and fish on the National Forests in Mississippi through 2030. Maximum Deer or Turkey production could meet the demand through 2030, but indications are that when deer and turkey capacity are maximized at the same time, demand for both cannot be met beyond 1990 or 1995.

Timber - Total demand for all wood products is projected to increase dramatically between 1976 and 1990. Demand is expected to slow to a 6-10% periodic rate increase until leveling off in 2020. If the South continues to increase its share of the wood products market, this may not hold true for Mississippi.

Minerals - Demand is high for oil and gas, and moderate to low for all other minerals.

TABLE 2-1
SUPPLY AND DEMAND COMPARISON
FOR THE NATIONAL FORESTS IN MISSISSIPPI

(Annual supply and demand for the displayed RPA time frames).

Resource Output	Unit of Measure	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
TIMBER						
Maximum Timber Benchmark	Million Board Feet	270	332	394	409	409
	Million Cubic Feet	54	66.4	78.8	81.8	81.8
Anticipated Demand (RPA)	Million Board Feet	241	281	385	520	583
	Million Cubic Feet	48.2	56.2	77	104	116.6
Forest Plan	Million Board Feet	241	316	382	382	382
	Million Cubic Feet	48.2	63.2	76.4	76.4	76.4
Current Management*	Million Board Feet	212	255	304	354	377
	Million Cubic Feet	42.4	51	60.8	70.8	75.4
Minimum Level Benchmark	Million Board Feet	5	5	5	5	5
	Million Cubic Feet	1	1	1	1	1
MINERALS						
Leases and Permits	Operating Plans	1043	1091	1141	1190	1240
WILDLIFE						
Management Indicator Species						
Deer						
Maximum Deer Benchmark	Thousand WRVDs**	385	518	511	446	435
Anticipated Demand (RPA)	Thousand WRVDs	340	387	403	422	515
Forest Plan	Thousand WRVDs	354	353	344	361	371
Current Management	Thousand WRVDs	348	355	352	355	352
Minimum Level Benchmark	Thousand WRVDs	309	309	309	309	309

* The "No-Action" Alternative.
** Wildlife & Fish User-Days.

TABLE 2-1 (continued)
SUPPLY AND DEMAND COMPARISON
FOR THE NATIONAL FORESTS IN MISSISSIPPI

(Annual supply and demand for the displayed RPA time frames)

Resource Output	Unit of Measure	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
WILDLIFE (continued)						
Management Indicator Species						
Turkey						
Maximum Turkey Benchmark	**Thousand WRVDs**	**35**	**41**	**40**	**40**	**38**
Anticipated Demand (RPA)	**Thousand WRVDs**	**32**	**34**	**37**	**38**	**47**
Forest Plan	**Thousand WRVDs**	**32**	**32**	**31**	**33**	**34**
Current Management	**Thousand WRVDs**	**32**	**32**	**32**	**32**	**32**
Minimum Level Benchmark	**Thousand WRVDs**	**28**	**28**	**28**	**28**	**28**
Cavity Nesters (Pairs)						
Maximum Cavity Nesters Benchmark	**MHCI**	**87**	**97**	**98**	**92**	**91**
Anticipated Demand (RPA)	**MHCI**	**63**	**63**	**63**	**63**	**63**
Forest Plan	**MHCI**	**73**	**74**	**65**	**56**	**50**
Current Management	**MHCI**	**71**	**72**	**69**	**64**	**62**
Minimum Level Benchmark	**Thousand WFUDs**	**28**	**28**	**28**	**28**	**28**
Sport Fish Species *						
Maximum Sport Fish	**Lbs/Acres**	**4.05**	**4.05**	**4.10**	**4.10**	**4.20**
Anticipated Demand	**Lbs/Acres**	**.46**	**.47**	**.48**	**.50**	**.51**
Current Management	**Lbs/Acres**	**1.10**	**1.15**	**1.20**	**1.25**	**1.40**
Minimum Level Benchmark	**Lbs/Acres**	**.40**	**.40**	**.40**	**.40**	**.40**

*** LMB - large mouth bass**
*** BG - bluegill**
*** RE - redear sunfish**
*** SB - spotted bass**
*** CC - channel catfish**

TABLE 2-1 (continued)
SUPPLY AND DEMAND COMPARISON
FOR THE NATIONAL FORESTS IN MISSISSIPPI

(Annual supply and demand for the displayed RPA time frames).

Resource Output	Unit of Measure	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
WATER						
Meeting Water Quality Goals						
Anticipated Demand (RPA)	**Thousand Acre-Feet**	**1903**	**1903**	**1903**	**1903**	**1903**
Forest Plan	**Thousand Acre-Feet**	**2130**	**2130**	**2130**	**2127**	**2127**
Current Management	**Thousand Acre-Feet**	**2122**	**2122**	**2125**	**2129**	**2131**
Minimum Level Benchmark	**Thousand Acre-Feet**	**1903**	**1903**	**1903**	**1903**	**1903**
RANGE						
Maximum Range Benchmark	**Forage Production in MAUMs**	**222**	**245**	**243**	**267**	**267**
Anticipated Demand	**Permitted Use in MAUMs**	**15**	**17**	**20**	**21**	**23**
Current Management	**Forage Production in MAUMs**	**103**	**98**	**100**	**114**	**120**
Forest Plan	**Forage Production in MAUMs**	**111**	**115**	**125**	**137**	**126**
Minimum Level Benchmark	**Permitted Use in MAUMs**	**7**	**7**	**7**	**7**	**7**
DEVELOPED RECREATION						
Maximum Developed Rec. Supply	**Thousand RVDs ***	**801**	**801**	**801**	**801**	**801**
Anticipated Demand (RPA)	**Thousand RVDs**	**352**	**360**	**385**	**431**	**480**
Forest Plan	**Thousand RVDs**	**352**	**360**	**385**	**431**	**480**
Current Management	**Thousand RVDs**	**352**	**360**	**385**	**431**	**480**
Minimum Level Benchmark	**Thousand RVDs**	**0**	**0**	**0**	**0**	**0**

*** Includes annual supply and demand for the displayed RPA time frame.**

TABLE 2-1 (continued)
SUPPLY AND DEMAND COMPARISON
FOR THE NATIONAL FORESTS IN MISSISSIPPI

(Annual supply and demand for the displayed RPA time frames).

Resource Output	Unit of Measure	1986-1990	1991-2000	2001-2010	2011-2020	2021-2030
DISPERSED RECREATION**						
Maximum Dispersed Rec. Supply	Thousand RVDs	4212	4212	4212	4212	4212
Anticipated Demand (RPA)	Thousand RVDs	1196	1246	1304	1524	1740
Current Management	Thousand RVDs	1196	1246	1304	1524	1740
Forest Plan	Thousand RVDs	1196	1246	1304	1524	1740
Minimum Level Benchmark***	Thousand RVDs	50	250	250	250	250
WILDERNESS						
Maximum Supply	Thousand RVDs	13	13	13	13	13
Anticipated Demand	Thousand RVDs	10	11	11	12	12

** Wildlife & Fish User-Days.

***Incidental use.

TABLE 2-2
DISPERSED RECREATION (MRVDs)

SUPPLY BY ROS CLASSES

Semi-Primitive Motorized	Roaded Natural	Rural	Urban
168	3327	548	168

DEMAND BY ROS

PLANNING PERIODS

ROS	1980		1990		2000		2010		2020		2030	
Classes	MRVD's		MRVD's		MRVD's		MRVD's		MRVD's		MRVD's	
	Dev	Dis	Dev	Dis	Dev	Dis	Dev	Dis	Dev	Dis	Dev	Dis
Primitive	55		58		59		61		66		72	
Semi-Primitive Non-Motorized	44		46		47		49		53		58	
Semi-Primitive Motorized	77		80		82		86		93		102	
Roaded Natural	74	608	74	633	75	646	77	677	82	729	88	797
Rural	261	321	264	333	265	341	273	357	293	384	312	421

Dev. - Developed
Dis.- Dispersed

NEED TO ESTABLISH OR CHANGE MANAGEMENT DIRECTION

Timber - Need to change from the current area control method of timber harvesting to a method that will harvest the timber that will produce the most return while meeting the multiple use needs of the Forest Plan. These multiple use considerations in the selection of stands for timber harvesting will force the consideration of the other resources. This includes vegetative management and conversion to meet all wildlife, watershed, recreation, and other needs.

Wildlife - Habitat will be defined and retained to meet the requirements of maintaining a viable wildlife population. This habitat includes that necessary to meet the recovery of the red-cockaded woodpecker, an endangered species. Other changes in management include: develop a hardwood component that will meet fuelwood demands; provide a large tree (late seral stage) component; provide snag density and distribution needs; and feature species in riparian areas that are totally dependent on that habitat.

Land Base - In order to meet the overall plan objective which includes wood, water, forage, wildlife, and recreation (multiple use), the loss of acreage to single use purposes such as roads, powerlines, pipelines, military use., etc., must be limited as much as possible. Where it is in the interest of providing the greatest good to the greatest number these areas will be provided. Areas such as wilderness, Research Natural Areas, and Wild and Scenic Rivers will be recommended for study where there are unique resources, and the need to preserve them can be supported.

Energy - Consider utilizing accessible hardwood pulpwood for firewood.

RESEARCH NEEDS

Cultural - Two research topics, which would be timely and valuable, are determining just what effects various timber management activities have on cultural resources, and what are the processes of site formation in upland settings. Other, more technically oriented, studies which could be undertaken include: determining the patterning of upland prehistoric sites and whether changes in patterns occur chronologically; determining the relationships of upland prehistoric sites to adjacent settlement systems; and synthesizing the known culture history. These latter concerns are particularly useful in evaluating a site for National Register eligibility, and, conversely, the potential for sites to yield such data could be one criteria for elegibility. Although more of an opportunity rather than a research need, the presence of numerous

19th century and early 20th century homestead sites in the forest can provide information on the American use, settlement distribution, and daily lives of early settlers, which could be included in the theme being developed by the USDA in "Rural Landscapes".

Recreation - Currently, recreation research needs are being met by projects underway.

Soil and Water - Vegetation potential as relates to soil toxicity. Loss of soil productivity as influenced by timber site preparation methods. Need to tie soil type with site index to determine productivity. Soil/water table relationships as relates to species selection for management type and planting survival. Effects of soil compaction on soil productivity.

Timber - The Forest's research needs in growth and yield modeling are generally within those outlined in the Southern Region Action Program for the Chief's "Forest Growth and Yield System Development and Implementation Plan." Our more specific needs are outlined in the Forest's comments on the Regional Action Program.

In addition, research is needed on the impacts of artificial flooding (pumping) of Greentree Reservoirs on Delta hardwoods. The long-term effects of this type siltation and the resultant buildup of agricultural chemicals in the soil on hardwood regeneration and growth are not known.

Research Natural Areas - A concerted effort will be made to obtain representative samples of the forest cover types identified in the Regional Guide and the "Gap and Redundancy Analysis of SAF Cover Types." This effort will be coordinated with the Southern RNA Committee.