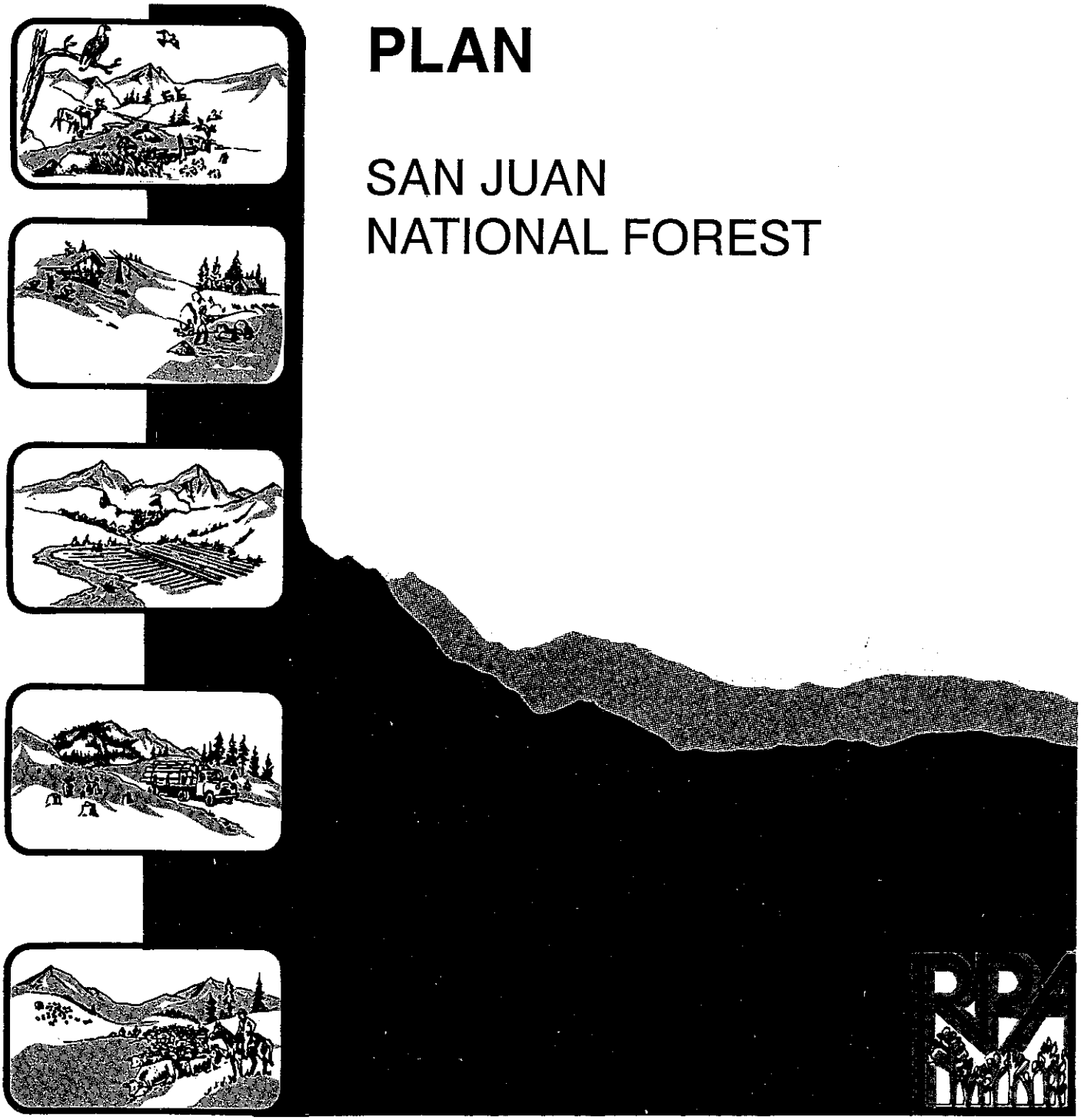
United States
Department of
Agriculture

Forest Service

Durango, Colorado

AMENDED LAND AND RESOURCE MANAGEMENT PLAN

SAN JUAN NATIONAL FOREST



AMENDED LAND AND RESOURCE MANAGEMENT PLAN

for the

SAN JUAN NATIONAL FOREST

Rocky Mountain Region
USDA, Forest Service

April, 1992

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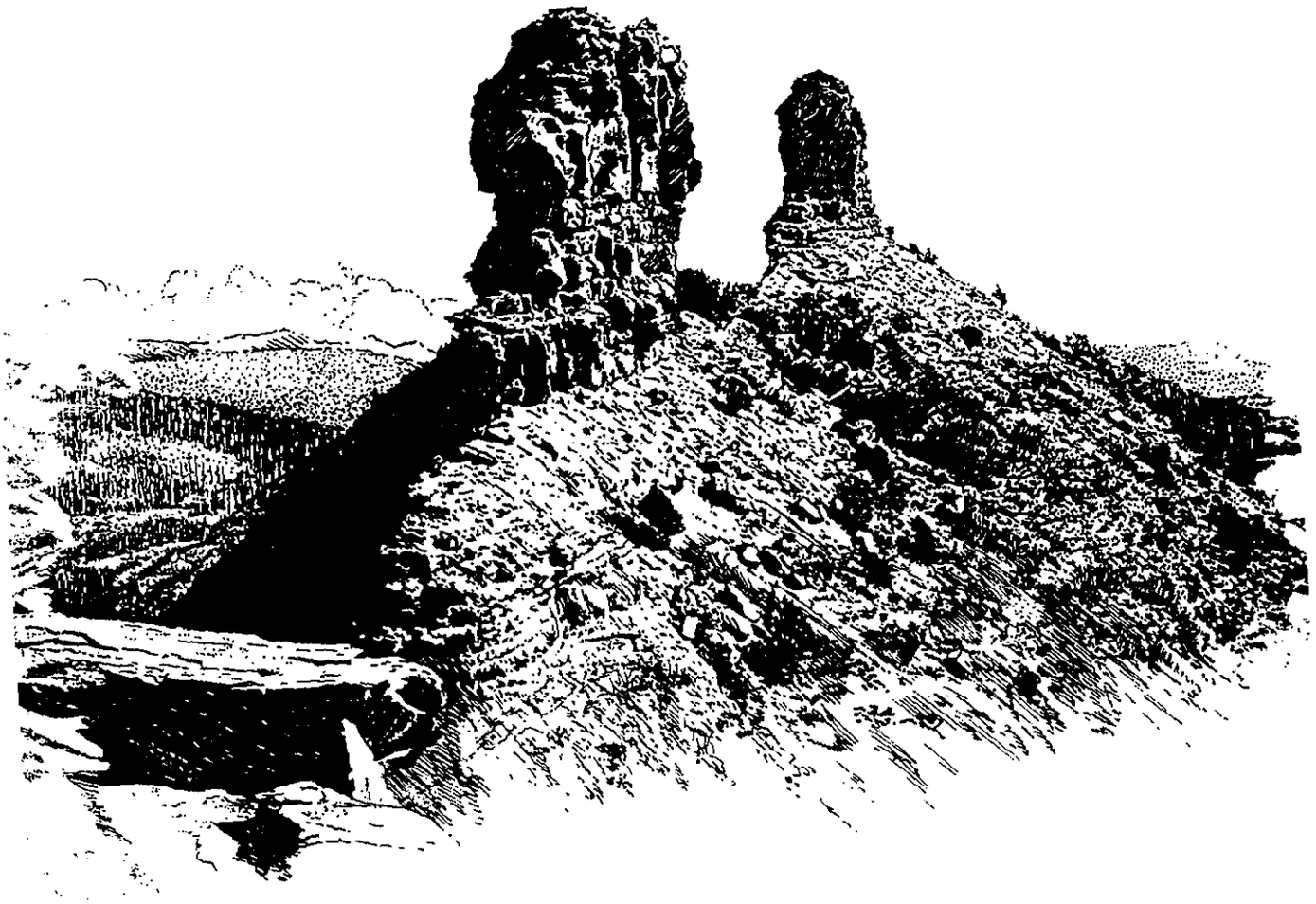


PREFACE

PURPOSE OF THE FOREST PLAN

This Amended Land and Resource Management Plan (Forest Plan) guides all natural resource management activities and establishes management standards and guidelines for the San Juan National Forest for up to 15 years. The Forest currently anticipates that a revision of the Plan will be completed by the end of 1997, which will be 14 years after the the Plan was implemented. The Plan describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. Specifically, the Plan:

Establishes Forest-wide goals and objectives [36 CFR 219.11(b)];

Establishes forest-wide management requirements (standards and guidelines) to fulfill requirements of NFMA applying to future activities (resource integration requirements of 36 CFR 219.13 to 219.26 and requirements of 36 CFR 219.27);

Establishes management area direction (management area prescriptions) applying to future management activities in that management area [36 CFR 219.11(c)];

Establishes the allowable timber sale quantity and designation of suitable timber land (36 CFR 219.16 and 219.14);

Provides nonwilderness multiple-use allocations for those roadless areas that were reviewed under 36 CFR 219.17 and not recommended for wilderness designation;

Establishes monitoring and evaluation requirements [36 CFR 219.11(d)], and

In some instances, provides project and activity level decisions if specifically identifies in the Record of Decision and Forest Plan.

The projected multiple-use objectives and rates of implementation are estimates and are dependent on the annual budgeting process.

Management Direction established in the Plan will ordinarily be reviewed (and updated, if necessary), at least every 5 years, and revised on a 10 year cycle or at least every 15 years (36 CFR 219.10(G)). The Plan may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have significantly changed. Or the Plan can be amended whenever the Forest Supervisor believes that the current information needs to change or new direction should be included. An amendment can be either significant or not, as determined by the scope of the amendment. The decision on the significance of an amendment is made by the Forest Supervisor.

PURPOSE OF THE AMENDED FOREST PLAN

This amended Land and Resource Management Plan (LRMP) for the San Juan National Forest superseded the original Forest Plan and "stands alone" as the direction for the Forest. It incorporates the thirteen amendments made to date plus Amendment 14, the "Timber Management" Amendment, approved in the accompanying Record of Decision. Appendix J contains Amendments 1 through 13 to the Forest Plan.

Amendment 14 is presented on blue pages at the beginning of each chapter and where the amendment adds to, deletes, or modifies the Management Requirements for timber management in Chapter III.

Minor changes have been made to Chapter II concerning demand estimates for some of the resource programs, and the economic situation has been changed to reflect the information obtained during the reanalysis for the timber amendment. Changes to the standards and guidelines for silviculture, the allowable sale quantity, lands designated suitable for timber production, and management areas are reflected in Chapter III. Chapter IV contains additional monitoring requirements for timber management.

Amendment 14 and the alternatives considered in developing the amendment, are the focus of the accompanying final Supplemental Environmental Impact Statement (SEIS). The final SEIS describes the issues that drove the amendment process, the affected environment, the six timber management alternatives, and the environmental effects of the six alternatives. The final SEIS also contains detailed information about how the analysis was conducted and how the public was involved.

Implementation of Amendment 14 will begin in fiscal year 1992. Budget levels, and subsequent project level environmental analysis may effect the volume of timber prepared and offered. Historic funding levels since the Plan was first issued have not been at the 100 percent level needed to implement the Plan.

Amendment 14 changes the Forest Plan timber management direction in the following manner:

Establishes a New Allowable Sale Quantity

Amendment 14 changes the Allowable Sale Quantity (ASQ) established in the original Forest Plan from 413 million board feet (MMBF) to 240 MMBF for the 10-year period extending from September 1983 to September 1993.

Allowable Sale Quantity is defined in the Planning Regulations (36 CFR 219.3) as the quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. To facilitate understanding of the ASQ level, the maximum amount of timber volume the Forest can offer for sale is 144 MMBF for the period extending from September 1991 to September 1997. The Forest Plan will be revised in 1997 and the ASQ will be re-evaluated at that time.

The ASQ, if offered on an even schedule, will amount to an average of 24 MMBF per year. Harvesting may not occur on an even schedule, therefore, monitoring of ASQ accomplishment will be based on the total amount offered from September 1991 through September 1997.

Changes the Number of Acres Designated as Suited for Timber Production

Amendment 14 changes the number of acres designated as suited for timber production from 470,000 acres to 375,000 acres. The change in suited acres requires a change in Management Area designation for some of the acres. The location of the lands designated suited for timber production is shown on the maps included on the inside back cover of this Amended Forest Plan.

Of the 95,000 acres previously designated as suited, 68,950 acres were located in Management Areas 7C and 7E, Wood Fiber Production and Utilization, and 9B, Increased Water Yield through Timber Harvest. The remaining 26,050 acres were located in various other multiple-use prescriptions. Amendment 14 does not changes the Management Area designation on the 26,050 acres, but designates them not suited for timber production. Amendment 14 changes the Management Area designation on the 68,950 acres to Management Areas 2B (Rural and Roaded Natural Recreation); 3A (Semi-primitive Non-motorized Recreation); 4B (Wildlife Habitat Emphasis); and 6B, Livestock Grazing, and designates all 68,950 acres as not

suited for timber production. A summary of all the Management Area acreage changes is on page III-86 of this Amended Forest Plan.

Changes All Lands Designated as Management Area 9B

Amendment 14 changes the management emphasis for all lands currently allocated to Management Area 9B (Increasing Water Yield) to Management Area 3A (Semi-primitive Non-motorized Recreation) and Management Area 7E (Wood Fiber Production and Utilization). In the original Forest Plan, 38,740 acres were designated Management Area 9B. In this amendment, all 9B lands are designated as shown below:

2,800 acres to Management Area 2A, Semi-primitive Motorized Recreation
5,610 acres to Management Area 3A, Semi-primitive Non-motorized Recreation
2,490 acres to Management Area 4B, Wildlife Habitat Emphasis
27,840 acres to Management Area 7E, Wood Fiber Production and Utilization

All the acres in Management Area's 2A, 3A, and 4B (10,900 acres) are designated as not suited for timber production. These acres were designated suited for timber production in the original Plan.

Changes General Direction Goals and Management Standards and Guidelines to Emphasize Uneven-aged Timber Management Systems and Landscape Ecosystem Management

Amendment 14 has additional goals to be used when developing silvicultural prescriptions. The goals focus on the landscape as the primary unit of analysis and require the identification of a desired future condition based on the landscape characteristics. Amendment 14 changes portions of the Standards and Guidelines for Silviculture in the General (Forestwide) Direction and for Management Area Prescriptions 2A, 2B, 3A, 4B, 5B, 6B, and 7E. Refer to Chapter III of this Amended Forest Plan: Forest Direction (III-35 to III-39); 2A (III-110); 2B (III-123); 3A (III-134); 4B (III-152); 5B (III-171); 6B (III-187); and 7E (III-217) for details of the changes.

The standard and guideline changes, in general, emphasize the importance of establishing a desired future condition for management areas based on a landscape perspective. The primary goal whenever timber harvest is an objective, will be to create or maintain uneven-aged stands using individual tree and group selection regeneration (harvest) methods. This goal does not preclude the use of the clearcut or shelterwood method for creating even-aged stands. The actual method used is determined at the site-specific project level using the standards and guidelines in this Amended Forest Plan.

Clearcutting will be applied to the aspen species type. Opportunities to apply selection methods to the aspen species type will be explored during the project planning process. Commercial thinning will occur on approximately 125 acres each year.

Changes the Monitoring Program to Include Additional Indicators of Changes in the Demand for Timber

Amendment 14 changes the Forest Plan Monitoring Program to include six additional indicators of changes in demand for live green sawtimber from the Forest. These additional indicators are:

1. Ratio of volume sold to volume offered
2. Ratio of volume harvested to the Allowable Sale Quantity
3. Amount of uncut-volume-under-contract
4. Economic efficiency of the timber program as reported in TSPIRS, Report 2
5. Stumpage bid prices

6. Stumpage harvest prices

Chapter IV of this Amended Forest Plan explains how these indicators are to be used.

RELATIONSHIP OF THE AMENDED FOREST PLAN TO OTHER DOCUMENTS

Environmental Impact Statements

The Amended Forest Plan provides the direction for managing the resources of the San Juan National Forest and is a result of extensive analyses and considerations that are addressed in the Final Environmental Impact Statement (1983 FEIS), environmental analyses that resulted in Amendments 1 through 13, and the accompanying final Supplemental Environmental Impact Statement. The planning process and the analysis procedures used to develop the Amended Plan are described or referenced in the FEIS and final SEIS.

Activities and projects will continue to be planned and implemented to carry out the direction in the Plan. The Forest will perform environmental analyses on these projects and activities. Project environmental analysis will use the data and evaluations in the Plan, FEIS, and final SEIS as its basis, but frequently will need additional or more specific information. Documentation of project level analysis will be tiered to the FEIS and final SEIS accompanying the Amended Plan. Tiering, in this case, means that environmental analyses prepared for projects arising from the Plan will refer to the FEIS and final SEIS and associated documents rather than repeat information. The environmental documents for specific projects can therefore concentrate on issues unique to the projects.

Long-Range Planning

Long-range planning occurs at the national, regional, and local levels as required in applicable laws and implementing regulations. National planning includes the Resources Planning Act (RPA) Assessment and RPA Program. Regional planning includes the Regional Guide. Local planning includes the Forest Plans within the National Forest System, Research Plans within the Research Work Units assigned to Experiment Stations and the Forest Products Laboratory, and State Forest Resource Plans for the State and Private Forestry System.

Short-Range Planning

Short-range planning implements long-range planning. Analysis and evaluation can lead to amendment or revision of Forest Plans, project planning, and project implementation. Short-range planning achieves the goals and objectives of the Forest Plan. This level involves site-specific analysis to meet NEPA requirements for decisionmaking. Forest Service managers must involve the public and comply with many site specific requirements of the applicable laws, regulations, and the direction set forth in the Plan.

Making Project Decisions

Forest Plans and accompanying EIS's do not normally have sufficient detail in them to make site specific decisions for individual projects and activities. Making project specific decisions requires further analysis of the proposed practices: **analysis and evaluation** is necessary to bridge between Forest Plan decisions and project decisions. The results of the analysis and evaluation are documented in project files and appropriate NEPA disclosure and decision documents: Environmental Impact Statement (EIS), Environ-

mental Assessment (EA), Categorical Exclusion (CE), Record of Decision (ROD), Decision Notice (DN), and Decision Memo (DM).

LEGISLATIVE BACKGROUND AND EVOLUTION OF NATIONAL FOREST SYSTEM PLANNING

Preparation of the Forest Plan is required by the Forest and Rangeland Renewable Resource Planning Act (RPA), as amended by the National Forest Management Act (NFMA). Assessment of its environmental impacts is required by the National Environmental Policy Act (NEPA) and the implementing regulations of NFMA [36 Code of Federal Regulations (CFR) 219]. The Forest Plan replaces all previous resource management plans, such as the 1976 Timber Management Plan, prepared for the San Juan National Forest. Upon approval of the Forest Plan, all subsequent activities affecting the Forest, including budget proposals, must be in compliance with the Plan. In addition, all permits, contracts, and other instruments for the use and occupancy of National Forest System lands must be in conformance with the Forest Plan.

There are numerous legal bases for management of National Forest System lands. Following are some of the more significant laws which must be considered in planning uses for the National Forests. These and other laws are included in the Department of Agriculture Handbook entitled "The Principal Laws Relating to Forest Service Activities."

Creative Act of March 3, 1891 (26 Stat. 1103, 16 USC 471; repealed by 704(a) of FLPMA, 90 Stat. 2792). Allows the President to set apart and reserve National Forests from the public domain.

Organic Act of June 4, 1897 (30 Stat. 35). States "No National Forest shall be established, except to improve and protect the Forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States," (16 USC 475).

The Secretary (Interior) "shall make provision for the protection against destruction by fire and depredations upon public forests and National Forests... and he may make such rules and regulations and establish such service and will insure the objects of such reservations, namely, to regulate their occupancy and use and to preserve the Forests thereon from destruction," (16 USC 551).

Transfer Act of 1905 (33 Stat. 628.16 USC 472). Transferred the Administration of the National Forests to the Secretary of Agriculture.

Multiple Use-Sustained Yield Act of 1960 States the "National Forests are established and administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes," (16 USC 528).

The Secretary of Agriculture is authorized and directed to develop and administer the renewable surface resources of the National Forests for multiple use and sustained-yield of the several products and services obtained therefrom. In the administration of the National Forest due consideration shall be given to the relative values of the various resources in particular cases. The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of section 528 to 531 of this title, (16 USC 529).

The Secretary is also authorized to cooperate with State and local governmental agencies in management of National Forests, (16 USC 530).

Wilderness Act of 1964 (16 USC 1131-1136). Provided for establishment and administration of the National Wilderness Preservation System to be administered for the use and enjoyment of the American people in such a manner as will leave the system unimpaired for future use and enjoyment as wilderness.

Wild and Scenic Rivers Act of 1968 (16 USC 1271-1287). Provides for designation as "Wild," "Scenic" or "Recreational" and preserves portions of designated rivers from development. Management of rivers within the System is directed toward preserving the scenic, recreational, geologic, historic, or other value that justified its inclusion in the System.

National Environmental Policy Act (NEPA) of 1969 (42 USC 4321-4335). Declares a National policy of "productive and enjoyable harmony between man and his environment," (42 USC 4321).

The detailed statement requirement of NEPA was designed to disclose to the public, President, Congress and agency decision-maker the environmental consequences of implementation of a proposed action and alternatives to it.

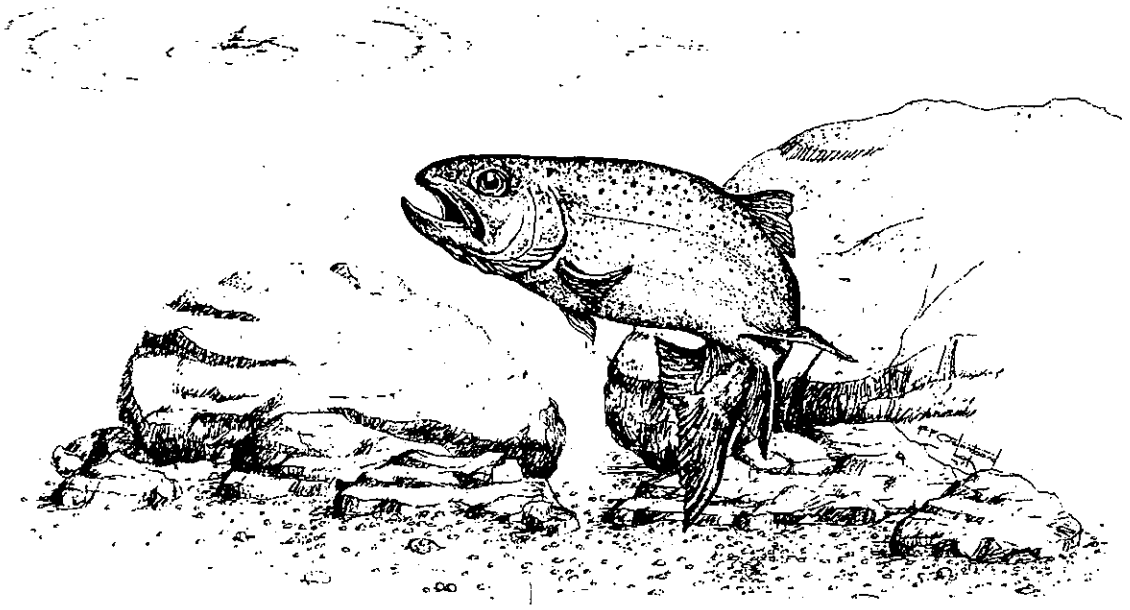
It applies to major federal actions significantly affecting the quality of the human environment.

Federal Land Policy and Management Act of 1976 (90 Stat. 2743). Range management and rights-of-way were dealt with for both National Forest System and public domain lands. For the most part, the statute is directed at lands managed by Bureau of Land Management, Department of the Interior.

Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended by National Forest Management Act (NFMA) of 1976 (16 USC 1600-1614). This is a comprehensive framework and primary source of direction to the Forest Service to fulfill its mandate to manage the National Forest System (NFS). The central element of the Act is the institution of land and resource management planning as a basic means to achieve effective use and production of renewable resources and a proper balance of the use of NFS lands.

Section 6 of the Act requires the Secretary of Agriculture to prescribe NFS land and resource management planning regulations. The standards and guidelines in these regulations must be incorporated into NFS land and resource management plans. Direction in Forest Plans must comply with Acts of Congress enacted to protect any of the individual resources, such as air, water, threatened or endangered species, cultural, or historic resources.

I . Introduction



CHAPTER I

INTRODUCTION

ORGANIZATION OF THE FOREST PLAN DOCUMENT

This Land and Resource Management Plan (Forest Plan) guides all natural resource management activities and establishes management standards and guidelines for the San Juan National Forest. It also serves to inform prospective users, as well as other interested publics, that any occupancy or use of the National Forest System lands within the San Juan National Forest must be consistent with the management requirements listed in the Forest and Management Area Direction sections of the Forest Plan.

In addition to relevant sections of the original Forest Plan, this printing incorporates all Forest Plan amendments made to date. The Forest Plan consists of this document and management area maps. A map illustrating locations of management areas, and a map showing general management emphases for federally managed land in Southwest Colorado are in an envelope inside the back cover of this document.

Chapter II describes the Forest as it is today, and how the Forest is expected to change with implementation of the Plan. Several sections of this chapter have been updated in conjunction with the analysis for Amendment 14, and are presented on blue pages at the beginning of Chapter II.

Chapter III contains management direction and is divided into three sections. The first section explains how the Forest Plan is to be implemented. Section Two specifies the goals and objectives for managing the National Forest System lands and resources. This section also contains Forest Direction which details overall management requirements that must be maintained during implementation of the Plan. Section Three contains the Management Area Direction. This direction, also called the management area prescriptions, details the management requirements for specific land areas of the Forest called Management Areas. The management requirements listed in Forest Direction are applied in addition to the management requirements for individual management areas. Individual management areas are identified on the Management Area Maps located inside the back cover of the Plan. The Forest Plan management direction is reprinted with additions and deletions marked by asterisks where the direction is changed by the Forest Plan amendments to date. To help distinguish the changes in management direction resulting from Amendment 14, we have printed the additions and deletions on blue pages, and placed them in Appendix L at the end of this document.

Chapter IV lists and describes the actions, effects or resources to be monitored during implementation of the Forest Plan. One blue page has been added in conjunction with Amendment 14.

The analysis that supports the 1983 Forest Plan is contained in the 1983 Final Environmental Impact Statement (FEIS). The Forest Plan and FEIS are companion documents; neither is complete in itself. The FEIS describes alternatives considered in arriving at the proposed Forest Plan and assesses environmental effects of implementing the Plan and its alternatives. In addition, the final Supplemental Environmental Impact Statement (final SEIS) accompanying this Amended Forest Plan contains the analysis of alternative timber programs considered in developing Amendment 14. Chapters V of the FEIS and final SEIS, list the persons who prepared the Forest Plan and Amended Forest Plan, respectively. Glossaries are provided in Appendix D of the final SEIS and Appendix K of this Amended Forest Plan, to aid in reading the two documents.

Activities and projects will continue to be planned and implemented to carry out the direction of the Forest Plan. The Forest will perform environmental analyses on these projects and activities. Project environmental analysis will use the data and evaluations in the Plan, FEIS and final SEIS as its basis, but frequently

will need additional or more specific information. Documentation of project level analysis will be tiered to the FEIS and final SEIS accompanying this Amended Forest Plan. Tiering, in this case, means that environmental analyses prepared for projects arising from the Forest Plan will incorporate the FEIS, final SEIS, and associated documents by reference, rather than repeating information. The environmental documents for specific projects can therefore concentrate on issues unique to the projects.

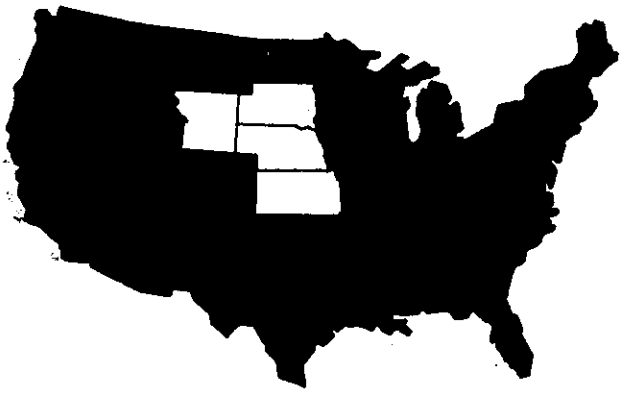
LOCATION OF THE FOREST

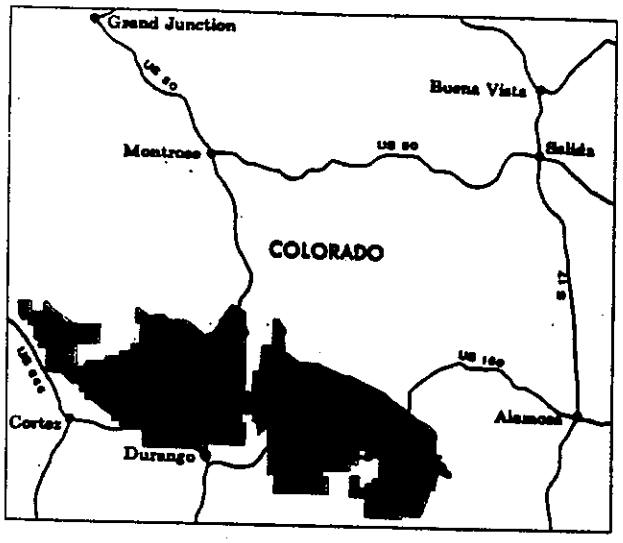
The San Juan National Forest is located in southwestern Colorado. It is an administrative unit of the Rocky Mountain Region of the Forest Service, U.S. Department of Agriculture. Portions of this Forest lie within La Plata, Montezuma, Dolores, San Juan, Archuleta, San Miguel, Hinsdale, Mineral, Conejos and Rio Grande Counties. (See Figure I-1).

The Forest is geographically separated from the rest of Colorado by the San Juan Mountains and lies near no major population center. The total population of the five-county area including La Plata, Montezuma, Dolores, San Juan and Archuleta Counties, surrounding the Forest is approximately 50,000 people. Less than 500 people live in those portions of San Miguel, Conejos, and Rio Grande Counties that are within the Forest boundary.

FIGURE I-1
VICINITY MAP

Region 2, Forest Service,
United States Department of Agriculture





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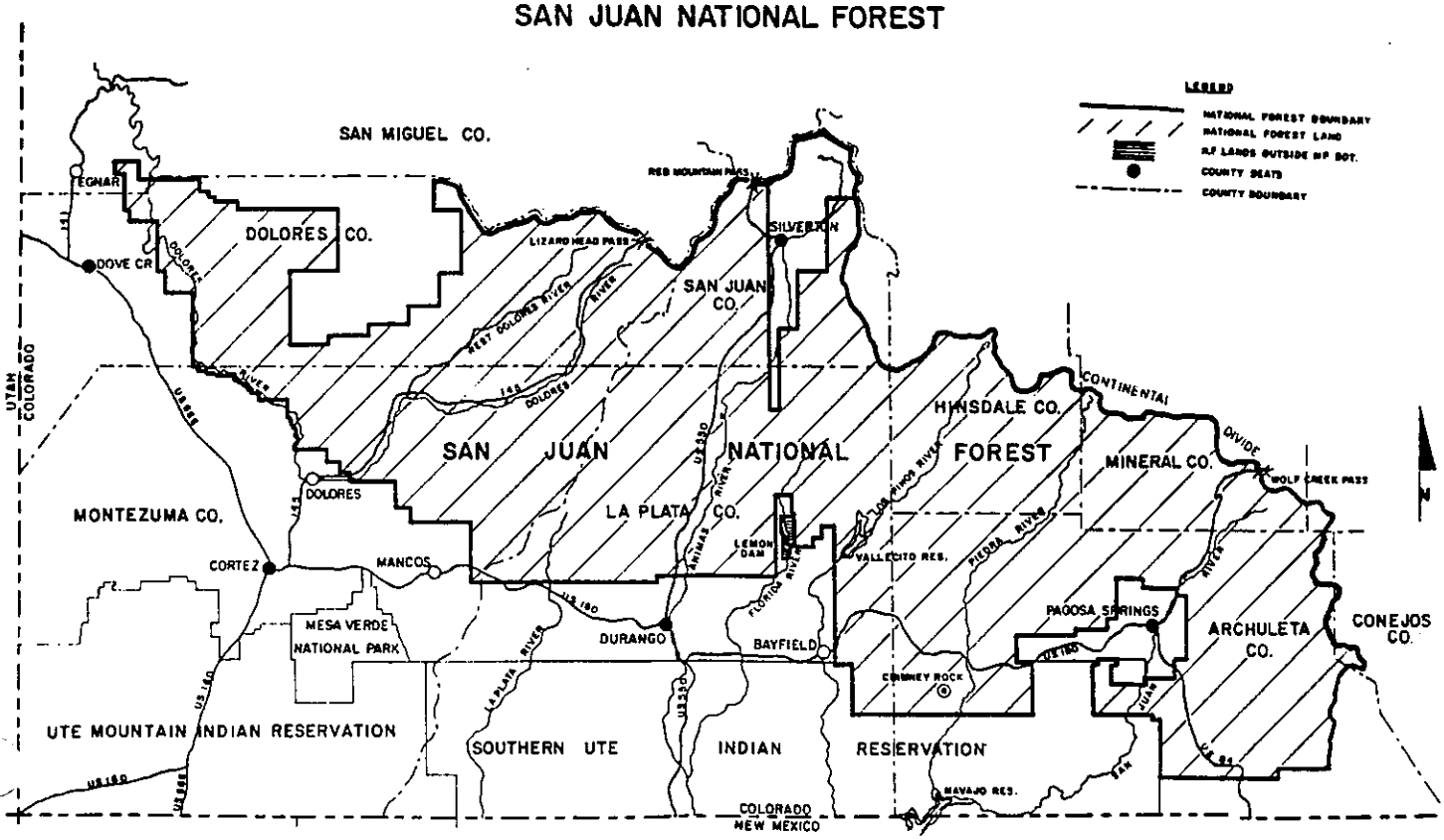
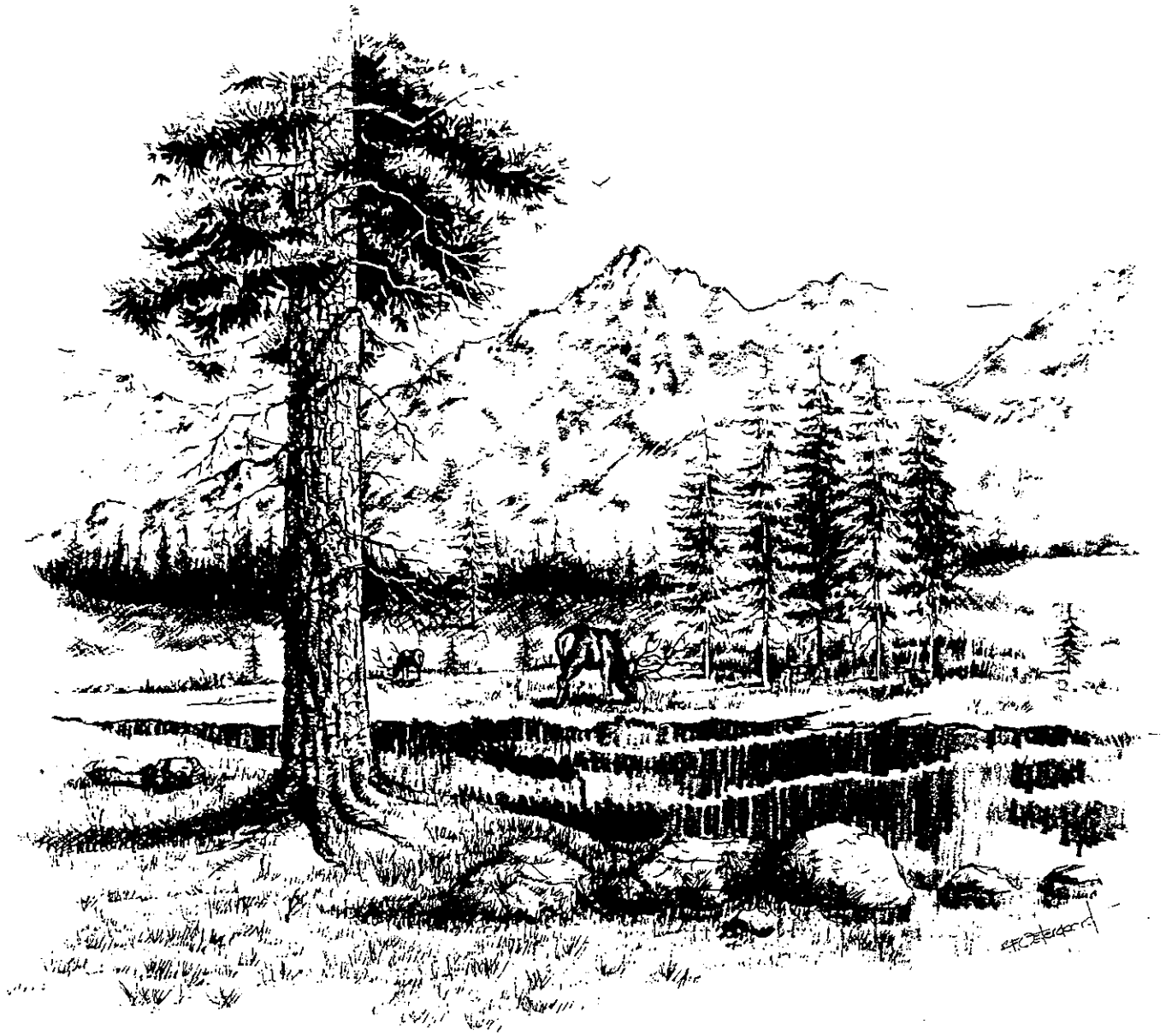


II . Management Situation



CHAPTER II

MANAGEMENT SITUATION

This section of the chapter, printed on blue pages, supplements information in Chapter II of the Forest Plan. The information used to create this description is a result of the Amendment 14 analysis of timber supply and demand as well as current resource conditions. A more detailed assessment is given in Chapter III of the accompanying final Supplemental Environmental Impact Statement.

This section focuses on timber related changes that have occurred since the Forest Plan's approval in September, 1983. This information supersedes that found in Chapter II. We have included relevant portions of the original Chapter II to help clarify what has changed. The management situation for resources that are not updated within these blue pages have also experienced some changes over the past eight years, but we have not attempted to persue analyzing and documenting these changes because they are beyond the purpose of this amended plan. The headings and outline of this chapter follow the same general format as the original Plan chapter to facilitate comparisons.

THE PRESENT

SOCIAL AND ECONOMIC SETTING

Population, employment, and unemployment rates have changed slightly in the six years since implementation of the Forest Plan in 1983. The following section replaces the original Forest Plan discussion of employment and income, reprinted on page II-3 of the following white pages.

Employment and Income

The unemployment rate of the local economic impact area has decreased from 8.2 percent in 1980 to 7.4 percent in 1990. This unemployment level is slightly higher than the current Colorado rate of 5.8 percent. About 28 percent of total area employment (around 7,250 jobs) is directly or indirectly associated with the activities and outputs of the San Juan National Forest. Retail, tourism, and agriculture are the major areas of employment.

The communities of Pagosa Springs, Mancos, and Dolores rely heavily on the natural resources of the San Juân National Forest for continuing employment. Durango and Cortez are less dependent on San Juan National Forest resources due to their broader economic base.

Progress towards diversifying the economies of these communities has been slow. The recent formation of an office of economic development may, however, provide the catalyst for long-term future economic growth.

PAST AND CURRENT MANAGEMENT AND SUPPLY POTENTIAL

Table IIA-1 provides information on demand trends, supply potentials, and Forest Plan objectives for recreation, wilderness, range, timber, and water. The table replaces Table II-1 on pages II-9 through II-11 of the original Forest Plan.

Table IIA-1
Current Outputs, Projected Demand, Supply Potentials (Average Annual Units)

Activity	Category	Unit of Measure	Time Periods 1989-1998	1999-2008	2009-2018	2019-2028	2029-2038
RECREATION							
Developed (total, including downhill skiing)	Demand Trend	Days Thousand Visitor 1/	890	1,000	1,130	1,280	1,445
	Supply Potential						
	Maximum Resource Output				Not Calculated		
	Forest Plan Objective		2,280	2,450	2,510	2,510	2,510
Dispersed (includes, off-road motorized)	Demand Trend	Days Thousand Visitor	1,230	1,385	1,565	1,770	2,000
	Supply Potential						
	Maximum Resource Output		9,740	9,740	9,800	9,800	9,950
	Forest Plan Objective		5,510	5,440	5,200	5,200	5,180
WILDERNESS							
Wilderness Use	Demand Trend	Days Thousand Visitor	190	215	245	275	310
	Supply Potential						
	Maximum Resource Output		350	470	640	715	810
	Forest Plan Objective		340	455	585	695	785
RANGE							
Grazing Use	Demand Trend	Thousand Animal Unit Months 2/	160	165	170	175	180
	Supply Potential						
	Maximum Resource Output		190	210	270	270	270
	Forest Plan Objective		155	155	155	155	155
TIMBER							
Sale Offerings	Demand Trend	Million Board Feet	24.0	27.0	27.0	27.0	27.0
	Supply Potential						
	Maximum Resource Output		80.0	110.0	115.0	110.0	125.0
	Forest Plan Objective		24.0	24.0	24.0	24.0	24.0
WATER							
Water Yield	Demand Trend	Million Acre-Feet	2,640	2,900	3,190	3,500	3,850
	Supply Potential						
	Maximum Resource Output		2,550	2,546	2,543	2,540	2,538
	Forest Plan Objective		2,550	2,546	2,543	2,540	2,538

1/ Recreation Visitor Day = 12 hours of recreation for one person or one hour of recreation for 12 persons or any combination thereof.
2/ Animal Unit Month = the amount of forage consumed by one mature cow or its equivalent in a one-month period.

RESOURCE ELEMENTS

The demand for the resources and services from the National Forest was one point raised by the Secretary's 1985 decision on the administrative appeals of the Forest Plan. In the decision letter, the Secretary raised the question:

> "Are the non-timber multiple-use benefits to be achieved through the timber program really needed? Do projections of demand for these non-timber objectives support the need for the Federal expenditures required to achieve them?" (1985 USDA Decision, p. 9)

To respond to this inquiry, we re-evaluated resource demand to determine whether demand changes have occurred since developing the original projections in 1980. The new resource demand projections more accurately reflect the current economic relationship between the commercial timber sale program and the Forest's capacity to meet other multiple-use objectives.

RECREATION

The information presented here supplements the original Forest Plan Chapter II. The section supplemented is reprinted on pages II-6 through II-9 of the following white pages.

Southwest Colorado's economy depends strongly on recreation and tourism. The San Juan National Forest is important as both a primary destination and a "backdrop" for other destinations like the Durango and Silverton Narrow Gauge Railroad and Purgatory Resort. The rugged beauty of the mountains and the vast natural appearing forests provide the foundation for primitive and unconfined recreational activities. Maintenance and perpetuation of this image of the San Juan National Forest is vital to its future attractiveness.

Recreation Demand

Actual recreation use for the eight year period the Plan has been in effect, has fallen 35 percent below the 1983 Plan projections. This disparity suggests that the future recreation use anticipated in the 1983 FEIS may have been overstated and that the projection errors are increasing. This does not mean that recreation use has decreased; only that the *growth rate* was not as great as originally predicted.

A strong correlation exists between historical population change and the change in historical recreation use. We base the first decade (1991 - 2000) revised recreation demand projections in Table IIA-2 on this correlation and population projections from the U.S. Bureau of Census. For the years 2000, and beyond, we base recreation demand projections on the assumption that population in the local area of influence and the four-state regional area will grow somewhat faster than the population growth projected for the western U.S. -- but not at a rate reflective of past growth.

Dispersed Recreation

We projected dispersed recreation demand by the categories of recreation opportunity spectrum (ROS) classes. The dispersed recreation data for 1986 provided the basis for disaggregating dispersed recreation use into the various ROS classes. Appendix B of the accompanying SEIS describes the procedure used. Table IIA-3 presents the results of these projections.

Table IIA-2
Revised Recreation Use Projections (Demand)

Year	Developed	Dispersed	Wilderness	Total
	(1000's of recreation visitor days/yr.)			
1985-1987 ave.	673	930	144	1747
1990	780	1085	170	2030
1995	890	1230	190	2310
2000	1000	1385	215	2600
2010	1130	1565	245	2940
2020	1280	1770	275	3325
2030	1445	2000	310	3755

Table IIA-3
Projected Dispersed Recreation use by ROS Class

Midpoint 10 Year Period	Prim/SPNM	SPM	RN/Rural
	(MRVD's/yr)		
current yr.	229	336	263
1995	300	440	340
2005	380	560	445
2015	430	635	500
2025	490	720	560
2035	550	810	640

Recreation Supply

Table IIA-4 displays the revised capacities. These capacities are based on the managed capacities for the current ROS class acreages.

Table IIA-4
Maximum Recreation Capacity Compared to Benchmark Level, 1983 FEIS

Midpoint 10 Year Period	*ROS Classification** Prim/SPNM	SPM	RNAT/RMOD/RURAL	REVISED TOTAL	TOTAL FEIS (BM #6)
	(RVD Capacity, MRVD's/yr)				
1995	1600	1550	6550	9700	24010
2005	1600	1590	6550	9740	24010
2015-2035	1600	1800	6550	9950	24010

* See glossary, Appendix L for definition of ROS classes.

UNROADED AREAS

This is a new section, there is no comparable section in the original Forest Plan.

The second Roadless Area Review and Evaluation (RARE II, 1979) of roadless areas on the San Juan National Forest serves as a valuable "benchmark" to evaluate changes. On the following page, Table IIA-5 lists the RARE II roadless areas, their acreage when the Forest Plan was released in September 1983, the subsequent changes to these areas resulting from activities conducted from 1980 through 1990, and anticipated changes to the extent of these roadless areas.

Various management activities since 1980 have changed the roadless character of approximately 31,790 acres (four percent) of the "RARE II" roadless areas released by the Colorado Wilderness Act. Over the past ten years, timber sales have modified 23,000 of these released acres and oil and gas field and ski area development have changed the rest. Unroaded acres on the Forest now include the remaining 544,000 acres released by the Colorado Wilderness Act, 355,534 acres of wilderness, and 90,100 acres of wilderness study area. The three total 989,634 acres, or 53 percent of the Forest.

Appendix F of the final Supplemental Environmental Impact Statement provides a detailed description of each of the original "RARE II" areas.

WILDLIFE AND FISH

This section supplements the discussion of Fish and Wildlife, reprinted from the original Forest Plan on pages II-9 through II-12 of the following white pages. This material also replaces demand and supply potential estimates displayed in Table II-1, Chapter II of the original Forest Plan.

Current Condition

Human occupation of the area and Forest management activities have resulted in some changes to the normal wildlife population. Animals considered predators have been reduced in numbers or eliminated. Elk and deer populations have increased. And the dynamics of animal populations has probably changed as a result of changed diversity in plant communities. Yet, of immediate concern, winter ranges on lands outside of the National Forest, BLM and State lands are diminishing due to human occupation and development.

Winter range habitat capability is the limiting factor for the elk and deer population, on private as well as public land. Therefore, activities which maintain and/or enhance habitat capability on known winter ranges are emphasized.

The San Juan NF contains approximately 650,000 acres of big game winter range, and 95,000 of these acres are classified as key winter range. The Forest's current carrying capacity (limited by winter range) is 12,000 elk and 13,000 deer. While more animals do live on the Forest during the summer months, the Forest's ability to provide year-round habitat is limited to the winter range capacities.

Some general assumptions concerning future wildlife management on the San Juan National Forest are listed below:

- Consumptive and non-consumptive use of wildlife in the future is expected to increase and to meet or exceed the available supply.
- Small game hunting will become more popular and this will require additional maintenance and improvement of small game habitat.

Table IIA-5
Former RARE II Areas

Roadless Area	RARE II Code	RARE II Net Acres	*1980 Colorado Wilderness Act* Designated Wilderness	Designated Wild. St. Area	Released	Acres Entered 1980-1990	Planned Timber Entry 1991-1997	Remaining Roadless
Lizard Head	235	17,440	12,500	0	4,940	0	0	4,940
San Miguel	240	60,240	0	0	60,240	0	0	60,240
South San Juan	284	123,210	39,843	32,800	50,567	2,960	400	47,207
Treasure Mountain	285	21,910	0	0	21,910	720	0	21,190
Turkey Creek	286	23,260	0	0	23,260	260	0	23,000
Martinez Creek	287	6,420	0	0	6,420	1,040	1,000	4,380
Davis Mountain	288	1,320	0	0	1,320	0	0	1,320
Monk Rock	289	2,260	0	0	2,260	0	0	2,260
Poison Park	290	9,060	100	0	8,960	0	0	8,960
Graham Park	291	12,090	0	0	12,090	1,000	1,200	9,890
Piedra	292	114,260	1,360	41,500	71,400	11,060	3,875	56,465
Runlett Park	293	6,610	1,200	0	5,410	0	0	5,410
Florida River	294	50,380	15,200	0	35,180	300	0	34,880
HD Mountain	295	20,010	0	0	20,010	460	0	18,550
Tenmile Creek	296	380	380	0	0**	0	0	0
Whitehead	297	600	600	0	0**	0	0	0
Cunningham Creek	298	1,280	1,280	0	0**	0	0	0
East Animas	302	18,220	4,380	0	13,840	0	2,280	11,560
West Needle	303	24,550	0	15,800	8,750	0	0	8,750
Blackhawk Mountain	304	17,750	0	0	17,750	1,880	0	15,870
Storm Peak	305	52,270	0	0	52,270	7,350	3,980	40,940
Hermosa	306	146,105	0	0	146,105	3,720	2,240	140,145
Sheep Mountain	307	4,150	0	0	4,150	0	0	4,150
Ryman	315	9,030	0	0	9,030	1,040	0	7,990
TOTAL		742,805	76,843	90,100	575,862	31,790	14,970	529,102
Percent of Original Acres			10%	12%	78%	5%	3%	70%

** These three areas involved in jurisdictional transfer with BLM (10/31/1983).

- The Forest Service will be called upon to improve the quality of big game winter range on the San Juan National Forest as increasing amounts of winter range on private land is lost to development.
- Non-consumptive uses of wildlife such as viewing, bird watching and photographing will increase.
- Big game hunting will continue to decline nationally but will increase on public lands due to the relative ease of access.

Fish

The Forest's aquatic wildlife (fisheries) resources consist primarily of common trout species such as brook, brown, rainbow and cutthroat. Non-game fish species include suckers, dace and sculpin and occur in a variety of aquatic habitats. Aquatic and semi-aquatic macroinvertebrates are an integral part of the aquatic resources and provide the major food source for the fisheries resources throughout the Forest.

In 1987, cold water fishing on the San Juan National Forest accounted for 130,000 recreation visitor days (RVD's) and made up about 9 percent of the total recreation use of the Forest.

Approximately 281 perennial fishing streams totaling about 1,080 miles, 94 natural lakes and 10 reservoirs are present on the San Juan National Forest. Many of the stream habitats are of low fish productivity because of steep gradients and high annual fluctuation of flow. Most of the natural lakes on the San Juan National Forest are in wilderness areas, thus providing limited opportunities to improve cold water fish habitat due to remoteness and restrictions on the use of mechanized equipment.

The general assumptions concerning future fishery management on the San Juan National Forest are as follows:

- As more people fish on the San Juan National Forest, fishing pressure will continue to increase and specific fish habitats in the wilderness will become over-used.
- More uniform distribution of fishing pressure on fish habitats will be needed to effectively use the habitats' limited potential.
- The Forest Service will be called upon to provide quality fisheries in low elevation ponds and lakes.

Wildlife and Fish Demand

Table IIA-6 displays historical hunting, fishing, and non-consumptive wildlife and fish recreation use levels, and the revised trends for these activities. Projections are based on a combination of national trend data, local use figures, and statewide information on hunting and fishing.

These revised trends for wildlife and fish related recreation are lower than the levels projected in the 1983 Forest Plan FEIS, Chapter III. We decreased the big game hunting projection only slightly and reduced the projections of other wildlife and fish related activities by approximately 35 percent from the sizable increases predicted in the 1983 FEIS.

Table IIA-6
Wildlife and Fish Demand Trend By Activity

Year	Big Game Hunting	Small Game Hunting	Fishing	Non Consumptive Use
	(thousands of recreation visitor days per year)			
Historical				
1975	101	14	127	8
1980	92	16	137	10
1982	113	16	147	10
1985	105	10	130	14
1986	101	13	117	8
1987	86	12	106	4
1985-1987 ave.	97	12	118	9
Projected				
1995	110	14	135	10
2005	140	18	175	13
2015	165	20	200	15
2025	185	23	225	17
2035	210	26	255	19

RANGE

This section replaces the discussion and display of range demand trends, reprinted on page II-12 of the following white pages, and Table II-1 of the original Forest Plan.

The western livestock industry has been in a decline in recent years - a trend that was difficult to forecast accurately when the Forest Plan was prepared. The demand for Forest grazing permits and actual rangeland grazing use declined during the late 1980's as a result. We have also experienced a long term trend of conversions from sheep to cattle, as well as a more recent trend of conversions from cow/calf operations to yearlings (Table IIA-7).

In 1986 about 1,631,000 acres of National Forest system land were open to grazing. Of this total, 881,250 were classified as capable and suitable range with 60,780 acres in low ecological condition. There are currently 198 livestock grazing allotments - 123 cattle, 73 sheep, and two recreation livestock. Of this total, 42 are currently vacant and four of these are not available for grazing due to range restoration efforts. Temporary grazing permits were issued on 12 of the vacant allotments in 1987. Stocking is within estimated carrying capacity Forest wide, but 28 cattle allotments and one sheep allotment are characterized as having management problems in need of correction. The overall trend of range conditions is generally improving across the Forest.

The livestock industry has been somewhat unpredictable recently, but some assumptions can be made.

- Per capita beef consumption nationally will continue to decline, but the U.S. population will continue to grow over the next five decades.

- The relatively low cost of federal grazing permits will continue to make them desirable, although the price structure for grazing fees may change in the near future.

Range Demand

Two of the above assumptions, decreasing per-capita consumption and increasing population, tend to counterbalance each other but not to the extent that they are offsetting. We believe that the livestock industry has made strides towards producing and marketing a leaner product. For this reason, we project that the rate of population increase will offset any further decrease in per capita consumption of red meat. Thus, we predict grazing demand to increase, but not at the level predicted in the 1983 Forest Plan FEIS. Table IIA-8 shows the revised prediction of livestock grazing demand.

Range Supply

The current permitted livestock stocking on the San Juan National Forest is 147,520 animal unit months. Allotment management plans have focused on improving the ecological condition of rangelands and resolving management allotment problems, but not increasing livestock numbers.

Table IIA-7
Rangeland Grazing Use on the San Juan National Forest

	CATTLE		SHEEP	
	NUMBER	AUM's	NUMBER	AUM's
Average 1960-69	23,100	97,700	73,101	189,000
Average 1970-75	32,200	109,900	47,700	116,400
Average 1976-80	30,800	101,000	29,700	59,300
Actual for 1984	27,300	102,200	18,500	48,100
Actual for 1985	29,200	100,200	21,600	46,700
Actual for 1986	27,800	99,000	20,900	41,500

Table IIA-8
Comparison of Revised Range Demand Trend to 1983 FEIS Projections.

(Thousands of animal unit months/year)

Year	FEIS	Revised
1995	180	160
2005	218	165
2015	225	170
2025	228	175
2035	232	180

TIMBER

This section supplements the timber discussion from the original Forest Plan, reprinted on pages II-12 and II-13 of the following white pages.

We conducted a periodic re-inventory of the San Juan National Forest timber lands (referred to as a Stage I Inventory) in 1988. This inventory is the basis for the following reassessment of lands available for timber production (Table IIA-9 and IIA-10) and for lands tentatively suitable for timber production discussed later in this chapter.

The current age-class distribution of forest vegetation is the result of natural processes altered by past management activities. Table IIA-10, on the following page, depicts the current distribution of forest stand successional / structural stages, by cover type and legal and administrative status. The table also summarizes the acres of other major cover types present on the Forest. The distribution and interspersion of forest and non-forest cover types is most important from the standpoint of wildlife habitat quality. The Forest has excellent interspersion of cover and openings in some areas, but other areas of the Forest contain large continuous forest cover with little or no interspersed meadow. The basis for the revised information in Table II-2 is the 1988 Stage I timber inventory.

Table IIA-9
Summary of Acreage by Forest Type and Availability

Forest Type	Available	Reserved	Total
Timberland			
Douglas-Fir	202,363	20,954	223,317
Ponderosa Pine	300,308	325	300,633
Spruce/Fir	345,372	180,205	525,577
Aspen	276,899	14,241	291,140
Limber Pine		40	40
Total Timberland	1,124,942	215,765	1,340,707
Woodland			
Cottonwood	1,319	15	1,334
Oak	113,376	71	113,447
Pinyon/Juniper	48,678		48,678
Total Woodland	163,373	86	163,459
TOTAL ACRES	1,288,315	215,851	1,504,166

Source: Inventory of the San Juan National Forest, USDA Forest Service, 1988

Table IIA-10
Distribution of Timber Types by Successional/Structural Stage

	Timber Type	Structural Stage (thousand acres) Early	Intermediate	Late	Mature/ Old Growth
Total for Forest					
	Douglas-Fir/ Mixed Conifer	2.58	51.98	168.73	36.50
	Spruce/Fir	45.96	75.79	403.82	230.00
	Aspen	11.58	99.58	179.98	161.50
	Ponderosa Pine	40.55	184.88	75.19	27.50
	Subtotal	100.68	412.23	827.72	455.50
Non-Forested Cover Types					
Meadows/Grassland		162.68			
Oakbrush		106.74			
Pinyon-juniper		5.08			
Riparian		40.09			
Sagebrush		12.47			
Water		2.25			
Other		191.89			
	Total	521.20			

** Mature/old growth is a subset of the late structural stage

Mature and "Old-Growth" Timber Stands

The Forest Plan FEIS (1983) did not analyze the mature/old-growth component of forest vegetation extensively. The relative importance of these forests has increased in the public awareness in recent years.

Concerns have focused on the cumulative effect of more than 80 years of logging activity, given the preference for logging large, mature trees, and the possibility that this has reduced the acreage of mature and old-growth forest to unacceptable levels. An analysis of the timber stands on the San Juan National Forest based on 1988 inventory data suggests that, for ponderosa pine and Douglas-fir/mixed conifer types, the percentage in the older categories is low. The relative amounts of existing mature and old-growth spruce-fir and aspen forest are quite large, however.

Table IIA-11 displays the abundance of mature and old-growth timber stands on the Forest. This information is based on inventory records which were sorted on the basis of age characteristics. All aspen stands exceeding 80 years old, and all other timber types exceeding 150 years old, are characterized as mature. Old growth is a component of the mature category.

Table IIA-11
Mature and Old-Growth Timber Stands

	SPECIES/COVER TYPE			
	spruce/fir	Doug-fir	aspen	pond. pine
Total Acres	525,500	223,500	291,000	300,500
Total Sawtimber Acres	480,500	219,500	203,500	224,500
Total Mat/O-G Acres	230,000	36,500	161,500	27,500
Mature and Old Growth Timber -				
Mature/O-G as % of Total	44%	16%	55%	9%
Mature/O-G as % of Sawtimber	48%	17%	79%	12%

Timber Demand

Table IIA-12 displays estimates of current timber quantity demanded by major product category and contrasts the revised estimate of current quantity demanded to the first period demand projection from Table II-1 of the original Forest Plan.

In addressing timber demand we examined two components: the immediate future and long-term future trends.

The long-term future deals with general market trends and how they may affect local demand. Table IIA-13 portrays the shift in demand resulting from three alternative assumptions regarding future stumpage demand at the current average price of $25 per MBF (expressed in 1978 constant dollars).

Table IIA-12
Current Quantity Demanded Compared to Timber Demand Estimates In the FEIS (1983).

Product	Current Quantity Demanded	1983 FEIS Demand Projection
	(million board feet per year)	
Softwood Sawtimber	18.0	38.0
Aspen Sawtimber	6.0	10.0
Fuelwood	6.5	10.0
Other Wood Products	0.5	10.0
TOTAL	32.0	68.0

Table IIA-13
Stumpage Price Projections by Time Period

Product	Current	1990	2000	YEAR 2010	2020	2030
				(1978 $/MBF)		
Softwood Sawtimber						
conservative estimate	25.00	25.00	29.00	29.00	29.00	29.00
moderate estimate	25.00	25.00	29.00	31.00	33.00	35.00
liberal estimate	25.00	25.00	29.00	33.00	36.00	40.00
Aspen	12.50	12.50	13.50	14.50	16.00	17.25
conservative estimate	12.50	12.50	12.50	12.50	12.50	12.50
moderate estimate	12.50	12.50	13.50	14.50	16.00	17.25
Fuelwood	7.00	7.00	7.00	7.00	7.00	7.00

WATER

This section amends the original Forest Plan discussion of water, reprinted on pages II-13 and II-14 of the following white pages.

Demand

A 1986 study by the Bureau of Reclamation, *USBR depletion schedule, simulation model demand input data*, provides updated predictions for 1990 and 2000 consumptive use requests for Colorado Basin water. The Bureau of Reclamation's estimates of requested consumptive use are based on historical use and expected future use in light of legal entitlement, current and expected delivery capacity, and expected development of water-using projects. Additional quantities expected to be requested by the Metropolitan Water District in California and the Central Arizona Project were added to the Bureau of Reclamation's estimates of water requested under existing legal entitlements. Table IIA-14 summarizes the Bureau of Reclamation's projected annual requested consumptive use depletions by use type for the years 1990 and 2000.

Table IIA-14
Projected Annual Consumptive Use Depletions

Basin and Use Type	Requested Depletion (1000 acre feet) 1990	2000
Upper Basin	3,893	4,453
Lower Basin	8,828	8,919
Mexico	1,515	1,515
Total	14,236	14,887

Brown, et. al. (1988) concluded that additional water produced from the Forest would be used for local consumption, downstream consumption, hydropower production and salt dilution. The results of the study conducted by Brown, et. al. ("Marginal Economic Value of Runoff From the San Juan National Forest" May 19, 1988) are summarized in Chapter III of the Supplemental Environmental Impact Statement.

Timber harvest levels should not result in an increase in total water outflow from the Forest. In fact, indications are that outflows will decrease through time as additional water yields created through past timber harvest are reduced. The demand for water far exceeds the Forest's potential to increase water production.

Summary of Demand Projections

Table IIA-15 provides a summary of the previously discussed demand or consumptive use trends by resource.

Table IIA-15
Summary of Demand Projections by Resource (Annual Basis)

Resource	Unit of Measure	Period 1995	2005	2015	2025	2035	% Change Period 1 to Period 5
Developed Rec.	(MRVD)	890	1000	1130	1280	1445	+85%
Dispersed Rec.**	(MRVD)	1230	1385	1565	1770	2000	+85%
Wilderness	(MRVD)	190	215	245	275	310	+82%
Range	(MAUM)	160	165	170	175	180	+12%
Timber (Softwood)*							
Conserv. Dem. Scen.	(MMBF)	18.5	20.5	20.5	20.5	20.5	+17%
Moderate Dem. Scen.	(MMBF)	18.5	20.5	23.0	25.5	29.5	+70%
Liberal Dem. Scen.	(MMBF)	18.5	20.5	27.0	32.0	38.0	+100%
Incr Water	(MMAF)	not quantified - exceeds Forest's water augmentation capacity					

THE FUTURE

SOCIAL AND ECONOMIC ENVIRONMENT

The reduction in the allowable sale quantity (ASQ) and lands suitable for timber production will alter only slightly the future conditions envisioned by the 1983 Forest Plan. Although the previous ASQ of 41 mmbf/yr is larger than the 24 mmbf/year ASQ in this amended plan, timber management is only one activity among many occurring on the San Juan National Forest. More importantly, because the ASQ maintains *current* timber supply and demand conditions locally, the future scenario will likely represent an extension of current employment levels, income, and payments to counties.

Since the timber program is generally consistent with the current situation, there will be essentially no change in the local economic environment.

With regard to attitudes, lifestyles, beliefs, and values, the amended Plan will foster stability and continuity. To continue a timber program as set out in the original Forest Plan would be perceived by many recreationists (the majority of users) as a "negative" shift sociologically - that is, timber production at the expense of recreation opportunity. Certain design aspects regarding the location of timber sales represent a consensus between the Forest Service, timber industry, and local and regional environmental organizations.

RESEARCH NEEDS

We considered additional research needs to supplement those cited in the original Forest Plan, reprinted on pages II-23 and II-24 of the following white pages. National concerns regarding biological diversity and wildlife habitat fragmentation reinforce and expand upon the research needs noted under Wildlife and Fish. A new question that needs to be answered is:

> Are there "thresholds" with respect to habitat needs that, when exceeded, would cause certain plant and animal species to cease to be viable populations (as defined by 36 CFR 219.19)

CHAPTER II

MANAGEMENT SITUATION

This chapter describes the San Juan National Forest as it is today and how it is expected to change under implementation of the Forest Plan. Included is a description of the setting in which the Forest is managed, its resources and uses, demands placed on the Forest, and how those demands will be met through management of the Forest. The information used to create this description is a result of an analysis that determined supply and demand conditions as well as changes needed to correct present problems and prevent future ones. A more detailed assessment is given in Chapter III of the accompanying final Environmental Impact Statement (EIS).

The second part of this chapter summarizes future conditions under direction of the Forest Plan and specifies both the type and the general location of activities that will occur. Expected future conditions of the Forest also reflect the way in which proposed management direction addresses planning questions.

The last part of the chapter summarizes research needs which were identified through the planning process.

THE PRESENT

PHYSICAL AND BIOLOGICAL SETTING

The San Juan National Forest covers 1,867,782 acres in southwestern Colorado. The boundary of the Forest encompasses the northeasterly portions of the San Juan and Dolores River basins. The boundary generally follows the crest of the Continental Divide and the Wilson Mountains on the east and north. The south and west boundary extends stairstep fashion from Chromo, Colorado, in the southeast to a point 40 miles northwest of Dolores, Colorado.

The San Juan River system drains most of the San Juan National Forest, except that part of the Forest in the Dolores River drainage. The Mancos, Animas, Los Pinos and Piedra Rivers are major tributaries of the San Juan River. Both the Dolores and the San Juan Rivers eventually flow into the upper Colorado River.

The San Juan National Forest is located where the Southern Rocky Mountain physiographic province joins the Colorado Plateau province. The Forest has diverse topography consisting of mesas, deep canyons, foothills and rugged mountains. The San Juan Mountains dominate the eastern end of the Forest. The La Plata, Rico, and Wilson Mountains occur in the central and west portions of the Forest. Elevations range from just above 6,000 feet to peaks over 14,000 feet.

General topography and geology of the Forest resulted from the domal uplift of a 10,000 square mile area which was subsequently eroded by a combination of water and extensive alpine glaciation. Volcanic activity, faulting and sagging have also been part of the geological process.

The San Juan National Forest includes four major climatic and vegetative zones: lower montane forest, upper montane forest, subalpine forest, and alpine tundra. Wildlife species whose range extends throughout all four vegetation zones include mule deer, elk, bighorn sheep, mountain lions, coyote, bear, beaver, and marten. Game fish species include cutthroat, rainbow, brook, and brown trout, northern pike, and kokanee salmon.

Reprinted from Forest Plan (Issued 9/1983)

Vegetation

The vegetation of the San Juan National Forest, through its species composition, size, color, texture, form, and distribution of natural and treated stands, determines the dominant character and appearance of the Forest. Management of the Forest is closely linked to vegetation and its relationship to other resource elements.

Past control of fire and low levels of vegetation treatment have resulted in large areas of the Forest achieving a mature vegetation condition, characterized by low vigor, high mortality, insect and disease infestations, and greater risk of wildfire. A more balanced distribution of age and size classes improves vegetation variety, vigor and growth, reduces the risk of disease and insect problems, reduces the potential for wildfire, and improves wildlife habitat and visual quality. In addition to improving the health and vigor of the Forest, vegetation treatment also results in more and better wood products to serve local and national needs.

About 24 percent of the Forest is designated wilderness, wilderness study areas, research natural areas, and wild and scenic river corridors. Natural succession will be the dominant process of vegetation change in these areas. The remaining 76 percent of the Forest is available for vegetation treatment.

The important vegetation types and their approximate percentages on the Forest are: aspen, typically mature to over-mature, 16.1 percent; mixed conifer, many mature and over-mature stands, 9.6 percent; ponderosa pine, mostly mature, 18.4 percent; spruce-fir, mostly intermediate to mature, 28.0 percent; meadows and grasslands, 8.7 percent; brush, 5.7 percent; pinon/juniper, 0.3 percent; riparian, 2.1 percent, and sagebrush, 0.7 percent. The remaining 10.4 percent is mostly water and rock. Chapter III of the final Environmental Impact Statement provides a detailed discussion of these vegetation types.

ECONOMIC SETTING

Area of Influence

The area of social and economic influence of the San Juan National Forest includes Archuleta, Dolores, La Plata, Montezuma and San Juan Counties in southwestern Colorado. The Forest covers 1.5 million acres in this five-county area, and activities and outputs are estimated to be directly or indirectly responsible for approximately 12 percent of the total employment within this area of influence. While portions of the San Juan National Forest lie within Conejos, Hinsdale, Mineral, Rio Grande and San Miguel Counties, residents relate more strongly to communities and National Forests north and east of the Continental Divide.

Population

The area of influence is separated from the front range population centers of Colorado by the San Juan Mountains. The area's total population is about 50,000 people. Populations declined, in some cases dramatically, in all five counties between 1960 and 1970. This trend reversed itself spectacularly after 1970, and projected growth is expected to more than double the five-county area's population over the next 30 years.

Almost half of the area's population lives in Durango, Cortez, Pagosa Springs and the seven other incorporated towns in the area of influence. Subdivision growth around Durango, Cortez and Pagosa Springs is rapid and rural "bedroom" communities are developing.

Employment and Income

The average per capita income for the five-county area in 1973 was about $3,630; by 1978 it has risen to $5,450. After adjusting for inflation, this represents almost a ten percent increase in per capita real income. Total income earned by all residents also increased markedly from 1973 to 1978, except in Dolores County, which had only a seven percent nominal increase. After adjusting for inflation, per capita and total real income in Dolores County declined more than 20 percent over that five-year period.

Unemployment in 1980 was low in all counties except Archuleta, which experienced a jobless rate of nearly 12 percent. Total labor force in the five-county area in April 1980 was estimated to be 23,950 of which 22,600 were employed, for an overall unemployment rate of 5.6 percent, which is slightly above the Colorado average of 3.6 percent. About 28 percent of this employment, or approximately 6,740 jobs, relates to activities and outputs on the San Juan National Forest. Based on an employment to population ratio of 1 to 2.4 for the area, it is estimated that these jobs support about 15,100 residents of the five-county area.

SOCIAL SETTINGS

Social Resource Units

The Forest Service has geographically subdivided the Rocky Mountain Region into Social Resource Units (SRU's). Social Resource Units serve as a framework for assessing social, cultural, and economic interactions within the physical resources base. Social Resource Units define areas characterized by common issues. As these issues are clarified, goals can be set by the public, government, and business to create human, economic, and environmental benefits. The Social Resource Unit concept is used to address broad regional, rather than Forest issues. The units are defined by natural boundaries such as mountain valleys and river basins and by the way people live such as settlement patterns and agricultural activity.

Human Resource Units

The Forest has delineated smaller units of analysis within the boundaries of Social Resource Unit K, called Human Resource Units (HRU's). A Human Resource Unit is an area characterized by unique patterns of life-styles, economic conditions, institutional arrangements, and topography. HRU's vary in size but are typically larger than individual towns and communities, and they may cross political jurisdictions.

There are three HRU's identified on the Forest. They are also shown in Figure II-1. The Pagosa, Animas and Montelores HRU's were designated to help design management actions at the National Forest and Ranger District levels that would be responsive to local issues, conditions and needs.

The following discussion briefly describes each HRU by identifying the general history of the area, as well as lifestyles, attitudes, beliefs, values, social organizations, and significant population characteristics.

Montelores HRU

The Montelores HRU lies primarily in Montezuma and Dolores Counties, although a portion of it extends eastward into La Plata County, and northward into San Miguel County. The western border of the unit is the Utah State line, with the New Mexico State line forming the southern border. The northern boundary runs from a point a few miles north of the Dolores County line southeastward to a point a few miles east of Lizard Head Pass. The eastern boundary forms the western boundary of the Animas HRU. This HRU is perceived by the residents as the "Montelores Area."

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Lifestyle - The entire area is strongly oriented toward a rural lifestyle. Cortez is the only town with over 1,000 people, but it is a community oriented toward tourism, agriculture, mineral development and energy. Cortez is the trade center of the HRU, and Montezuma County is the second most populous county in southwestern Colorado. The importance of mining, energy and timber industries has fluctuated widely in the last 30 years but is presently on the rise.

Work routines are different within the town of Cortez than in the rest of the area. Light industry, government, tourism and retail trade dominate Cortez, and places of employment are generally in town. For the rest of the HRU, employment is more agricultural oriented and is also more seasonal. Unemployment increases during the winter. Big game hunting is an important event and attracts a large number of out-of-area hunters. Major economic events will be the development of McPhee Reservoir and energy projects.

Summer recreation focuses on fishing, camping, hiking, and other types of recreation opportunities on National Forest System lands. No major ski areas exist; however Hesperus and Stoner are popular with local residents, and the area is within commuting distance of Telluride and Purgatory. Winter recreation is on the increase, especially cross-country skiing and snowmobiling.

Attitudes, Beliefs and Values - The predominant attitudes are that natural resource development and utilization is good and is necessary for growth and progress.

Social Organization - All areas in the HRU are covered by protective services such as county sheriff's offices, fire districts, and search and rescue. Medical facilities, including a full service hospital, are located in Cortez, but serious cases requiring specialized care are usually referred to facilities in Durango or Farmington, New Mexico. The Ute Mountain Ute Indian Reservation is headquartered at Towaoc, about 15 miles southwest of Cortez.

Population and Land Uses - Despite a growing population, subdivision development has not caused loss of big game winter range or National Forest access problems in the Montelores HRU that it has elsewhere. Property values in the area have increased.

Animas Human Resource Unit

The Animas Human Resource Unit (HRU) is bounded on the west by a line running essentially from Red Mountain Pass southwest to the New Mexico border. This line crosses U.S. Highway 160 just west of Hesperus. The northern boundary of the HRU is the Continental Divide. The eastern border runs south from the Divide a few miles east of the Los Pinos River down to the New Mexico line.

The entire HRU is dependent on Durango as a primary trade and service center and as a recreation visitor entry point. The bulk of the unit is in La Plata and San Juan Counties.

Lifestyles - The Animas HRU is moderately urbanized, especially in the Durango area, but the rural mountain lifestyle still prevails. Durango is the primary trade center, and is the "gateway" to the HRU and to the San Juan National Forest. Logging, ranching and mining are directly related to National Forest activities in the HRU, and many residents spend large amounts of their leisure time in the Forest as well.

Attitudes, Beliefs and Values - Animas HRU residents represent a wide cross-section of attitudes, beliefs and values. The community is diverse, cosmopolitan and easily polarized on issues, including those relating to natural resource management.

Social Organization - The standard social services available in most small American cities are found in Durango, including a four-year college. Because of the diverse population and economic base, the Animas HRU is not as vulnerable to social disruption from projects such as mineral or ski area development as most other communities in southwest Colorado might be.

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Population and Land Uses - Population increases of the past decade have created a problem with the conversion of agricultural lands to residential and commercial uses, particularly when converted lands are adjacent to the National Forest. Loss of access and key big game winter range are two adverse effects. Recreational use of the National Forest is growing as populations increase, with much of the increased use occurring on Forest lands in the Animas HRU. Vegetation treatment is necessary to maintain the scenic views people are accustomed to and to provide for increased capacity on big game winter range to compensate for the rapid loss of private land.

Pagosa Human Resource Unit

The Pagosa Human Resource Unit (HRU) centers on the town of Pagosa Springs, the only incorporated community within the HRU boundaries. The Continental Divide is the dominant feature on the eastern and northern boundaries of the unit. The New Mexico State line forms the southern boundary. The western boundary is formed by the hydrological divide between the Los Pinos and Piedra Rivers. The Pagosa HRU contains portions of Hinsdale and Mineral Counties and virtually all of Archuleta County.

Lifestyles - The predominant lifestyle in the Pagosa HRU is "rural mountain," with many of the residents dependent on the National Forest for their livelihood. Ranching, logging and tourism, including outfitter-guide operations, are occupations dependent on the Forest.

Attitudes, Beliefs and Values - Public awareness of the recreational environment of the National Forest is increasing with immigration to the area. There is a changing public attitude toward protecting and preserving rather than developing and using Forest resources such as timber, forage and minerals. In the future, direct conflicts can be anticipated between those who hold "preservation" attitudes and those who believe resources should be developed to meet local income and employment needs.

Social Organization - While most of the community services found in other areas are available in Pagosa HRU, rapidly increasing populations are placing strains on school systems, medical facilities, street and road maintenance and law enforcement.

Population and Land Use - Until a few years ago, Hispanics were in a majority in Archuleta County. Recent population growth has changed this this mix, but the Hispanic influence is still extremely strong. Population growth has created a significant shift in land uses, the most significant being the conversion of ranchland into housing subdivisions and resorts.

PAST AND CURRENT MANAGEMENT AND SUPPLY POTENTIAL

The capacity of the San Juan National Forest to provide outputs, goods, and services is directly related to management of the resource elements and support activities described in the following section. These resource elements are the same ones used in developing the National Assessment and Renewable Resources Program (RPA).

Current Management

The level of outputs and uses that could be attained under the guidance of goals, objectives and land use allocations established in existing plans.

Regional Objectives

That portion of resource uses and outputs from the 1980 Resource Planning Act (RPA) Program that have been assigned to the San Juan National Forest by the Regional Guide.

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Demand Trends

Level of outputs, uses, and services expected to be needed or desired in the future.

Supply Potential - Maximum Resource Outputs

The estimated maximum possible level of a given output that could be supplied while maintaining long-term land productivity.

Forest Plan Objectives

The estimated levels of resource uses and outputs to be provided over time by implementation of the Forest Plan.

RESOURCE ELEMENTS

The following discussion is intended to portray the management situation as it relates to the various resource elements. Although resource elements are discussed individually, it must be remembered that management of the Forest occurs on an integrated resource basis. Management activities affect a variety of resources, and decisions are made only after considering the entire set of ramifications involved. Similarly, single management activities are actually designed to serve a variety of resource objectives. Timber harvests, for example, are designed not only to remove timber in the most cost-effective manner, but also to increase water yield in appropriate areas. Water developments are designed to serve the needs of certain wildlife species as well as domestic livestock. Roads are located to efficiently transport logs from the timber sale area to the mill, but these same roads are also designed to provide access for hunting, firewood gathering, and recreation.

Other, inter-relationships are more separated chronologically. For example, timber harvesting, when it improves the balance of successional stages of vegetation, can improve wildlife habitat diversity. Improved diversity leads to a gradual increase in populations of certain animal species, which in turn increases recreation opportunities for viewing, photographing, and hunting these animals. This series of events may take several years to come to fruition, yet it may be entirely the result of a single management activity.

Therefore, resources that are discussed individually below are really part of a very complex system with numerous interactions. They are described individually only to emphasize important aspects of the current situation in some type of organized framework. These elements must be conceptually combined in order to understand the overall current situation on the Forest as well as how the Forest Plan relates to it.

Recreation

Recreation is one of the major uses of the San Juan National Forest. An estimated 1.18 million recreation visits occurred in 1980, which provided approximately 1.62 million recreation visitor days (RVD's). Use is distributed among the following activities.

Dispersed Recreation - Specific dispersed recreational opportunities available on the San Juan National Forest include hiking, backpacking, picnicking, camping, gathering forest products, trail-biking, driving for pleasure, fishing, hunting, boating, rafting, mountain climbing, swimming, horseback riding, general leisure and sightseeing, crosscountry skiing, snowmobiling, snowshoeing, ice fishing, snow play, sledding and tobogganing.

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The San Juan National Forest has approximately 1,867,000 acres that are available for dispersed recreation activities. Non-wilderness dispersed recreation is estimated at 873,000 recreation visitor days per year and is presently the largest and fastest growing form of recreation on the San Juan National Forest.

Developed Recreation - the 61 "public sector" sites on the San Juan National Forest have a total use of about 391,000 RVD's per year with a combined total theoretical capacity of 2,261,000 RVD's. These sites include 37 campgrounds, 7 picnic areas, 4 boating sites, 2 group campgrounds, 6 developed trailheads, and 5 observation or interpretive sites, including the Chimney Rock Archaeological Area. Season of use runs from May 15 through November 15. Fees are charged on campground and group picnic sites meeting Land and Water Conservation Fund Act criteria. Present, 31 of the 61 sites are designated as fee areas. In 1980, returns to the U. S. Treasury from these fees were $40,700.

Nearly all "public sector" sites are currently maintained to complement the natural environment and provide adequate visitor facilities, such as toilets, tables, fire rings, and roads. The largest suppliers of developed recreation outside of the San Juan National Forest are private campgrounds and Mesa Verde National Park with an estimated total theoretical capacity of 4,580,000 RVD's. Developed recreation use on non-National Forest sites is expected to increase from 35 percent of present theoretical capacity to 80 percent by the year 2030.

Demand for developed recreation is expected to increase as local population increases. As travel expenses increase, use of developed sites by local residents will also increase.

Ski Areas - There are two operating ski areas on the San Juan National Forest, Stoner and Purgatory. Current annual use of these areas is 138,000 RVD's. Stoner is a small weekend-type ski area presently operated by a nonprofit club. It has two T-Bar lifts which are partially located on the Forest (27 acres) and a small rope tow on private land, with a total capacity of 380 skiers at one time. During the 1979-1980 season, Stoner had 4,544 skier visits. Annual use at Stoner has not increased significantly for several years.

Purgatory, the only destination ski resort in the San Juan National Forest, is much larger than Stoner. During the 1979-1980 season there were 271,500 skier visits. Skier use averaged 51 percent of capacity on weekdays and 76 percent of capacity on weekends. The capacity of 3,200 skiers per day was exceeded 13 times during the season. Approximately 60 to 70 percent of the skiers are from out-of-state, mostly from New Mexico, Texas and Arizona. The market for out-of-state skiers is favorable, as Purgatory is the only major ski area in Colorado that can be driven to from the southwestern states without crossing a major mountain pass. Commercial jet aircraft capability at the La Plata County Airport further enhances the attractiveness of Purgatory Ski Area.

Purgatory currently has five double-chair and two triple-chair lifts serving approximately 500 acres of trails. Proposed expansion would add tow more chairlifts and increase the trail area served to about 700 acres. In 1979, Purgatory installed an "alpine slide" which involves riding a sled-like vehicle down a fiberglas chute. This attraction has increased summer use of the area.

Demand for downhill skiing generally exceed supply. Consistent demand, in spite of energy shortages and higher lift ticket prices, suggests that substantial increases in capacity would be paralleled by increases in use. Use by 1995 will more than double if current trends continue.

There are 14 inventoried potential ski area sites on the Forest. There is an identified interest by the private sector in at least three of these sites: East Fork, Windy Pass and Grayrock-Cascade.

Cultural Resources - Many Anasazi ruins are scattered throughout the Forest, representing various periods of Anasazi history. Much evidence of early development in the San Juan Mountains, such as old mines, pack trails, toll roads, and narrow gauge railroad beds, can also be found.

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Prior to any ground-disturbing management activities, project sites are surveyed for archaeological and historic significance. Protective measures are taken when a cultural resource site is found. Over 250,000 acres, or approximately 13 percent of the San Juan National Forest, has been systematically inventoried for archaeological resources.

Currently, there are three cultural resources on the San Juan National Forest listed in the National Register of Historic Places: the Chimney Rock Archaeological Area; the Spring Creek Archaeological District (listed in the National Register as the "Zabel Canyon Indian Ruins"); and the Durango and Silverton Narrow Gauge Railroad which is also a National Historic Landmark. Chimney Rock is presently managed to emphasize wildlife protection, recreation, and archaeology research. It is also being proposed for designation as a Chaco Protection Site under Sections 502 and 503 of Title V of Public Law 96-550 which will recognize its important relationship with the prehistoric culture of Chaco Canyon National Park in New Mexico.

Visual Resources - The San Juan National Forest is characterized by outstanding scenery. Interest in management of the visual resource is increasing.

Approximately eight percent of the Forest has been altered by man to the degree that it visually dominates and contrasts with the natural appearing landscape. Examples are developments such as roads, utilities, mineral activity, timber clearcutting, and developed recreation sites. Contrasts which increase vegetation diversity and textural differences generally enhance the visual quality of an area.

Demands for, and concerns about scenic quality of San Juan National Forest lands viewed from recreation sites and major travelways will become increasingly important. Visual resource management techniques will continue to be applied to all projects in the future, with specific emphasis on those areas identified by the Forest Plan as high in scenic quality or recreation use. A major emphasis is on maintaining a healthy and vigorous Forest through vegetation treatment.

Wilderness

The San Juan National Forest presently contains 355,056 acres of designated wilderness. This is about 20 percent of the Forest, which is distributed among the Weminuche, the Lizard Head, and the South San Juan Wildernesses. The South San Juan Wilderness Expansion, Piedra and the West Needle Wilderness Study Area comprise an additional 90,100 acres to be studied for possible inclusion into the National Wilderness Preservation System.

Existing Wilderness - The Weminuche Wilderness now contains 459,172 acres (294,457 acres on the San Juan National Forest). It was originally designated in 1975 although it had been managed since 1932 as the San Juan Primitive Area. The Weminuche stretches along the Continental Divide from Stony Pass on the north to near Wolf Creek Pass on the south. Approximately 497 miles of light to heavy use trails permit access to the area. In the past decade, recreation use has risen to almost 200,000 RVD's in 1980 with areas such as Chicago Basin, Johnson Creek, and Flint, Goose, Trout, Ute, and Emerald Lakes receiving heavy recreation use. Direct controls such as camping restrictions have been necessary on some areas around Emerald Lake. The Weminuche is very popular for commercial outfitter-guides who generate over 10 percent of the annual use in the form of hunting, fishing, photography and sightseeing trips. There is low interest both in mineral exploration and oil and gas leasing in the area.

The 41,158-acre Lizard Head Wilderness (20,816 acres on the San Juan National Forest) was created out of parts of the Wilson Mountains Primitive Area and adjacent areas by an Act of Congress in December 1980 (PL-96-560). Impressive rock outcrops and high mountain terrain with peaks over 14,000 feet characterize this area. Cirque lakes and swift flowing streams are also present and some contain cutthroat, rainbow, and brook trout. Extensive vistas and large areas of alpine and spruce-fir vegetation are present. Approximately 19 miles of trails provide access for light to moderate recreation use. There is also low interest in mineral exploration and high interest in oil and gas leasing in the area.

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The South San Juan Wilderness, designated in 1980 (PL-96-560), crosses the Continental Divide in the San Juan Mountains. The 127,685-acre area (39,783 acres on the San Juan) contains bottomlands, canyons, glaciated uplands, uneven mountains and high hills. Some of the area is above timberline. The Conejos, San Juan and Blanco Rivers originate in the area. Vegetation includes a variety of grasses, shrubs, spruce, fir, aspen and various alpine plants. One hundred sixty-four miles of trails provide access for hunting, fishing, sightseeing, and grazing. The area is currently receiving light recreation use which is expected to rise as a result of official wilderness designation. There is low interest in both mineral exploration and oil and gas leasing in the area.

Future wilderness use can be expected to rise during the next decade at nearly the historic rate of increase. Changes in this rate beyond the next few years will depend on factors such as travel costs and leisure time.

Under existing legislation mineral exploration and development can continue until December 31, 1983, at which time the lands will be withdrawn from further mineral entry and leasing. Grazing use, on the other hand, is expected to remain steady or increase slightly. On some vegetation types, grazing capacity will decline due to natural succession of trees into existing forage producing areas.

Wilderness Study Areas - In 1977 the Forest Service began a Nation-wide Roadless Area Review and Evaluation (RARE II) to identify roadless and undeveloped areas within the National Forest System which were suitable candidates for inclusion in the National Wilderness Preservation System. Thirty-eight areas were inventoried on the San Juan National Forest; over 300 areas were inventoried in Colorado.

The Colorado Wilderness Act of 1980 (PL 96-560) was a direct result of RARE II. In the Act, three areas on the San Juan National Forest, West Needle, Piedra, and South San Juan Wilderness Expansion (Montezuma Peak - V Rock Trail) were established as Wilderness Study Area. This act requires the Secretary of Agriculture to review the study areas and make recommendations as to the suitability or unsuitability of inclusion into the National Wilderness Preservation System by December 31, 1983.

Fish and Wildlife

Wildlife - In 1980, the San Juan National Forest provided 107,600 RVD's of hunting, 91,600 of them for big game. Non-consumptive wildlife use constituted 10,000 RVD's. Wildlife related recreation made up approximately seven percent of the total recreation use of the San Juan National Forest.

The variety of topography and climate that occurs within the San Juan National Forest provides habitats for many species of mammals, birds, reptiles, amphibians, and fish. A complete species list and summary of habitat relationships is included in the wildlife data input to the San Juan National Forest Land and Resource Plan on file at the Forest Supervisor's Office, Durango.

Estimated populations of the primary species of game animals on the San Juan National Forest are indicated in the following table. No specific data on population numbers of small game and non-game species is available.

There are approximately 650,000 acres of big game winter range on the San Juan National Forest, of which 95,000 acres are classified as key winter range. Winter range is especially important since winter ranges on adjacent private lands are being lost or impacted as a result of developments and other conflicting uses.

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Populations of Game Species

Species	Estimated Population 1980
Bighorn sheep	220
Black bear	1,200
Elk	9,700
Mountain lion	70
Mule deer	16,250
Turkey	330
Mountain goat	80

Consumptive and non-consumptive uses of wildlife resources are expected to increase and to meet or exceed supply. Small game hunting will probably become more popular requiring additional maintenance and improvement of small game habitats. The Forest Service will be called upon to improve the quality of big game winter range on the San Juan National Forest as more adjacent winter range is lost to development. Nonconsumptive uses of wildlife such as viewing, bird watching and photographing will increase as consumptive uses become more restricted.

Fish - In 1980, cold-water fishing on the San Juan National Forest provided 136,700 RVD's. Total fish-related recreation made up about nine percent of the total recreation use of the Forest.

There are presently 16 species of fish on the Forest, of which seven are classified as game fish. These are brook, rainbow, brown and cutthroat trout, kokanee salmon, and northern pike.

There are approximately 1,215 miles of perennial fishing streams, 94 natural lakes and 10 reservoirs on the San Juan National Forest. A majority of stream habitat is of poor quality because of steep gradients and high yearly fluctuation of flow. Current inventories indicate approximately 236 miles of stream where improvement of habitat could be accomplished on an cost-effective basis. The majority of the natural lakes on the San Juan National Forest occur in wildernesses. There are only a few opportunities to improve cold-water fish habitat in lakes or ponds.

In the future, the Forest Service will probably be called upon to provide fish habitat in low elevation, highly productive ponds and lakes. Fishing pressure likely increase beyond supply, especially on waters outside wildernesses. As fishing pressure continues to increase, specific fish habitats in wilderness may become over-utilized because of their limited production potential.

Threatened and Endangered Species - The Endangered Species Act of 1973 requires that all Federal agencies protect and manage threatened and endangered species and their habitats. The San Juan National Forest has the following Federal or State designated threatened or endangered wildlife species:

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Common Name	Latin Name	Designation
American peregrine falcon	Falco peregrinus anatum	Endangered-Federal
Bald eagle	Haliaeetus leucocephalus alascanus	Endangered-Federal
Colorado River cutthroat trout*	Salmo clarki pleuritius	Threatened-State Candidate-Federal
Colorado Squawfish*	Ptychocheilus lucius	Endangered-Federal
Grizzly bear*	Ursus arctos	Endangered-Federal
Humpback chub*	Gila cypha	Endangered-Federal
Razorback Sucker*	Xyrauchens texanus	Candidate-Federal
River otter	Lutra canadensis	Endangered-State
Wolverine*	Gulo gulo	Endangered-State

*Uncertain existence on San Juan National Forest

At present, there are 21 prime inventoried San Juan National Forest that have been recommended as essential habitat for peregrine falcon. One of these sites is an active eyrie and another is being used as a hack site for reintroduction purposes. Six areas of winter roosting sites for bald eagles have been identified. These areas are primarily on private lands adjacent to or intermingled with the San Juan National Forest.

A cooperative research study with the Colorado Division of Wildlife has been completed on nearly 80,000 acres to determine if grizzly bear exist on the San Juan National Forest and to classify possible habitat. No sign of current grizzly bear presence was found and the potential habitat that was identified was not considered widespread enough to support a reproducing population. Habitat for the river otter has been identified, and a multi-year transplanting program is in progress.

There are no known threatened or endangered plant species on the San Juan National Forest although Mesa Verde cactus and Knowlton's hedgehog cactus have been found about 10 miles from the Forest boundary.

Certain trends can be expected in the future. For example, a sizable portion of the general public will continue to demand that threatened and endangered species and their habitats will be maintained or improved. If the determination is made that grizzly bear do exist on the San Juan National Forest, the Forest Service may be required to alter its management of grizzly bear habitat. Demands for commodity products will continue to be in conflict with certain threatened and endangered species habitat requirements.

Wildlife Habitat Diversity - Vegetation diversity and structural stages are a primary influence on wildlife habitat. The majority of the San Juan National Forest has good to excellent inherent diversity of its vegetation; however, most forested areas are mature to overmature and in need of a better balance of

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age-classes. Vegetation diversity problems are past clearcuts in spruce-fir, non-regenerated ponderosa pine areas, and some oakbrush areas.

Aspen is a key habitat for many wildlife species. The maintenance, expansion, and renewal of aspen stands is important for habitat diversity. Generally, the aspen on the San Juan National Forest is overmature and in need of renewal as a result of limited treatment.

Alpine and rockland non-forested habitats are in good condition. Only a few activities, primarily dispersed recreation, affect their wildlife habitat values. The mountain shrub and grassland habitats are in fair to good condition, with a few areas of livestock-big game competition.

Riparian habitat is especially important for wildlife and fish. There are problems in some areas with excessive domestic livestock grazing and off-road vehicle use.

The demand for increased habitat diversity will continue in the future. As pressure on the Forest grows from loss of private habitat lands and from increased hunting and fishing, vegetation treatment will be called upon to provide more habitat opportunities for game species. More fisheries and fish habitat improvement projects will also be needed.

Range

Of the 1,867,782 acres of San Juan National Forest, about 866,000 acres are classified as capable and suitable livestock grazing rangeland. There are about 145,500 acres in unsatisfactory range condition. It is the goal of range management to maintain all rangeland in satisfactory range condition.

Grazing of livestock on the San Juan National Forest is a major use. Much of the local economy is dependent on ranching and stock-raising. The total number of livestock grazing on the Forest, about 31,000 cattle and 51,000 sheep in 1980, represents one-third of the total cattle and sheep in the five-county area. Also, there were about 3,400 horses, mostly being used for recreation activities, grazing on the Forest. The majority of the cattle are permitted on the Forest from mid-May to mid-October. The majority of the sheep are permitted from early July to mid-September.

There are 219 livestock grazing allotments on the San Juan National Forest broken down as follows: 145 cattle and horse allotments, and 74 sheep and goat allotments. Thirty-two of the allotments are vacant; 28 are available to be stocked and grazed by livestock; and four are currently not available for restocking because of restoration projections.

Forest-wide stocking is within estimated carrying capacity; however, 22 cattle and horse allotments and six sheep and goat allotments are considered to be either overstocked or have management problems. The overall trend is that range conditions are improving across the Forest. The number of cattle grazing on the Forest has remained fairly steady over the past few years; however, because of variations in the sheep market; numbers of sheep have fluctuated greatly.

The demand for permits for cattle grazing is expected to remain high and will exceed available supply. Demand for sheep permits is expected to continue fluctuating over time but will rise to exceed supply. The dependency on Forest lands for grazing will probably increase as more private land is converted from rangeland to other uses. Conflicts will increase between grazing and other resource uses.

Timber

Timber management on the San Juan National Forest has not been a cost-effective program in recent years considering only the direct costs and revenue of selling trees. However, when all the other associated resource benefits are considered, a timber management program becomes a realistic and cost-effective

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management tool. The other resource objectives provide the impetus for a coordinated timber management program and in so doing improve the effectiveness of their own programs. Without a timber management program, many other resource management programs would cost a great deal more or could not be accomplished at all. In a sense, wood products are both an objective and a by-product of multiple use management.

During the period from 1915 to 1980, over 1,800 million board feet (MMBF) of timber have been harvested from the Forest. From 1960 to 1980, average annual harvest has been 53 MMBF per year, ranging from 98 MMBF per year in 1969 to 22 MMBF in 1980.

Average annual harvest of timber has been declining as a result of depressed market conditions for lumber and other wood products. The Montezuma Plywood Company in Dolores, with a capacity of 30 MMBF annually, closed in 1976. San Juan Lumber Company's operation in Pagosa Springs, which used 25 MMBF annually, has not operated since 1978. San Juan's operation in Durango closed in 1981. It processed 10 MMBF of timber in 1980.

During the period 1973 through 1982, Engelmann spruce, true fir, and Douglas-fir have been the major species harvested on the Forest, accounting for 49 percent of the harvest, followed by ponderosa pine (27 percent) and aspen (12 percent).

The timber resource is presently being regulated on a non-declining yield basis. This means that yield of wood fiber for any decade will not be less than the yield during the previous decade. This also implies that the average annual amount cut cannot exceed the long-term capability of the Forest to regenerate wood fiber on a sustained yield basis. Current average annual cut is below that level; however, larger harvests are needed to maintain a healthy forest and acceptable levels of wildlife habitat, range, visual quality, and water yield. Opportunities exist for diversifying and expanding mill capacity to meet vegetation treatment objectives.

Commercial harvest techniques have generally been limited to tractor logging, primarily because of the low volume cut per entry on most sales has rendered high cost logging systems economically infeasible. Tractor logging is limited to slopes less than 40 percent.

Timber harvests are designed to achieve multiple use objectives, including water yield, range, wildlife habitat and visual quality improvement, fuel reduction, and insect and disease control. Regeneration systems called for in the 1976 Timber Management Plan include clearcut and shelterwood in the spruce-fir and Douglas-fir types and clearcutting in the ponderosa pine and aspen types. Not all of these regeneration systems are scheduled in the first Plan period; however, they are scheduled in later periods when the stands are to be regenerated.

From 1962 to 1980, 40,568 acres were planted, with other acres having been replanted. As a result of poor regeneration success, ponderosa pine sites which are presently non-stocked or on greater than 30 percent slopes are considered unsuitable for timber production. For Engelmann spruce, harvest methods were changed from clearcutting to shelterwood to enhance natural regeneration, except that small clearcuts using aerial logging systems are permitted.

Demand for timber resources is expected to increase at a moderate rate, except for fuelwood, for which demand will be high. There will be strong pressure from outside the local area for the Forest to contribute more to the national wood supply. It is anticipated that both market and non-market demands will increase and that in some cases demand will conflict. In most instances, timber harvest will enhance other resource values. Reforestation programs are expected to show greatly improved success rates.

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Water

Watersheds on the San Juan National Forest generate approximately 15 percent of the flow of the Colorado River as measured at Lee's Ferry, Arizona, although they occupy only three percent of the drainage area. Nearly 80 percent of the flow of the San Juan River at Bluff, Utah originates on the Forest. Total average annual yield is 2.5 million acre-feet.

The Forest's riparian and aquatic zones were identified in the stream type classification process and are the flood-prone areas of the Forest covered by Executive Order 11988, Flood Plain Management. New development or other concentration of activities is limited to areas where impacts on floodplain/wetland resource values can be mitigated.

The San Juan National Forest provides water for 18 irrigation reservoirs within or adjacent to its boundaries. Many of the streams of the Forest are impacted by diversions and are drying up.

Vegetation treatment and snow management structures are often feasible means of increasing stream flow. Cloud seeding with silver iodide crystals in the San Juan Mountains as a method of augmenting snowpacks and water yield is again being studied by the Bureau of Reclamation. A permit has been issued to the Bureau of Reclamation for electronic monitoring of limited cloudseeding being performed by private consultants in cooperation with various local water and snow users. Changes in stream flow timing can be obtained through reservoir construction and control of peak flows through vegetation treatment. As more funds become available, additional snow fencing can be utilized to provide increased stream flow from the high elevation watersheds. Existing yield increases, about one percent of current total water yield, have resulted from timber management activities and other vegetation reducing activities, such as roads, powerlines, pipelines, and fires.

Demand for water presently exceeds supply, a trend that is expected to intensify in the future. Water yields from the San Juan National Forest can be increased by approximately 87,000 additional acre-feet per year above pristine baseline without degrading water quality. The primary method for increasing water yield on the Forest is through vegetation treatment using both commercial and non-commercial methods.

Minerals and Geology

The geologic forces responsible for the topographic conditions on the San Juan National Forest also led to a high degree of mineralization. As a result, mineral resource are prevalent.

Forest Service policy toward mineral activities on National Forest System lands is guided by statues and expressed in regulations; in statements of the President, the Secretary of Agriculture and the Chief of the Forest Service; and in the Forest Service Manual.

The search for and production of minerals and energy resources are statutorily authorized uses of the National Forest System, except for those lands formally withdrawn from mineral activities by Act of Congress or by Executive authority. Mineral activities on National Forest System lands are encouraged in accordance with the National Mining and Mineral Policy Act, and Acts governing mineral disposals from National Forest System lands and the various applicable Federal and State statutes governing protection of the environment, including air and water quality.

Statutory and regulatory direction separate mineral resources in lands owned by the United States into three categories: locatable (generally precious and base metals for which mining claims may be staked), leasable (generally oil, gas, geothermal, coal, sodium and potassium for which a lease may be issued), and salable (sand, gravel, construction rock which the Forest Service may sell.

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Locatable Minerals - Placer and lode gold, along with silver, copper, lead and zinc have been recovered from the Forest since the 1870's. More recently, uranium has been extracted and exploration for molybdenum has been carried out.

Other locatable minerals having the potential of being economically recoverable include tungsten, thorium, and vanadium. Increasing use of coal to generate electrical power in the Four Corners Region may lead to the development of limestone as an emission-scrubbing agent. Minor amounts of iron, manganese, nickel, cadmium, mercury and sulfur have also been produced on the Forest.

Exploration, development, and production of locatable minerals is likely to increase in the 1980's. The outlook for increased exploration and development of precious and base-metal ores is mixed. Increasing political pressure to develop domestic resources may spur development of economically marginal operations.

The long-range outlook for exploration and development of molybdenum and vanadium resources is good, but the outlook for tungsten and uranium development is less favorable.

Leasable Minerals - Since 1920, approximately 85 exploratory oil and gas wells have been drilled on the Forest, most of which were either dry or had amounts too low to be economically extracted. Several proven reserve fields lie along the southern and southwestern boundaries of the Forest, and five producible natural gas wells on the Pine and Dolores Districts were discovered in 1981-82. Production is expected following the construction of gathering pipelines. Virtually the entire western third and southeastern third of the Forest are covered with existing oil and gas leases or lease applications.

The United States Geological Survey has inventoried four areas as being prospectively valuable for geothermal resources:

- West Fork area -- 26,300 acres
- Pagosa Springs area -- 26,300 acres
- Dunton-Rico area -- 132,109 acres
- Trimble-Pinkerton area -- 130,313 acres

To date no geothermal leases have been issued. Interest in developing this resource is limited by the generally low temperature gradient of geothermal waters.

Oil companies are involved in a joint CO_2 project which includes the Doe Canyon area on the western edge of the Forest. The corridor for a 480-mile transmission pipeline to Texas has been approved, and construction is almost completed. Interest in CO_2 has been expressed by other companies and several new exploration wells are planned to test for CO_2 east of the present project field.

Two areas of the Durango Known Recoverable Coal Resource Area (KRCRA) lie on the San Juan National Forest. A detailed assessment is contained in Appendix H of the EIS. One emergency coal lease application near Chimney Rock is currently being considered, and a San Juan River Regional Coal Lease sale will be assessed in 1986.

Exploration and development of leasables, especially fossil fuels, is expected to increase sharply. The southern portions of the Pine and Pagosa Districts and the western part of the Dolores District will probably bear the major impacts of this activity. Development of geothermal resources on the San Juan National Forest will be limited to small-scale uses such as space heating and spas, resulting in minimal impacts within geothermal resource areas. Exploration for oil and gas will increase, and technological advances

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in geophysical interpretation and data-gathering methods will result in more activity and heavier impacts in favorable areas. Coal lease sales and attendant development are anticipated on the southern portions of the Pine and Pagosa Districts.

Salable Minerals - Seventy-six aggregate sources of salable minerals have been inventoried, most of which have not been developed. Those developments that have taken place are short-term and site specific, mostly for Forest, County, and State road projects. A few non-competitive sales of lichen-covered ("moss") rock have been made. The outlook for salable minerals on the Forest is for an increase in applications for sand, gravel and building stone corresponding to increases in the number of construction, mining and housing projects in the 1980's.

Human and Community Development

The Forest has been actively engaged in a wide variety of manpower and youth training programs. A summary of the major programs follows:

Comprehensive Employment Training Act (CETA) Program - This program provides employment to youths between the ages of 15 and 18. The average annual participation has been 8 CETA enrollees, nearly all of whom are women or minorities.

College Work-Study Program - This program is designed to provide work experience and employment to low income college students. At most 15 students were working under this program. Many of these students are women or minorities.

Youth Conservation Corps (YCC) - The Forest had 24 young people between 15 and 18 years old employed in the YCC in 1983; there was no program in 1981 and 1982. This has traditionally been one of the Forest's most effective programs internally and externally, but funding had been somewhat variable over the past few years.

Volunteers in National Forest Program - This program, authorized in 1972, has been used extensively to accomplish campground host work and archaeological surveys. In 1980, there were 36 volunteers working for the Forest.

Senior Community Service Employment Program (SCSEP) - Currently, there are 18 enrollees, 55 years of age or older who meet low income requirements specified by the Department of Labor. Many of these individuals are women and minorities.

The outlook for manpower and youth training programs on the San Juan National Forest is not encouraging. Many of the programs are Federally funded, with monies coming from other government agencies. The current economic and administrative climate in the country is such that monies have been, and will likely continue to be, significantly reduced.

SUPPORT ELEMENTS

Lands

Special Land Uses - The San Juan National Forest is available for occupancy when special uses further the public interest and are compatible with Forest Service goals and objectives. Occupancy is authorized through special land use documents. Factors limiting authorization are availability and suitability of land for the proposed uses, compatibility with other National Forest management programs, and public benefits and interests served.

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Special land use applications are increasing. Eighty-eight non-recreational documents were issued prior to 196; 183 were issued from 1960 to 1969; and 205 were issued from 1970 to 1980. There are also 133 recreation-related special use permits operational at present.

Special land uses with significant impacts on the Forest include corridors for oil and gas transmission pipelines (29.7 miles), electric power transmission and distribution lines (165.1 miles), water transmission lines and ditches (104.3 miles), and telephone lines (117 miles).

Demand for special uses will increase substantially and issuance of special use occupancy documents will become more difficult due to increasing conflicts with other Forest management activities.

Land Ownership - Land exchanges and purchases have been moderate. Land and Water Conservation Funds (L&WCF) have been used to purchase a number of private lands for outdoor recreation purposes, but this program has been the only source of funding for land purchase.

Occupancy trespass involves the identification, investigation, and resolution of non-mineral related unauthorized occupancy and use of the San Juan National Forest. There are many suspected unauthorized occupancies where adjacent land owners have constructed improvements on National Forest property. Where property lines are not well identified, the Forest Service has increased efforts to accurately survey boundaries.

There are an increasing number of subdivision developments adjacent to National Forest System lands, with associated conflicts over responsibility for range fences along property boundaries, access to the Forest, and loss of key winter habitat for wildlife. Owners of adjacent properties often desire land exchanges with the Forest Service to reduce subdivision costs, resolve access difficulties, and reap investment benefits. Exchange activity has been low due to uncertain funding and the small number of proposed exchanges which would benefit the public.

Land ownership adjustments are coordinated with the plans and programs of other Federal Agencies, and state and local governments. The San Juan National Forest and the Bureau of Land Management (BLM) have proposed a major boundary adjustment which is now awaiting Congressional action. This adjustment was initiated in 1975 and encompasses 31,607 acres of National Forest land and 25,559 acres of BLM land. There are three Wilderness Study Areas involved in the boundary adjustment. If these areas are transferred to the Forest Service, the studies will be continued by the Forest Service and a recommendation on suitability or unsuitability for wilderness will be made to Congress.

Land ownership adjustment proposals from private and other government agencies are expected to increase in the immediate future.

Rights-of-Way - The intermingled public and private lands within the boundaries of the San Juan National Forest have resulted in many public road and trail access problems. Many areas are unavailable for public use because of insufficient access. More access to the Forest is a major public issue because private landowners often enjoy nearly exclusive use of these areas through control of access.

The San Juan National Forest presently acquires about five to six rights-of-way (ROW) annually. The current emphasis is to acquire ROW's which provide access for commodity uses. Private landowners are reluctant to grant ROW's to the Forest Service unless there is a significant benefit to the landowner. When a ROW is in the public interest, and the property owner is unwilling to grant an easement, the right of eminent domain can be used.

The public demand for public ROW access will increase as other Forest uses increase. Resistance to grant public ROW's is likely to also increase.

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Withdrawals - Land withdrawals on the San Juan National Forest are composed of Federal Energy Regulatory Commission withdrawals for transmission rights-of-way, Bureau of Reclamation withdrawals, and Congressional withdrawals for certain activities within wilderness areas and proposed Wild and Scenic River corridors. These withdrawals comprise 463,325 acres on the Forest.

A review and assessment of existing withdrawals is required by Section 204 of the Federal land Management and Policy Act. Present direction to all agencies is to review withdrawals by 1991, and revoke those which create unnecessary encumbrances on the land. A summary of proposed mineral withdrawals and revocations can be found in Appendix E.

The new withdrawals contemplated are for administrative sites, research natural and archaeological areas, and those involving other major investment areas which require protection.

License and Permits - This section covers licenses and permits issued by another Federal agency for surface use of National Forest System lands. Currently there are two projects on the San Juan National Forest that have either a license or a preliminary permit for a proposed project. These permits, issued by the Federal Energy Regulatory Commission (FERC), are for the:

- Colorado-Ute Electric Association - Tacoma-Ames Project No. 400 (license); and

- Ptarmigan Resources and Energy, Inc. - Lemon Reservoir Project No. 2938 (preliminary permit)

The Tacoma-Ames license was issued March 19, 1936. The project has been active for several years developing hydroelectric power. A major expansion of the facility was made in 1980 - 1981, and there is currently a request for renewal of the license with the Federal Energy Regulatory Commission.

The Lemon Reservoir project was issued a preliminary permit that will expire in 1982. It is not known at this time if the proponent expects to file an application after 1982.

Except for the recent expansion of the Tacoma-Ames project, there are no other development proposals. However, with the interest in and the associates rising costs of energy development, there could be additional studies, particularly with water impoundment projects. An example of this is the McPhee pumpback storage project near Hoppe Point on the Dolores Ranger District. Although in the preliminary stages, the project appears feasible. If so, it would require a license under the authority of the Federal Energy Regulatory Commission.

Utility and Communication Facilities - Utility and communication facilities on the Forest are authorized by special use permit or easement. The include oil and gas pipelines, powerlines, telephone and telegraph lines, electronic sites, and a railroad easement. The locations of the major corridors within which future major uses will be considered are shown on the Forest Plan Map.

The present trend of increasing utility uses is expected to continue through the planning period.

Special Areas - Special areas are designations of portions of the Forest for specific purposes such as research natural areas, wild and scenic rivers, and archaeological areas.

- Research Natural Areas - The San Juan National Forest has one designated research natural area, Narraguinnep; and two potential areas, in Williams Creek and Spring Creek.

  The Narraguinnep Research Natural Area has 1,928 acres and is representative of the mesa country of southwestern Colorado. Located on the Dolores Ranger District, the vegetation consists of ponderosa pine, pinon pine, juniper and oakbrush types. Due to topography, virgin conditions prevail, and livestock is excluded through the use of fences and natural barriers.

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Williams Creek Area is a potential natural area of approximately 420 acres of white-fir forest on the Pagosa District, which appears to be suitable for designation as a research natural area.

The Spring Creek Archaeological District is a potential research natural area for the study of prehistoric, aboriginal ecosystems. It is an area of 3,360 acres which has been included in the National Register of Historic Places.

Future demands for research natural areas should increase. Several areas my be proposed for designation in the COlorado Natural Areas Program during the next 10 years.

- Wild and Scenic Rivers - The 1975 Wild and Scenic Rivers Act designated three rivers on the San Juan National Forest for potential addition to the National Wild and Scenic Rivers System. These are the Dolores River, the Piedra River, and the Los Pinos River.

  The Forest has completed Wild and Scenic River Study Reports and Environmental Impact Statements on all three rivers. All three studies, along with the Administration's recommendations, have been submitted to Congress for action. The recommendations are:

  - Dolores River - 105 miles should be designated as a component of the National System of Wild and Scenic Rivers.

  - Piedra River - 28.4 miles should be designated as a component of the National System of Wild and Scenic Rivers.

  - Pine River - 54 miles, all within the Weminuche Wilderness, should be designated as a component of the National System of Wild and Scenic Rivers.

  The San Juan National Forest was also directed to make evaluations of the San Juan River and Animas River for possible inclusion in the National System of Wild and Scenic Rivers. Neither river was determined to be eligible. (See Appendix I of the final is - "Determination of Animas and San Juan Rivers for Wild and Scenic Rivers Eligibility.")

  The demand to protect and maintain free flowing rivers will increase.

- Chimney Rock Archaeological Area - Chimney Rock Mesa, located off Colorado Highway 151 near Pagosa Springs, lies between the Piedra River and Stollsteimer Creek and features a heavy concentration of Anasazi ruins.

  In 1970, 3,160 acres were designated as Chimney Rock Archaeological Area and entered in the National Register of Historic Places. Various management plans have since been proposed for the area, some providing significant development along Highway 151 at the base of the mesa, including a parking lot, visitor information center, and picnic facilities. Considerations have also been given to joint development with the Southern Ute Tribe, which would encompass the nearby Ute-owned Capote Lake area. The Southern Ute Tribe owns land in and around the Chimney Rock area and would like to participate in and benefit from the development of Chimney Rock as a tourist-oriented attraction. Development of Chimney Rock site was halted due to the discovery of a pair of peregrine falcons, an endangered species, which resides near the ruins.

  Today, Chimney Rock Archaeological Area is accessible only by dirt road from Highway 151, which is closed to the general public. During the summer, the Forest Service conducts guided tours of the ruins, which are organized and conducted in cooperation with the Pagosa Springs Chamber of Commerce.

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The demand for public access to the Chimney Rock Archaeological Area will increase. The Southern Ute Tribe has expressed a continuing interest in development of the area.

Soils

Soils within the San Juan National Forest vary considerably with landform, geology and the erosional and depositional processes. Soils are forming from parent materials derived from sedimentary, metamorphic and igneous rocks, as well as glacial and alluvial deposits. Landforms include mesas, cuestas, canyons, glaciated mountains, alpine features, and alluvial bottoms and terraces.

The objective of soil management on the Forest is to match management activities to the capability and suitability of the soil in the interest of maintaining long-term productivity. This can be done quite well where the soil has been inventoried and soil characteristics are known, although only about one million acres have been inventoried thus far.

Soil management problems include soil erosion and compaction. Accelerated soil erosion decreases soil productivity, although management activities can be designed to contain soil erosion within tolerance limits. Soil compaction resulting from heavy equipment and vehicle use on moist, fine textured soils also affects soil productivity. Activities such as skidding and hauling logs and construction must take place during those periods when soils can support heavy loads.

Soil management services are provided on projects judged to have potential for soil resource damage. These include timber sales, roading mineral operations, and range management. Management services typically include recommendations to reduce soil impacts.

Continuing concern for soil productivity and erosion will require increased management emphasis on maintaining and improving soil productivity.

Facilities

Structures and Administrative Sites - The Forest Service currently owns 5 office buildings, 18 dwellings, 4 lookout towers, 14 work centers, and 30 other miscellaneous buildings, for a total of 71 buildings utilized in managing the San Juan National Forest. Additional office space is acquired through General Services Administration (GSA) leases as needed. The Supervisor's Office and the Animas Ranger District Office are housed in a GSA-leased building in Durango. The Dolores Ranger District Office, although not under GSA contract, is also leased. Construction is limited to warehouses and special project buildings. Current plans call for a new warehouse in Dolores. Use of government furnished housing for Forest Service employees is increasing.

Most of the office and work facilities on the Forest are over 40 years old. Most facilities are used to capacity and, in some instances, are overcrowded. Many are not fuel-efficient, either in location or design. Most of the buildings need to be retrofitted for energy efficiency.

There are no solid waste disposal sites on the Forest.

There are 65 road bridges or major culverts on the San Juan National Forest, representing a $4,000,000 capital investment. There are also 34 trail bridges, which cost approximately $850,000 to construct.

There are over 300 dams on the Forest, but only 13 of these are over 20 feet in height. Only one of these, at Henderson Lake, is owned and maintained by the Forest Service. There are currently no plans for constructing additional dams over 20 feet in height.

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There will be an increasing need to reconstruct existing buildings and recreation sites due to their age and condition. Further bridge work will involve rebuilding and upgrading existing structures. There are proposals for constructing additional dams on the Forest and, as demands for water increase, additional storage capacity will be proposed. The demand for solid waste sites on the Forest will also increase as population and land values increase.

Roads - The San Juan National Forest has 2,905 miles of Forest development roads, 565 miles of which are arterial and collector roads and the remainder are local. Other Federal, State and County roads also provide access to the Forest. In addition, 1,087 miles of primitive roads have been created by off-road vehicle (OHV) use.

The majority of the roads on the Forest were constructed due to timber sale activity. However, they serve multiple purposes since they are available for the benefit of grazing, fishing, minerals, driving for pleasure, and other motorized activities.

Much of the road system now requires, or will soon require, reconstruction to provide safe and maintainable standards. Some roads causing erosion problems or which cause undesirable impacts due to human use on other resource uses, such as recreational activities or wildlife, have been obliterated (returned to production) or put-to-bed (stabilized). More roads are scheduled for such action.

Use of the roads rather than the roads themselves cause most of the impacts on other resource uses and activities. The road system is managed through specific management objectives and traffic regulations. Management of roads may consist of closing to public use year round, seasonal closures, or controlled use for specific purposes. Reasons for this level of travel management are to minimize undesirable impacts of human use on resource uses such as recreational activities and wildlife. It also assists in controlling rising maintenance costs.

Areas where indiscriminate off-road driving results in erosion or aesthetic problems and areas where traffic is legally prohibited have been closed to off-road vehicle use. Areas where ORV use have not resulted in resource conflicts are open to vehicular traffic and ORV use. The present travel management status is displayed on the San Juan National Forest travel map.

Demand for use of Forest roads is significant. Several roads are now used at such a level that any increases in traffic volume will cause congestion and safety problems. Four-wheel drive interests want more opportunities for off-road and primitive-road use. Owners of private inholdings want exclusive access to their property. Sightseers want more roads with better driving surfaces. Although there is demand for numerous and varied road opportunities, some users want fewer roads.

Trails - The San Juan National Forest trail system consists of approximately 380 miles within three wildernesses, and 710 miles of trails outside wilderness. Trail use outside wilderness is predominantly recreation oriented, although approximately 80 miles are used primarily for stock trails, fire access, or other miscellaneous uses.

Trail maintenance has not kept pace with the growing recreational use of trails. It is estimated that over half of the total trail system is in need of some kind of reconstruction treatment at this time, entailing the rebuilding of entire sections of tread and/or relocating the trail around wet or rocky areas.

In 1979, two trails on the Forest were established as National Recreation Trails (NRT) under the National Trails System Act. The Calico NRT on the Dolores District is 6.5 miles in length, and the Highline Loop NRT on the Mancos District is 20 miles long.

About 120 miles of proposed Continental Divide National Scenic Trail (CDNST) corridor occurs on the San Juan National Forest. Much of this trail crosses numerous times between the Rio Grande and San Juan

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National Forests. Projected demand for trails is expected to increase corresponding with the demand for dispersed recreation opportunities.

Protection

Fire - The fire management program in the San Juan Basin of southwestern Colorado is a coordinated interagency effort involving Federal, State and local agencies. The overall fire management objective is to provide a cost-effective program which responds to land and resource management goals and objectives. This includes fire protection nd use.

Since 1978, there have been two separate fire suppression objectives for the San Juan National Forest. The first, applied on all but 305,000 acres of the Forest, is to control all fires at ten acres or less. The second, applied on the remaining 305,000 acres of the Forest, includes variable acreage control objectives, depending upon the area involved and fire intensity. Other fire management objectives for the entire Forest are to protect air quality through management of wild and prescribed fires and to use prescribed fire to reduce fuel hazards and accomplish other resource management objectives.

The average number of wildfires varies considerably with weather conditions. In the past 20 years the number of man-caused fires has decreased slightly, while lightning fires have increased. The annual burned acreage has not changed significantly over the past two decades. From 1961 to 1970 an average of 109 acres were burned per year, where as from 1971 to 1980 an average of 112 acres were burned per year.

Some increase in the number of man-caused fires can be expected as development and visitor use increase, although this will not drastically affect the wildfire situation.

The potential for large destructive fires does exist on the San Juan National Forest. Over the next 40 to 100 years, due to aging and decay of forested areas, fuel hazards will likely increase and could result in larger, more destructive fires. This is particularly true in areas of the Forest which receive little vegetation treatment.

Integrated Pest Management (IPM) - The Forest's objective is to ensure optimal pest management with respect to environmental concerns, biological effectiveness, and economic efficiency while achieving resource management objectives. The intention is to rely on an IPM policy which will reduce the reliance on chemical methods, and manage resources in a manner that is not conducive to the development and perpetuation of pest problems. Pesticides will be used under prescribed conditions to protect resource values when their use is prudent and control of potential adverse effects can be minimized.

Significant pests on the Forest include insects (mountain pine beetle, spruce bark beetle, western spruce budworm, western tent caterpillar); noxious weeds (Canadian thistle, toadflex, whitetop, knapweed, spurge); and rodents (mice, gophers, porcupines). At present pest management in forest stands is to meet long-range objectives through prevention measures using vegetation treatment practices, particularly planting, harvesting and utilization practices. Biological, chemical, mechanical means, and prescribed fires are considered where conditions are epidemic. Only western tent caterpillar, western spruce budworm, mountain pine beetle, and noxious weeds are considered to be increasing in population at a rate that would be a threat to resources and uses.

Forest diseases which cause losses include a variety of stem cankers, rusts and root rots. Acting in a much more subtle fashion over time, disease loss possibly exceeds the loss caused by insects. Rot and decay are particularly significant in overmature aspen stands.

Noxious farm weeds are controlled by chemical means, usually in cooperation with county programs. The current level of control is below that required to meet needs identified in noxious weed inventories.

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Air Quality - Air quality over the San Juan National Forest is good with respect to all air pollutants. The largest source of air pollution from Forest activities is smoke from both wildfires and prescribed fires, and dust from unpaved roads.

Law Enforcement - The current organization consists of a Law Enforcement Coordinator (Administrative Officer), Zone Special Agent, two level IV law enforcement officers, and Levels II and III law enforcement officers.

Emphasis to date in law enforcement has been in developed recreation and travel management. Over half of the law enforcement work is associated with developed recreation, such as non-payment of campground fees. Recreation is a major use on the San Juan National Forest. This use continues to increase and as more people use the Forest, more problems will develop.

Cooperative law enforcement agreements are financed with Dolores, Montezuma, La Plata, San Juan, and Archuleta Counties. These agreements call for patrols in heavy use recreation areas.

Major law enforcement problems occur in:

- Recreation facilities and management
- Travel management
- Land occupancy
- Vandalism to government property
- Personal and commercial firewood

RESEARCH NEEDS

The planning process identifies areas of research needed to support or improvement management of the San Juan National Forest. They are summarized below for consideration for research projects and will be updated during periodic evaluation of Plan implementation.

Recreation

Research is needed to determine the effects of developed sites (campgrounds, trailheads) on hunting and fishing recreation.

Wildlife and Fish

Research is needed on how best to determine vegetation diversity (composition plus structural), its juxtaposition and interspersion and how these factors actually affect population levels of various management indicator species. Questions that need to be answered include:

- Can diversity be determined effectively for many species using a common area or does each species need to be studied individually?

- What changes in diversity and to what magnitude of change (size and time span) is necessary to markedly affect population size of primary management indicator species?

- What is the total effect of disturbance that change diversity through vegetation manipulation practices? This also relates to overall visual quality and total forage composition and production to be available for wildlife and domestic livestock.

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Timber

Research needed to answer questions related to timber management are:

- A study of the physical and chemical site properties affecting timber productivity and regeneration (especially in ponderosa pine).

  This research should include evaluation of regeneration problems in the ponderosa pine type, and field, lab, and greenhouse studies to evaluate the relationship between site characteristics and regeneration.

- Effects of oak brush competition on the growth of ponderosa pine.

- Stand regeneration studies under local conditions to determine the best silvicultural practices to use to ensure adequate natural regeneration.

- Development of site index/productivity index tables for local species on local site conditions.

Planting stock research to obtain precise data relative to size and shape of containers, root configuration, planting season, number of trees per square foot, age of stock to be planted and lifting data.

Soil and Water

The majority of existing information relating to soil productivity and its capability comes from agricultural research. More information on forest soils is needed to help answer the following:

- How do management activities affect soil productivity?

- How much erosion is acceptable for the soils on the San Juan National Forest?

- Is compaction a problem on the Forest? If so, what is the best way to prevent or mitigate it?

- What soil features should we monitor to evaluate changes in soil productivity?

Protection (Includes Prescribed Fire)

The Forest Service will continue the present research study in the ponderosa pine-oakbrush type. This study relates to the on-site vegetation effects of seasonal and interval burning, fuel accumulation, and seedbed preparation within this type. The study should be expanded to determine effects of burning on soil and water resources.

A study is needed of local historic fire regimes so that intervals of natural fire and the resulting vegetation and soil succession trends can be predicted. Stylizing fuel models need to be developed to represent local situations and resource fire effects.

Also, a study is needed to improve the risk interpretation for forest pests and weeds on various sites.

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III . Management Direction

CHAPTER III

MANAGEMENT DIRECTION

FOREST DIRECTION

The following general goal statements amend the existing timber management goals, page III-4, Chapter III, Forest Plan. The section of the original Plan that is amended by these blue pages follows immediately after page IIIa-6, and begins with page III-1.

GOALS

Timber (added)

- Achieve timber management objectives in an economically efficient manner.
- Provide timber sale offerings that address the needs of local dependent industry.
- Use silvicultural systems and harvest schedules that achieve diversity, forest regulation, wildlife habitat, visual resource, and watershed objectives in an economically efficient manner.

Timber (deleted)

- Implement silvicultural practices on areas suitable for timber production to provide roundwood and sawtimber volume above the present level.

OBJECTIVES

Table IIIa-1, displayed on the next page, replaces Table III-1, page III-7 of the original Forest Plan.

Table IIIa-1

FOREST PLAN OBJECTIVES EXPRESSED AS AN AVERAGE ANNUAL YIELD

Activity	Units	Time Periods Decade 1 1989-1998	Decade 2 1999-2008	Decade 3 2009-2018	Decade 4 2019-2028	Decade 5 2029-2038
RECREATION						
Developed Recreation Use (excluding downhill skiing)	MRVD'S	890	1,000	1,130	1,280	1,445
Downhill Skiing	MRVD'S	140	180	205	230	260
Dispersed Recreation Use	MRVD'S	1,230	1,385	1,565	1,770	2,000
VISUALS						
Visual Quality Objectives						
Preservation	M Acres	412	412	412	412	412
Retention/Part. Ret	M Acres	688	688	688	688	688
Modification/Maximum Modification	M Acres	768	768	768	768	768
WILDERNESS						
Wilderness Use	MRVD's	190	215	245	275	310
Wilderness Management	M Acres	412.4	412.4	412.4	412.4	412.4
WILDLIFE AND FISH						
Big Game Hunting	MRVD's	110	140	165	185	210
Habitat Improvement Wildlife	M Acres	4.4	4.4	4.4	4.4	4.4
Fisheries	# Structures	41	56	56	56	40
Small Game Hunting	MRVD's	14	18	20	23	26
Fishing Use	MRVD's	135	175	200	225	255
Non-Consumptive Use	MRVD's	10	13	15	17	19

Table IIIa-1 (Continued)

FOREST PLAN OBJECTIVES EXPRESSED AS AN AVERAGE ANNUAL YIELD

Activity	Units	Time Periods Decade 1 1989-1998	Decade 2 1999-2008	Decade 3 2009-2018	Decade 4 2019-2028	Decade 5 2029-2038
TIMBER						
Total Timber Sale Program Quantity						
	MMBF	31.0	31.0	31.0	31.0	31.0
	MMCF	7.2	7.2	7.2	7.2	7.2
Allowable Sale Quantity	MMBF	24.0	24.0	24.0	24.0	24.0
Long Term Sustained Yield	MMBF	53.7	53.7	53.7	53.7	53.7
	MMCF	13.0	13.0	13.0	13.0	13.0
Reforestation						
Site Preparation	Acres	470	470	470	470	470
Planting	Acres	55	55	55	55	55
Natural Regeneration	Acres	415	415	415	415	415
Timber Stand Improvement Precommercial Thinning	Acres	300	300	300	300	300
WATERSHED						
Augmented Water Yield (Current 23 MMAF)		21	17	14	11	9
Watershed Improvement	Acres	170	170	170	170	170
MINERALS AND ENERGY						
Mineral Claims	Operating Plans	168	168	168	168	168
Available for Leasing	M Acres	1,426	1,426	1,426	1,426	1,426
LANDS						
Purchase and Acquisition	Acres	100	100	100	100	100
Land Exchange	Acres	500	500	500	250	250
Rights-of-Way Acquisition	Number of Cases	3	3	3	3	2
Land Line Location	Miles	45	45	45	45	45

Table IIIa-1 (Continued)

FOREST PLAN OBJECTIVES EXPRESSED AS AN AVERAGE ANNUAL YIELD

Activity	Units	Time Periods Decade 1 1989-1998	Decade 2 1999-2008	Decade 3 2009-2018	Decade 4 2019-2028	Decade 5 2029-2038
FACILITIES						
Arterial/Collector Roads						
New Construction	Miles	2.5	2.5	0	0	0
Reconstruction	Miles	5.0	5.0	10.0	10.0	10.0
Local Roads						
New Construction	Miles	12.0	10.0	5.0	4.0	8.0
Reconstruction	Miles	7.0	11.0	11.0	12.0	16.0
Trails						
New Construction	Miles	15.0	10.0	5.0	2.5	2.5
Reconstruction	Miles	25.0	25.0	25.0	30.0	30.0
Recreation Sites						
New Construction	# of Sites	10	10	5	5	5
Rehabilitation	# of Sites	20	20	20	20	20
ECONOMIC (expressed in 1978 constant $)						
PNV (PV discounted Benefit Costs)	MM Dollars	267.4	267.4	267.4	267.4	267.4
Benefits		431.2	431.2	431.2	431.2	431.2
Costs		163.8	163.8	163.8	163.8	163.8
Total Budget	M Dollars	10,986	10,986	11,500	11,500	11,500
Returns to US Treasury	M Dollars	915	955	995	1,020	1,070
Payments to Counties	M Dollars	270	280	290	295	350

MANAGEMENT REQUIREMENTS

We have changed the management requirements for silvicultural prescriptions, pages III-35 to III-40 of the Forest Plan. The complete set of changes to, or additions or deletions of General Direction and Standards and Guidelines are listed in one place on the blue pages following the Mangement Requirements section of this chapter. We have also inserted these changes in the body of the Forest Direction and Managment Area Direction (pages III-1 through III-291) where the changes supercede previous Forest Plan direction approved and issued September 29, 1983.

MANAGEMENT AREA DIRECTION

MANAGEMENT AREA SUMMARY

The following summary lists the management emphasis and shows the amended acreage allocations for each management area. This summary information supercedes the Management Area summary on page III-86 of the Forest Plan.

Management Area	Emphasis	Current Forest Plan Acres	Amended Forest Plan Acres	Change
1A	Developed recreation sites (acres are contained within other management areas).	562	562	0
1B	Winter sports sites.	13,042	13,042	0
1D	Utility Corridors (acres were not calculated and are contained within other management areas).	--	--	--
2A	Semi-primitive motorized recreation opportunities.	93,652	94,627	+975
2B	Rural and roaded-natural recreation opportunities.	54,654	61,569	+6,915
3A	Semi-primitive non-motorized recreation opportunities.	386,226	396,561	+10,335
4B	Wildlife habitat for management indicator species.	79,327	95,070	+15,743
5B	Big game winter range.	144,836	150,110	+5,274
6B	Livestock grazing.	289,148	314,626	+25,478
7C	Management of forested areas for wood fiber production and utilization on steep slopes.	55,229	0	-55,229

Management Area	Emphasis	Current Forest Plan Acres	Amended Forest Plan Acres	Change
7E	Management of forested areas for wood fiber production and utilization on gentle slopes.	238,477	268,000	+29,553
8A	Pristine wilderness opportunities.	318,273	318,273	0
8B	Primitive wilderness opportunities.	43,671	43,671	0
8C	Semi-primitive wilderness opportunities.	41,951	41,951	0
8D	Limited areas of wilderness providing for high density day use.	8,461	8,461	0
	Maintenance of the qualities of an area which make it possible for inclusion in the National Wilderness Preservation System; to be used on all Wilderness Study Areas, regardless of the Plan's recommendation, until Congress acts. (Acres are shown within other management areas).	(90,100)	(90,100)	0
9A	Riparian areas.	38,413	38,413	0
9B	Increased water yield.	38,739	0	-38,739
10A	Research Natural Areas.	2,302	2,302	0
10C	Chimney Rock Archaeological Area, increased public use.	3,160	3,160	0
10D	Wild and Scenic River corridors.	18,221	18,221	0

PRESCRIPTIONS FOR MANAGEMENT AREAS

We have changed sections of the General Direction and Standards and Guidelines for silviculture contained in Management Area prescriptions 2A, 3A, 4B, 5B, 6B, and 7E, and consolidated these changed requirements in the Forest Direction. The changed Management Requirements are inserted in their proper place with all unchanged Management Requirements reprinted from the Forest Plan, in the white pages (III- 1 through III-291) that follow. Appendix L at the end of this document displays, in one place, the extent of changes to the Forest Direction and Prescriptions for Management Areas.

CHAPTER III

MANAGEMENT DIRECTION

IMPLEMENTATION

This San Juan National Forest Land and Management Plan provides long-range management direction for the San Juan National Forest.

As soon as practicable after the Plan is approved, the Forest Supervisor will ensure that, subject to valid existing rights, all outstanding and future permits and other occupancy and use documents which affect National Forest System lands are consistent with the Plan. The management direction contained in the Forest Plan is used in analyzing proposals by prospective Forest users. All permits, contracts, and other instruments for occupancy and use of the National Forest System lands covered by this Plan must be consistent with the Management Requirements in both the Forest and Management Area Direction sections. This is required by 16 USC 1604(i) and 36 CFR 21.10(e).

Subsequent administrative activities affecting National Forest System lands, including budget proposals, shall be based on the Plan. The Forest Supervisor may change proposed implementation schedules to reflect differences between proposed annual budges and actual funds received. Schedule changes resulting from the budget appropriation process will be considered as an amendment to the Forest Plan. The final annual budget allocation for the National Forest will serve as documentation of the amendment. Changes resulting from the budget appropriation process shall not be considered a "significant" amendment, and therefore will not require the preparation of an environmental impact statement. Budget changes which significantly alter the long-term relationships among outputs in the Forest Plan will be evaluated in conjunction with the five-year update of the RPA Program, and may result in an amendment or revision of the Forest Plan.

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 with the Forest and are applied in addition to the Forest Direction management requirements. 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 into on-the-ground results. The Forest Plan is implemented through the program development, 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.

The Forest Plan provides guidance for developing multi-year implementation programs for each Ranger District. The Plan's goals, objectives, and management requirements are translated into these multi-year program budget proposals which specifically identify the activities and expenditures necessary to achieve the direction provided by the Forest Plan. These implementation programs form the basis for the Forest's annual program budget.

Upon approval of the final budget appropriation for the Forest, the annual program of work is finalized and implemented on the ground. The annual work plan provides the detail to the program budget proposals necessary to guide the land managers and their staffs in responding to the direction of the Forest Plan. The activity files in the data base and the Program Accounting and Management Attainment Reporting System provide information for monitoring the accomplishments of the annual Forest program.

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Future environmental documents, when needed, will supplement the Forest Plan Environmental Impact Statement (EIS). Environmental analyses will use the Forest Plan direction as an umbrella. Additional detail will be included in the environmental documents for factors appropriate for project level decisions.

The management direction of this chapter is composed of two major parts: Forest Direction and Management Area Direction.

Forest Direction consists of goals, objectives, and management requirements. The goals and objectives provide broad overall direction regarding the type and amount of goods and services that the Forest will provide. The management requirements contained in the Forest Direction section set the minimum conditions that must be maintained while achieving the goals and objectives.

Management Area Direction consists of management area prescriptions applicable to specific management areas shown on the Forest Plan map. The management area prescriptions contain management requirements specifying which activities will be implemented to achieve the goals and objectives. Management requirements contained in individual management area prescriptions are applied to specific areas shown on the management area map in the back of this document.

Implementation maps indicate the estimated timing and vicinity or location of proposed and probable management practices for the the remaining seven year period of the Plan. An implementation map is a composite of seven and on-half minute quadrangle map overlays. These overlays supplement the Forest's vegetation data base and are available for review at the applicable Ranger District offices. This map will be updated annually to reflect project completion, changes in scheduling due to funding changes, and adjustments in projects resulting from better site specific knowledge.

Additional direction and information is contained in Appendices A through H. Appendix F summarizes lands capable, available and suitable for timber production; Appendix J contains Amendments 1 through 13; Appendix K is the glossary. We have not reprinted Appendix A, B, C, D, E, G, H and I from the Forest Plan.

FOREST DIRECTION

GOALS

The following are general statements of goals to be achieved sometime in the future. They are expressed in broad terms and are timeless in that they have no specific attainment date. These goals statements provide the basis for the specific objectives listed later in the chapter. Goals respond to the Planning Questions listed in Chapter II as well as appropriate laws, regulations, and policies.

The goals of the Forest Plan are:

Vegetation

- Allow natural succession to proceed without human intervention in all designated wilderness and wilderness study areas.

- Manage vegetation types outside of wilderness to provide multiple use benefits commensurate with land capability and resource demand.

- Improve the health and vigor of all vegetation types.

- Integrate vegetation management with resource management in all functional ares -- recreation, wildlife, range, timber, and water.

Recreation, Cultural and Visual

- Provide nearly equal areas for motorized and non-motorized dispersed recreation opportunities.

- Provide areas for semi-primitive non-motorized recreation opportunities to perpetuate that recreation experience.

- Provide the opportunity for developed recreation sites to be operated by public concessionaires.

- Provide more cost effective service to the public by closing low-use developed recreation sites and expanding heavy-use sites.

- Provide opportunities for expanding downhill skiing in Human Resource Units that can accommodate the social and economic impact.

- Locate, determine significance, and where appropriate, preserve historical and archaeological sites.

- Manage exceptional historical and archaeological sites for increased public use and visitations, while still protecting the values of the site.

- Make historical and archaeological sites available for study by agencies involved in research.

- Enhance and/or preserve scenic values along heavily traveled roads, use areas and trails through management activities.

Wilderness

- Provide the opportunity for additions to the National Wilderness Preservation System.

- Manage wilderness to preserve the wilderness character and provide for compatible human use and enjoyment through indirect control methods.

Wildlife

- Increase winter range carrying capacity for deer and elk.

- Improve wildlife habitat diversity on approximately half of the Forest.

- Improve fish habitat on suitable streams and low elevation ponds and lakes.

Range

- Provide for grazing of livestock at moderately increased levels.
- Provide for intensive livestock management on approximately 60 percent of the Forest.

Timber

- Practice vegetation management to provide multiple benefits using a comprehensive timber management program as a tool.
- Implement an integrated pest management program emphasizing silvicultural management of timber stands to prevent and control insect infestations and disease.
- Improve the Forest-wide age class and species diversity to improve forest health and wildlife habitat.
- Implement silvicultural practices on areas suitable for timber production to provide roundwood and sawtimber volume above the present level.
- Specifically design the timber sales on lands suitable for timber management to benefit other resource objectives.
- Perpetuate the aspen type.
- Eliminate the reforestation backlog by the end of 1985.
- Continue timber stand improvement in ponderosa pine stands through prescribed burning of Gambel oak to reduce competition.
- Determine if ponderosa pine sites now designated as not suitable for timber production can be reforested.

Soils and Water

- Protect soil and water productivity so that neither will be significantly or permanently impaired.
- Protect streams, lakes, riparian areas, and other bodies of water through management activities.
- Improve water quality by allowing those watershed presently below water quality standards to recover.
- Increase water yield through land treatment measures consistent with other resource objectives and water quality standards.

Minerals

- Encourage mineral exploration, development and extraction consistent with management of surface resources.
- Protect surface resources and environmental quality in accordance with laws and regulations.

Lands

- Provide for increased opportunities for exchange of National Forest Systems lands.
- Pursue acquisition of necessary rights-of-way to facilitate public access to National Forest System lands.

Facilities

- Manage the transportation system for increased cost-effectiveness and efficiency.
- Provide for a slight increase of maintained road mileage but maintain approximately one-third of the mileage only to protect the road investment and surrounding resources, and close to public use.
- Retain three-fourths of the present acreage in unroaded or low-roaded densities.
- Provide for the reduction of total trail miles while emphasizing reconstruction on trail miles remaining.

Human and Community Development

- Provide the opportunity for economic growth of industries and communities dependent upon Forest outputs.
- Encourage equal employment opportunities for women, minorities, the elderly, and the handicapped.
- Provide the opportunity for community stability and cohesion within the Human Resource Units to remain in productive harmony with the activities on the San Juan National Forest.
- Provide the opportunity for human resource programs that assist the disadvantaged with employment opportunities.
- Encourage the Volunteers in the National Forest Program to enhance Forest Service activities.

Protection

- Provide a cost-effective level of fire protection to minimize the combined costs of protection and damages, and prevent loss of human life.
- Provide air quality compatible with federal and state laws.
- Prevent and control insect and disease infestations where feasible and when attainment of management objectives are threatened.

OBJECTIVES

See preceeding Table IIIa-1 (blue pages). Table IIIa-1 supercedes Table III-1, Forest Plan, pages III-7 through III-9. The objectives are the basis for the management requirements listed in the Forest and Management Area Direction section which follows.

MANAGEMENT REQUIREMENTS

The management requirements in the Forest Direction section set the baseline conditions that must be maintained throughout the Forest in carrying out this Forest Plan. They establish the environmental quality requirements, natural and depletable resource requirements, and mitigating measures that apply to all areas of the Forest. Any necessary additions to them are included in the management requirements for the individual management area. The management requirements listed in the Management Area Direction section are applied in addition to those in this section. Substantive changes which alter the intent of these management requirements many not be made without amending or revising the Forest Plan. Editorial and other minor modifications to these management requirements which do not alter their intent may be made without amending or revising the Forest Plan.

Management requirements are presented in three columns: Management Activities, General Direction Statements, and Standards and Guidelines.

Management Activities are work processes that are conducted to produce, enhance, or maintain levels of outputs, or to achieve administrative and environmental quality objectives. Management Activities are identified by a code number and title defined in the Management Information Handbook (FSH 1309.11) dated July 1980. In some cases, management activities were grouped under one activity when it was not appropriate to develop separate requirements. National Forest System lands will be managed to comply with Laws, Regulations, Executive Orders, direction in the Forest Service Manual, and Regional Acceptable Work Standards.

General Direction Statements specify the actions, measures, or treatments (management practices) to be done when implementing the management activity, or the condition expected to exist after the general direction is implemented.

Standards and Guidelines are quantifications of the acceptable limits within which the general direction is implemented.

Management requirements included in overall Forest Direction are detailed on pages III-11 through III-84. Identification numbers shown in parentheses following each General Direction and Standard and Guideline Statement are intended to facilitate future tiering to the Forest Plan and final EIS. Users and reviewers of the Plan will find these identification numbers useful for cross-referencing and identification of mitigating measures.

NOTE

PAGES III-7 THROUGH III-10

ARE INTENTIONALLY MISSING

FROM THIS DOCUMENT

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Maintain structural diversity of vegetation on units of land 5,000 to 20,000 acres in size, or fourth-order watersheds, that are dominated by forested ecosystems. (0061) (FDR)	a. Maintain or establish a minimum of 20 percent of the forested area within a unit to provide vertical diversity. (6030) (FDR) b. Maintain or establish a minimum of 30 percent of the forested area within a unit to provide horizonal diversity. (6031) (FDR) c. In forested areas of a unit, 5 percent or more should be in old-growth and 5 percent or more should be in grass/forb stages. (6032) (FDR) d. In forested units, create or modify created openings so they have a Patton edge-shape index of at least 1.4 and have at least a medium-edge contrast. (6033) (FDR)
	02 Retain existing medium- or high-contrast edges within forested diversity units. (0060) (FDR)	
	03 If medium-contrast edges are created in units dominated by grassland or shrubland, create openings with Patton edge-shape index of at least 1.4. Manage unmanipulated plant communities to reach late seral stages. (0288) (FDR)	a. Maximum size of individual treated areas is 500 acres. (6237) (FDR)
	04 In forested diversity units, maintain at a minimum on each treated area, an average of 20-30 snags (in all stages of development) per 10 acres, well distributed over the diversity unit. (0405) (FDR)	a. Provide at a minimum, an average of 6-10 snags per 10 acres of the following minimum diameters (where biologically feasible): -Ponderosa Pine, Douglas-fir and spruce-fir: 10 inches dbh.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:

-Aspen and Lodgepole pine: 8 inches dbh.
(6021) (FDR)

b. Retain an average length per acre of down-dead logs (where biologically feasible) of the following minimum diameters:

-Ponderosa Pine, Douglas-fir and spruce-fir - 12 inch diameter
50 linear feet/acre.
-Aspen and Lodgepole pine - 10 inch diameter
33 linear feet/acre.
(6022) (FDR)

05 Manage aspen for retention wherever it occurs, unless justified by one of the following:

a. Conversion of determinate aspen to conifers, or shrub-or grass/forb seral stages for wildlife, esthetic, recreation, transportation, or watershed purposes.
b. Conversion of determinate aspen to conifers on sites with high site index for conifers, in conjunction with a high demand for softwood; or
c. Areas of aspen which are larger than are needed for wildlife or esthetic purposes.

(0286) (FDR)

06 If determinate aspen stands are managed for regeneration, treat contiguous areas no larger than 40 acres, unless larger areas are needed to protect aspen regeneration or prevent decadence. Treat entire clones. Indeterminate (climax) aspen stands can be converted to other cover types if needed to meet other objectives.
(0287) (FDR)

07 Use firewood gathering as a means of obtaining desired diversities of oakbrush.

(0002SJ) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Wild and Scenic River Management (F02)	01 Protect river segments that have been determined eligible for potential addition to the National Wild and Scenic Rivers system from activities which could diminish or change the free-flowing character, water quality, or the scenic, recreational, fish and wildlife, and other values which make the river eligible for designation. a. Request that Federal lands which constitute the bed or bank, or which are within one-quarter mile of either bank, be temporarily withdrawn from appropriation and entry under the mining laws. Withdrawal should continue until the river segment is: a) found to be ineligible b) not recommended for inclusion in the National system , or c) added to the system by Act of Congress. b. Safeguard the values of the river area by appropriate conditions and stipulations in leases, permits, and licenses, including prospecting, issued under terms of the mineral leasing laws. c. Extraction of salable, common-variety minerals from the river or the study area shall not be authorized until the study is complete and recommended actions are enacted. d. Prohibit construction of roads within the river study area if it would have direct and adverse effects on the values which make the river eligible for potential inclusion into the system. e. Maintain current motorized access character and avoid any changes to the potential wild and scenic river classification. f. Maintain free-flowing characteristics and water quality during the study and Congressional review period. g. Manage tree stands within the study area to maintain or enhance potential wild and scenic river values. Protect scenic values by sizing and shaping timber harvest units to achieve a natural appearance and to harmonize with the surrounding landscape. h. Prohibit special uses or permitted land uses which degrade or have directly adverse effects on values	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wild and Scenic River Management (F02)	which make the river segment eligible. i. None of this direction shall abrogate any existing privileges or contracts affecting National Forest System lands held by any private party without consent of said party. Activities affecting the applicability of U.S. mining and mineral leasing laws are subject to valid existing rights. (0004) (FDR)	
Cultural Resource Management (A02)	01 Protect, find an adaptive use for, or interpret all cultural resources on National Forest System (NFS) lands which are listed on the National Register of Historic Places, the National Register of Historic Landmarks, or have been determined to be eligible for the National Registers. (0039) (FDR) 02 Nominate or recommend cultural resource sites to the National Register of Historic Places by 1990 in the following priority: a. Sites representing multiple themes; b. Sites representing themes which are not currently on the National Register within the State; or c. Sites representing themes which are currently represented by single sites. (0045) (FDR)	a.. Follow direction in FSM 2360. (6310) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Cultural Resource Management (A02)	03 Protect and foster public use and enjoyment of cultural resources: a) Complete cultural resource surveys prior to any ground-disturbing project; b) Avoid disturbance of known cultural resources until evaluated and determined not significant; c) Collect and record information from sites where there is no other way to protect the properties; d) Issue antiquities permits to qualifying academic institutions or other organizations for the study and research of sites. e) Protect appropriate cultural resource properties for ceremonial/religious or other socio-cultural purposes by Native Americans and other cultural/ethnic groups. (0501SJ) (FDR)	
Visual Resource Management (A04)	01 Apply the Visual Management System to all National Forest System (NFS) lands. Travel routes, use areas and water bodies determined to be of primary importance are sensitivity level 1 and appropriate visual quality objectives are established according to the Visual Management System. (0360) (FDR)	a. Follow direction provided in FSM 2380 and FSH 2309.16 through FSH 2309.25. (6205) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Visual Resource Management (A04)	02 Rehabilitate all existing projects and areas which do not meet the adopted visual quality objective(s) (VQO) specified for each management area. Set priorities for rehabilitation, considering the following: a. Relative importance of the area and the amount of deviation from the adopted VQO. Foregound areas have highest priority; b. Length of time it will take natural processes to reduce the visual impacts so that they meet the adopted VQO; c. Length of time it will take rehabilitation measures to meet the adopted VQO; and d. Benefits to other resource management objectives to accomplish rehabilitation. (0363) (FDR)	
	03 Achieve enhancement of landscapes through addition, subtraction or alteration of elements of the landscape such as vegetation, rockform, water features or structures. Examples of these include: a. Addition of vegetation species to introduce unique form, color or texture to existing vegetation b. Vegetation manipulation to open up vistas or screen out undesirable views. (0364) (FDR)	
	04 Plan, design and locate vegetation manipulation in a scale which retains the color and texture of the characteristic landscape, borrowing directional emphasis of form and line from natural features. (0365) (FDR)	a. Meet the Visual Quality Objectives of retentiòn and partial retention one full growing season after completion of a project. Meet modification and maximum modification objectives three full growing seasons after completion of a project. (6259) (FDR) b. Determine sensitivity levels in accordance with FSH 2309.16, Agriculture Handbook No. 462,

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Visual Resource Management (A04)		Vol. 2, Chapter 1; Sensitivity Levels. (6272) (FDR)
	05 Blend soil disturbance into natural topography to achieve a natural appearance, reduce erosion and rehabilitate ground cover. (0366) (FDR)	
	06 Revegetate disturbed soils. In large projects, this may have to be done in stages. (0456) (FDR)	a. Revegetate disturbed soils by the following growing season. (6276) (FDR)
	07 Choose facility and structure design, color of materials, location and orientation to meet the adopted visual quality objective(s) for the management area. (0367) (FDR)	
Recreation Site Construction and Rehabilitation (A05 AND 06)	01 Provide appropriate development facilities where the private sector is not meeting the demand. (0441) (FDR)	
	02 Maintain cost-effective developed recreation facilities which complement non-Forest Service developments. (0442) (FDR)	
	03 Provide facilities which are accessible to handicapped persons. (0443) (FDR)	
	04 Facilities proposed for construction or reconstruction which lie within identified 100-year floodplains will be evaluated as to the specific flood hazards and values involved with the site. Viable alternatives will be thoroughly evaluated. (0728) (FDR)	a. Follow procedures and guidelines in FSM 2527.04c. (6632) (FDR)

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Recreation Site Construction and Rehabilitation (A05 AND 06)	05 Past and probable flood heights in inventoried 100-year floodplains will be posted to provide visible warnings to the using public about possible periodic flooding. (0730) (FDR)	a. Follow procedures and guidelines in FSM 2527.6. (6634) (FDR)
Management of Developed Recreation Sites (A08, 09, 11 & 13)	01 Design, construct and operate developed sites which are adjacent to or provide an access point into a wilderness to complement wilderness management objectives. (0350) (FDR)	
	02 Construct, reconstruct and maintain developed sites in accordance with the established Recreation Opportunity Spectrum (ROS) classification for the management area. (0348) (FDR)	a. Standards and Guidlines

ROS Class*	Site Development Scale
P	Not to exceed 1
SPNM	Not to exceed 2
SPM	Not to exceed 2
RN	Class 3 or 4
R	Class 3 or 4
U	Class 5

* P = Primitive
SPNM = Semi-primitive non-motorized
SPM = Semi-primitive motorized
RN = Roaded Natural
R = Rural
U = Urban
FSM 2331.47
(6193) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Management of Developed Recreation Sites (A08, 09, 11 & 13)	03 Manage development scale 3 and 4 sites for full service when at least one of the following are met: a. A campground is designated as a fee site; b. More than 20 percent of theoretical capacity is being utilized; c. A group campground or picnic ground has a reservation system and/or user fee; or d. The site is a swimming site, a boating site with a constructed ramp, or a staffed visitor information center. (0349) (FDR)	a. FSM 2331.47 (6652) (FDR)
Dispersed Recreation Management (A14 and 15)	01 Provide a broad spectrum of dispersed recreation opportunities in accordance with the established Recreation Opportunity Spectrum (ROS) classification for the management area. (0351) (FDR)	
	02 Close or rehabilitate dispersed sites where unacceptable environmental damage is occurring. (0040) (FDR)	a. Close sites that cannot be maintained in Frissell Condition Class 1, 2, or 3 (Campsite Condition, Frissell, S.S.; Journal of Forestry August 1978). (6023) (FDR) b. Rehabilitate sites that are in Frissell condition class 4. (6197) (FDR)
	03 Manage dispersed recreation activities to not exceed the established ROS PAOT/acre capacity. Manage use of trails in dispersed areas to not exceed the established PAOT/mile of trail guidelines. (0352) (FDR)	a. Standards and Guidelines: - - - - - - - - - - - - - - - - - Recreation use and capacity range during the snow-free period (PAOT/acre): - Trail use and capacity range (PAOT/mile of trail): ---------- Capacity Range

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES			
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		Use Level	Very Low	Low	Moderate	High
		ROS class - Primitive				
		On Trails PAOT/Mile	0.5	1.0	2.0	3.0
		Area wide PAOT/acre	.001	.002	.007	.025
		ROS Class - Semi-Primitive Nonmotorized				
		On Trails PAOT/mile	2.0	3.0	9.0	11.0
		Area-wide PAOT/acre	.004	.008	.05	.08
		ROS Class - Semi-Primitive Motorized				
		On Trails PAOT/mile	2.0	3.0	9.0	11.0
		Area-wide PAOT/acre	.004	.008	.05	.08
		ROS Class - Roaded Natural				
		On Trails PAOT/mile	-	-	-	-
		Area-wide PAOT/acre	.04	.08	1.2	2.5
		ROS Class - Rural				
		On Trails PAOT/mile	-	-	-	-
		Area-wide PAOT/acre	.5	.8	5.0	7.5

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biophysical resources will occur. - * VERY LOW applies to alpine. LOW applies to rock, mtn. grass, and clearcuts 1-20 years old. MODERATE applies to LP size class 9, mtn. grass, PP size class 9,8 and 7, DF size class 9,8 and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old. HIGH applies to SF size class 9 and 8, LP size class 8 and 7, Aspen size class 8 and 7 and clearcuts 20-80 years old. (6195) (FDR)
	04 Prohibit camping within a minimum of 100 feet from lakes and streams unless exceptions are justified by terrain or specific design which protects the riparian and aquatic ecosystems. (0353) (FDR)	
	05 Manage resource activities and facilities in accordance with the Regional Acceptable Work Standards. (0391) (FDR)	a. FSM 1310 R2 ID No. 1 7/22/82 (6194) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Recreation Management (Private and Other Public Sector) (A16)	01 Ensure that permitted private and public sector sites on Forest Service lands which are adjacent to, or provide an access point into, a wilderness complement wilderness management objectives. (0457) (FDR)	
Wilderness Area Management (B02)	01 Do not provide interpretive facilities at cultural resources sites, nor restore or enhance cultural resources for recreation purposes. (0172) (FDR)	
	02 Provide opportunities for human isolation, solitude, self-reliance and challenge while traveling cross-country and on system trails. (0191) (FDR)	
	03 Utilize a permit system to manage use levels and patterns during the summer use period based upon the following criteria: a. When acceptable use levels, as specified in the individual prescriptions, are exceeded during 20 percent of the summer use season, or b. When acceptable capacities, as specified in the individual prescriptions, in primitive or pristine management areas are exceeded on 10 percent or more of the days during the summer use season. c. Apply a permit system to an entire wilderness, not just impacted portions of a wilderness. (0192) (FDR)	
	04 Do not impose party-size limits during traditionally light-use seasons or during fall hunting seasons unless necessary to prevent unacceptable levels of change to the biological and physical resources. (0193) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wilderness Area Management (B02)	05 Maximum party-size limit for the summer use period is 25 people and/or recreational stock. Party size limits less than 25 people and/or recreational stock will be established where biological and physical resource capability cannot support that level of use. Party sizes established for protection of biophysical resources will set limits for both people and recreational stock. Parties larger than established limits may be allowed under permit on a case-by-case basis when compatible with other wilderness management objectives. (0194) (FDR)	
	06 Prohibit competitive contest events, group demonstrations, ceremonies, and other similar events. (0209) (FDR)	
	07 Prohibit dogs, or require them to be physically controlled on a leash. Exceptions will be made for permittee's working dogs, and for hunting dogs while hunting during legal seasons. (0202) (FDR)	
	08 Prohibit recreational stock along lake shores and streambanks except for watering and through-travel. (0204) (FDR)	
	09 Require users camping overnight with recreational stock to carry cubed, pelleted, or rolled feed and/or certified weed-free hay where grazing is prohibited. (0176) (FDR)	
	10 Control overnight grazing of recreational stock in alpine and Krummholz ecosystems according to use standards in Management Activity D02, Forest Direction. (0206) (FDR)	a. Base range condition on the standards in Range Analysis Handbook (FSH 2209.21). (6156) (FDR) b. Allowable soil disturbance criteria: 20% maximum disturbance on ranges with good-excellent soil stability condition on 0-15% slopes. 15% maximum disturbance on ranges with fair soil stability conditions on slopes less than 15% and good

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wilderness Area Management (B02)		or better soil stability conditions on slopes of 16-25% 10% maximum disturbance on ranges with fair soil stability conditions on slopes of 16-25%, and good soil stability conditions on slopes of 26-45%. (6280) (FDR)
	11 Prohibit new range improvement structures other than corrals, fences or water developments essential to sustain current permitted numbers. (0221) (FDR)	
	12 Implement revegetation only for rehabilitation of areas in less than "fair" range condition based upon their natural potential. Use only native species for revegetation. Implement only where natural vegetation possibilities are poor, and only where degradation was due to human activities. (0177) (FDR)	a. Base range condition on the standards in Range Analysis Handbook (FSH 2209.21). (6156) (FDR)
	13 Permit fish and wildlife research and management utilizing guidelines adopted by the International Association of Fish and Wildlife Agencies (FSM 2323.3). (0179) (FDR)	
	14 See Mining Law Compliance and Administration and Minerals Management Activities in Forest Direction for minerals direction. (0476) (FDR)	
	15 Maintain or enhance the uniqueness and values of the wilderness resource using prescribed fires originating from unplanned ignitions except when wildfires threaten human life, lands of other ownership, downstream values, off-site resources, or escape from the wilderness. (10048J) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wilderness Area Management (B02)	16 Confine, contain, or control wildfires which threaten human life, lands of other ownership, off-site resources, downstream values, escape from the wilderness, or are not being managed as prescribed. (1005SJ) (FDR)	a. Suppression action will be taken on natural fires occurring in the Florida River Municipal Watershed Fire Management Unit to restrict fire size to less than 250 acres. (6801SJ) (FDR)
	17 Use methods and equipment in fire suppression which will least alter the landscape or disturb the land surface. Utilize natural barriers such as vegetation type changes and non-combustible land features to restrict wildfire spread. (1006SJ) (FDR)	
	18 Dozers may be used within wilderness when there is imminent threat to human life, property of other ownership, or to escape from the wilderness. Any other use of dozers for fire control must be approved by the Regional Forester. (1007SJ) (FDR)	
	19 Locate fire camps outside wilderness when practical. If located within wilderness, avoid the alpine zone. (1008SJ) (FDR)	
	20 Reclaim areas disturbed as part of fire control activities to meet the visual quality objective of retention. (1009SJ) (FDR)	
	21 Protect air quality related values from adverse effects from air pollution. (0188) (FDR)	a. See criteria and standards in FSM 2120. (6286) (FDR)
	22 Control natural insect or disease outbreaks in wilderness only when justified by predicted loss of resource values outside of wilderness. Conduct analysis in accordance with FSM 3430. (0190) (FDR)	

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wilderness Area Management (B02)	23 Control problem animals on a case-by-case basis in cooperation with other agencies (FSM 2610) using methods directed at the offending animal but which present the least risk to other wildlife, and/or visitors. (0180) (FDR)	
Wildlife and Fish Resource Management (C01)	01 Where present, the following species are Management Indicator Species: -Deer; -Elk; and -All Federally-listed endangered or threatened plant and animal species. (0458) (FDR)	
	02 In addition to the above, use indicator species that represent the following categories: a. Riparian area dependent species; b. Wetland dependent species; c. Species dependent on either climax plant communities or one seral stage of a plant community or communities (forested land and rangeland); d. Tree cavity-dependent species; e. Game fish; f. Unique habitats for which there are dependent species (cliff, talus, cave); g. Small game species; h. Species dependent on multi-storied tree stands by commercial forest cover type; and i. Species which have particular scientific, local, or national interest, and species needing special management to prevent Federal listing as threatened or endangered. (0459) (FDR)	
	03 Maintain habitat for viable populations of all existing vertebrate wildlife species. (0289) (FDR)	a. Habitat for each species on the forest will be maintained at least at 40 percent or more of potential. (6289) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife and Fish Resource Management (C01)	04 Establish elk, moose, bighorn sheep, and threatened and endangered species on sites that can supply the habitat needs of the species and the population levels and distribution agreed to with the States (FSM 2610). (0461) (FDR)	
	05 Manage waters capable of supporting self-sustaining trout populations to provide for those populations. (0290) (FDR)	
	06 Manage and provide habitat for recovery of endangered and threatened species as specified in the Regional Forester's 1920 (2670) letter dated June 25, 1982. (0740) (FDR)	
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 Use both commercial and noncommercial silvicultural practices to accomplish wildlife habitat objectives. (0051) (FDR)	a. In forested areas, maintain deer or elk hiding cover on 60 percent or more of the perimeter of all natural openings, all created openings and along at least 75 percent of the edge of arterial and collector roads and 40 percent along streams and rivers. Not more than one half of the hiding cover can be contiguous to another portion of the hiding cover. Along streams and rivers in addition to hiding cover, 20 percent or more of the edge must be in thermal cover. (6188) (FDR) b. In diversity units dominated by forested ecosystems, maintain a minimum of 40 percent of the diversity unit in deer or elk hiding cover. This hiding cover should be well distributed over the unit. Maintain 20 percent of the diversity unit in thermal cover (winter or spring-summer). Hiding cover can be used to meet thermal cover requirements also, if they indeed coincide biolog-

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)		ically. (6312) (FDR)
		c. In diversity units dominated by non-forested ecosystems, maintain deer and elk hiding cover as follows: % of Unit Forested — % of Forested Area In Cover 35-50 — at least 50% 20-34 — at least 60% less than 20 — at least 75% These levels may be exceeded temporarily during periods when stands are being regenerated to meet the cover standard, or to correct tree disease problems, in aspen stands, or where windthrow or wildfire occurred. Maintain hiding cover along at least 75 percent of the edge of arterial and collector roads, and at least 60 percent along streams and rivers, where trees occur. (6660) (FDR)
		d. Alter age classes of browse stands in a diversity unit, no more than 25 percent within a ten-year period. (6146) (FDR)
	02 Improve habitat capability through direct treatments of vegetation, soil, and waters. (0337) (FDR)	
	03 Conduct habitat improvement projects jointly or cooperatively funded with the States. (0339) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)	04 Maintain edge contrast of at least medium or high between tree stands created by even-aged management. (0448) (FDR)	a. Contrast by Age Class is:

Contrast

Age Class*	OG	M	P	SSS	GF	Shr	Gra
OG	-	L	M	H	H	M	H
M	L	-	M	M	H	M	H
P	M	M	-	M	H	M	H
SSS	H	M	M	-	L	L	L
GF	H	H	H	L	-	M	L
Shr	M	M	M	L	M	-	M
Gra	H	H	H	L	L	M	-

* OG = Old Growth
M = Mature
P = Poles
SSS = Shrub-seedling-sapling
GF = Grass-forb
Shr = Shrubland
Gra = Grassland

H = High contrast
M = Medium contrast
L = Low contrast
(6265) (FDR)

Wildlife and Fish Cooperation With Other Agencies (G12)	01 Manage animal damage in cooperation with the State Wildlife Agencies, Fish and Wildlife Service, other appropriate agencies, and cooperators to prevent or reduce damage to other resources and direct control toward preventing damage or removing only the offending animal. (0097) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife and Fish Cooperation With Other Agencies (C12)	02 Allow denning or aerial gunning only for the purpose of animal damage control and under the following conditions: a. Methods are specified in the Forest Animal Control Plan; b. Denning and aerial gunning is done by an authorized individual; and c. The permit is issued by the State for aerial gunning. (0098) (FDR)	
Range Resource Management (D02)	01 Provide forage to sustain local dependent livestock industry as well as wildlife populations agreed to in Statewide Comprehensive Wildlife Management Plans for National Forest System lands. (0055) (FDR)	
	02 Remove livestock for the remainder of the grazing season from allotments managed under a continuous grazing system when further utilization on key areas will exceed allowable use criteria for the season. (0057) (FDR)	
	03 Manage livestock and wild herbivores forage use by implementing allowable use guides. (0058) (FDR)	a. Livestock and wild herbivores allowable forage use by grazing system and range type are: 1. Rest Rotation System: a. Use by range type: -Mainly seed Reproduction: (Bunchgrass, plains grassland, foothills shrub and alpine range types): 50-60 percent on heavy use pastures. Up to 45 percent on light use pastures. -Mainly vegetation reproduction (meadow, sandhill prairie, bluegrass bottoms, and aspen range types):

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		Bluegrass: maximum up to 80 percent; others, 55-65 percent on heavy use pastures, 40-50 percent on light use pastures. -Wild herbivores use during spring in rest-pastures will not exceed 25%. b. Allowable soil disturbance or recovery criteria: Soil and vegetation condition must be restored to at least the pre-treatment condition by the return to the same point in the grazing cycle. 2. Deferred Rotation System: a. Use by range type: -Mainly seed Reproduction: 40-50 percent on all pastures. -Mainly vegetation reproduction: 45-55 percent on all pastures. b. Allowable soil disturbance or recovery criteria: Soil and vegetation conditions must be restored to at least the pre-treatment condition by the return to the same point in the grazing cycle. 3. Rotation System:

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		a. Use by range type: -Mainly seed Reproduction: Max. of 50 percent on last used pastures; Max. of 40 percent on first used pasture. -Mainly vegetation reproduction: Max. of 55 percent on last used pasture. Max. of 45 percent on first used pasture. b. Allowable soil disturbance or recovery criteria: Same as deferred rotation system above. 4. Continuous System (Grazing same time and place every year): -Mainly seed Reproduction:

Season	Use by Condition Class on Key Area: Good and Excellent	Fair	Poor	Very Poor
Full Grazing Season or Spring	31-40%	21-30%	11-20%	0-10%
Summer	36-45%	26-35%	11-25%	0-10%
Fall	46-	31-	16-	0-

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Range Resource Management (D02)

and/or Winter	55%	45%	30%	15%

-Mainly vegetation reproduction:

Same as primary seed reproduction except increase utilization by 10% on bluegrass.

Allowable soil disturbance:

20% maximum disturbance on ranges with good-excellent soil stability condition on 0-15% slopes.

15% maximum disturbance on ranges with fair soil stability condition on less than 15% slopes, and on good or better soil stability condition on 16-25% slopes.

10% maximum disturbance on ranges with fair soil stability condition on 16-25% slopes, and good or better soil stability condition on 26-45% slopes.

5. Alternate Years System:

a. Use by range type on key areas:

-Mainly seed Reproduction:

Condition Class on Key Area	Use
Good-Excellent	51-60%
Fair	36-50%
Poor	21-35%
Very Poor	0-20%

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		-Mainly vegetation reproduction: Condition Class on Key Area — Use Good-Excellent — 56-65% Fair — 41-55% Poor — 31-40% Very Poor — 0-30% Bluegrass 80% on good or better condition and same proper use percent for fair and lower as above. Soil disturbance criteria is same as for continuous grazing. (6041) (FDR)
	04 Achieve or maintain satisfactory range conditions on all rangelands. (0499) (FDR)	
	05 Treat noxious farm weeds in the following priority: a. Leafy spurge and Russian and spotted knapweed; b. Invasion of new plant species classified as noxious farm weeds; c. Infestation in new areas; d. Expansion of existing infestations of Canada and musk thistle, and other noxious farm weeds; and e. Reduce acreage of current infestation. (0096) (FDR)	
Range Improvement and Maintenance (D03, 04, 05 and 06)	01 Structural range improvement should be designed to benefit wildlife and livestock. (0416) (FDR)	a. Structural improvements and maintenance will be in accordance with FSH 2209.22-R2. (6277) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Silvicultural Prescriptions	01 Provide for wildlife habitat improvement and enhancement of other renewable resources in Sale Area Improvement Plans. (0014) (FDR)	
	General:	
	*** 02 The silvicultural prescription will consider integrated pest management and long term forest health. Pests include insect, disease, animals and vegetation. Protective measures should be integrated into silvicultural treatment objectives where conditions exist or are anticipated which may cause unacceptable damage or reductions in tree stocking or growth.	
	03 The preference given to one commercial species over another during timber harvest or other silvicultural activities should be based on: a. application of economic principles' b. long term stand health and vigor, including potential insect and disease problems, c. needs for biological diversity and d. needs for wildlife habitat or other resource considerations.	
	04 Where small stands of aspen are found as inclusions in management areas, management of these aspen stands will be included in site specific silvicultural prescriptions. In general, strong consideration should be given to maintenance of these inclusions where practical. ***	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions	*** 05 Vegetation management objectives identified in silvicultural prescriptions should be defined in terms of the desired future condition of the forest vegetation within the project area: a. following the proposed treatment b. through the eventual regeneration of the treated vegetation. Identification of the desired future condition of important vegetative communities is key to successful achievement of integrated resource management. 06 The landscape is the primary unit of analysis for silviculture. A landscape is broadly defined here as an association of landforms such as an order IV watershed (diversity unit) or a distinct landform such as a mesa. Landscapes frequently consist of a variety of vegetative communities, displaying varying degrees of forest structural diversity. 07 Tailor the silvicultural prescriptions to the characteristics of each individual landscape. The following three general kinds of landscape are defined in terms of forest structure. They represent discrete examples on a continuum of landscape conditions: Open landscapes: These landscapes are typified by relatively open forests interspersed with numerous large openings. These landscapes are a result of natural ecological variability and/or past silvicultural activities. Meadows, high elevation grasslands, riparian areas, and numerous forest stands are scattered throughout the landscape. ***	

*** Denotes change from original Plan.

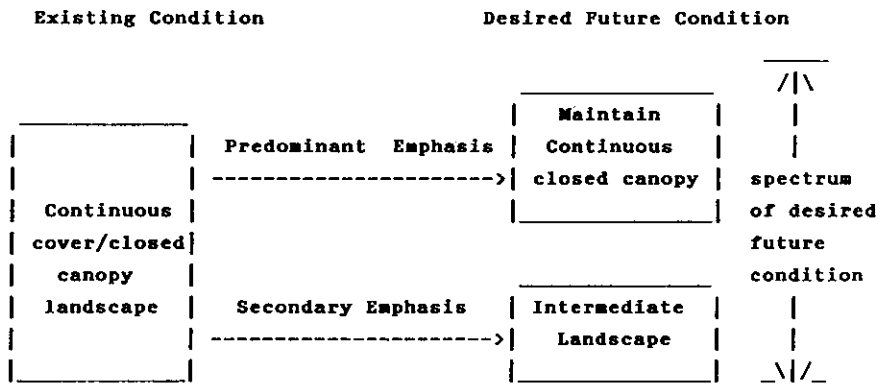
MANAGEMENT ACTIVITIES		GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions	***	Continuous closed canopy landscapes: Landscapes dominated by continuous high canopy forest. Typically made up of mature forests with few meadow or wetland openings in the landscape. These landscapes generally display more or less continuous forest cover and distribution over a large expanse. Intermediate forest landscapes: Lying between the open and continuous forest cover landscapes is a kind which has the characteristics of both present within the same watershed or landform. These landscapes typically display a mosaic of vegetative communities which include open and closed canopy forests, meadows and wetlands. Large and small openings are commonly interspersed with forest communities in various successional stages. These landscapes generally contain a diverse mixture of even-aged and uneven-aged forests due to natural variability or past silvicultural treatment.	
	***		

*** Denotes change from original Plan.

CONTINUATION OF:
Silvicultural Prescriptions

*** DESIRED FUTURE CONDITION

08 For continuous cover/ closed canopy landscapes:



a. The desired future condition (predominant emphasis) for these continuous cover/ closed canopy landscapes will be one that emulates the current forest structure, providing for a landscape that maintains continuous high forest cover with small well interspersed openings. These landscapes will feature high within stand structural diversity (vertical diversity); providing additional horizontal diversity will be of lesser importance. Emphasize uneven-aged silvicultural systems to manage all but the aspen tree species, only breaking up the large expanses of forest where needed to prevent risk from insects, disease and wildfire, or where needed to provide plant communities used for wildlife forage. ***

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions	*** Where considered inappropriate to maintain the closed canopy landscape as a result of other resource management objectives, provide for a mix of uneven-aged and even-aged silvicultural activities that may gradually transform the landscape to one more closely resembling an intermediate landscape condition. Temporary openings will be larger and more abundant, and the landscape may display more horizontal diversity than currently exists. b. Where the silvicultural system being used is uneven-aged, harvest trees designated for timber production based on a "q" factor that will move the treated stand toward a desired distribution of size/age classes. Desired density will depend on existing stand and site characteristics, forest type, and other resource objectives. c. Where the silvicultural system being used for an area of the landscape is even-aged, harvest units should be such as to emulate the naturally occurring openings in the landscape. d. Alter large unbroken expanses of forests where needed to prevent insect, disease, and wildfire attack. e. Maintain some aspen stands in the landscape, even at the expense of spruce-fir or other late-successional stands. ***	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF: Silvicultural Prescriptions

*** 09 For open landscapes:

Existing Condition	Change agent	Desired Future Condition
Open	If landscape is naturally open / diverse ---------->	Open
Open	If current landscape is result of prev. mgt. act. ---------->	Intermediate

a. If the open landscape is the result of natural ecological site variability and is characterized by large permanent openings with well interspersed forest stands, emphasize uneven-aged silvicultural methods to maintain existing forested cover. Within stand structural (vertical) diversity will be high. Where it is more desireable for non-timber resources to maintain an even-aged stand structure (low within stand diversity) even-aged silvicultural methods may be used. Because of site characteristics, these open landscapes will continue to remain in an open landscape condition.

If the open landscape is the result of a recent natural disturbance or past silvicultural practices, emphasize silvicultural practices that gradually transform the open landscape to an intermediate landscape condition. The future landscape will be more vertically diverse and contain fewer and smaller temporary openings than currently.

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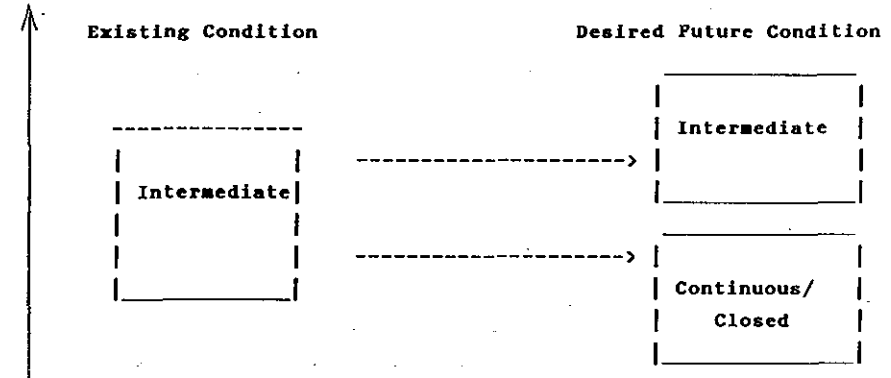
*** Denotes change from original Plan.

CONTINUATION OF:
Silvicultural Prescriptions *** 10 For intermediate landscapes:



a. For intermediate landscapes provide a desired future condition that either maintains the current (intermediate) extent and distribution of forest cover types and structural diversity, or gradually converts the landscape to one displaying more of the elements of a continuous closed canopy landscape. Apply both even and uneven-aged silvicultural systems to shape the patterns of growth of individual stands within the landscape so as to keep the entire mosaic relatively constant. Or where the desired future condition features more the elements of a continuous closed canopy landscape, place greater emphasis on uneven-aged systems (group and individual tree selection). Rotation ages and cutting cycles will vary in order to grow the trees to ages and in configurations typical of these intermediate landscapes.

b. Maintain some aspen stands in the landscape, even at the expense of spruce-fir or other late-successional stands.

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*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural Prescriptions

SILVICULTURAL SYSTEMS
General Direction

***

Landscape and Forest Type	Primary options	Secondary Options[1]
Continuous Closed Canopy Landscapes		
Ponderosa Pine	Single tree or Group Selection	Shelterwood, Seed Tree
Mixed Conifer	Single tree or Group Selection	Shelterwood, Seed Tree
Aspen	Clearcut	Group Selection
Engelmann Spruce / Subalpine-fir	Single Tree or Group Selection	Shelterwood, Seed Tree
Open Landscapes		
Ponderosa Pine	Single tree or group Selection	Shelterwood, Seed tree
Mixed Conifer	Single tree or Group Selection	Shelterwood, Seed tree
Aspen	Clearcut	Group Selection
Engelmann Spruce / Subalpine-fir	Single Tree or Group Selection	Shelterwood, Seed Tree
Intermediate Landscapes		
All Cover Types	Even-aged or Uneven-aged As appropriate from above	

[1] - Secondary options are available when the primary option is inapproriate

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		a. The appropriate harvest methods by forest cover type are:

Forest Cover Type	Appropriate Harvest Methods*	
	Even-aged	Uneven-aged
Interior Ponderosa Pine	SW,CC&S	GS & ST
Mixed Conifer	SW & CC	GS
Aspen	CC	--
Lodgepole pine	SW & CC	GS
Engelmann spruce-Subalpine fir	SW & CC	GS & ST

* The following abbreviations are used for harvest methods:

SW = Shelterwood
CC = Clearcut
GS = Group Selection
ST = Single Tree Selection
S = Seed Tree

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~Ponderosa pine sites which are presently non-stocked or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This determination does not apply to stands on slopes less than 30 percent which may become "non-stocked" in the future through management prescribed or natural means such as fire.~~

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

~~When a harvest method other than shelterwood is used in interior ponderosa pine, remove trees in units less than one acre in size.~~

~~* Mixed Conifer includes interior Douglas fir and white fir forest cover types.~~

***

(8001SJ) (FDR)

b. Utilization standards by National Forest for live and dead material are:

Species	Min. DBH.	Min Top Dia.	Length (Feet)	%Net of Gross
Live Trees - All Periods				
Sawtimber				
Conifers	7.0.	6.0	8	33-1/3
Aspen	7.0.	6.0	8	33-1/3
Products Other than Sawtimber	5.0.	4.0	6-1/2	----
Dead Trees - All Periods				
Sawtimber				
Conifers	8.0.	6.0	16	33-1/3*

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*** Denotes change from original Plan.

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Products Other than Sawtimber 5.0. 4.0 Variable * Considering all defects except weather checking. Prominent checks or splits are considered defects. (8002SJ) (FDR) c. Silvicultural Standards by Harvest methods: (These standards do not apply on areas managed for old

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions

growth.

1) Clearcut:

Forest Cover Type	Rotation Age	Growing Stock Level	Thinning Cycle
Mixed Conifer	100 to 180 yrs.	80 to 150	20 to 40 yrs.
Spruce-fir	100 to 180 yrs.	80 to 180	20 to 40 yrs.
Lodgepole Pine	90 to 140 yrs.	80 to 140	10 to 30 yrs.
Aspen	70 to 120 yrs.	NA	NA
Other	100 to 180 yrs.	80 to 120	20 to 40 yrs.

2) Two-Step Shelterwood:

Forest Cover Type	Rotation Age	Growing Stock Level	Thinning Cycle
PP, MC, and SF	90 to 180 yrs.	70 to 160	20 to 40 yrs.

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES		
CONTINUATION OF: Silvicultural Prescriptions		Lodgepole Pine	90 to 140 yrs.	80 to 120	20 to 30 yrs.
		Other	70 to more yrs.	60 to 120	20 to 30 yrs.
		First Cut (seed cut): Remove 30 to 70 percent of the Basal area or cut to Basal Area (BA) BA 25-80 for Interior Ponderosa Pine,			

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Mixed conifer and Spruce-fir; BA 20-40 for Lodgepole Pine BA 20-60 for other forest cover types
		Second cut (removal cut): Remove all overstory when regenerated stand meets minimum stocking standards.
		3) Three-step shelterwood: Rotation age, growing stock level and cutting cycle is the same as two-step shelterwood.
	*** ↑↓ ***	First Cut (preparatory cut): Remove 10 to 40 percent of the basal area or, Cut to BA 50-80 for Interior Ponderosa Pine, Mixed Conifer, and Lodgepole Pine. Cut to BA 50-80 for all other forest cover types.
		Second Cut (seed cut): Remove 40 to 50 percent of the remaining basal area or

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Cut to BA 40-80, 10 to 20 years after preparatory cut for Interior Ponderosa pine, Mixed conifer, and Spruce-fir; BA 20-40, 10 to 20 years after preparatory cut for Lodgepole pine: BA 20-50, 10 to 20 years

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions

after preparatory cut for other species.

Third Cut (removal cut):
Remove all overstory when regenerated stand meets minimum stocking standards.

4) Selection:

Forest Cover Type	Residual BA	Thinning Cycle
SF and MC	80 to 180	20 to 40 yrs.
Other	40 to 120	20 to 30 yrs.

*** ↕ ***

(8003SJ) (FDR)

d. To facilitate the control of soil erosion within acceptable tolerance:

1) Permit conventional logging equipment on slopes of less than 20 percent in shale capability areas and on slopes of less than 25 percent in hard sediment capability areas that have less tha 20 percent coarse fragments (gravel, cobble, stone) where soil surveys or site-specific soil data are unavailable.

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		2) Allow conventional logging equipment on slopes up to 40 percent where soil survey or site-specific soil data are available to design erosion mitigation needs. 3) Utilize high flotation equipment on slopes up to 60 percent or

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		cable and aerial systems on any slope. 4) For the named and correlated soils within the Piedra soil survey area, the following will apply: - Limit conventional logging equipment to slopes less than 30 percent on the following soil types: Adel loams, Grenadier loams, Muggins loams, Nunn loams and Pescar loams. - Limit conventional logging equipment to slopes less than 25 percent on the following soil types: Carracas loams, Goni sandy loams, Corta silt loams, Dunton loams, Greenough loams, Heflin loams, Hunchback clay loams, Juey silt loams, Limber loams, Mayoworth silt loams, Miracle loamy fine sands, Molas loams, Vasquez loams, Winifred clays and Woodrock silt loams.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		The above restrictions may be modified on the basis of more site specific soils information. (8004SJ) (FDR)
	*** 11 Clearcuts may be applied to dwarf mistletoe infected stands of any forest cover type. *** (0138) (FDR)	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	04 Assure that all even-aged stands scheduled to be harvested during the planning period will generally have reached the culmination of mean annual increment of growth. (0453) (FDR)	
	05 The maximum size of openings created by the application of even-aged silviculture will be 40 acres regardless of forest cover type. Exceptions are: a. Proposals for larger openings are subject to a 60-day public review and are approved by the Regional Forester; b. Larger openings are the result of natural catastrophic conditions of fire, insect or disease attack, windstorm; or c. The area does not meet the definition of created openings. (0017) (FDR)	a. Size of openings: Patch clearcuts: 1-10 acres Clearcuts : 10-40 acres (6073) (FDR)
	06 Design clearcuts to enhance natural regeneration. (2507SJ) (FDR)	a. Optimum clearcut size and design standards by forest cover types except for dwarf mistletoe infected stands: - Interior Ponderosa-Pine: Patch clearcut in units not exceeding one acre in size. - Mixed Conifer and Engelmann Spruce-Subapine Fir: Patch clearcut in units below 10 acres in size and no more than 400 feet in width for seed dispersal. - Aspen: Clearcut in blocks up to 40 acres. (8007SJ) (FDR)

CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)

07 Acceptable management intensity activities to determine harvest levels are:

Management Activity*	Engelmann Spruce-Subalpine Fir	Interior Ponderosa Pine	Lodgepole Pine	Interior Douglas-Fir and White Fir	Aspen	Other Pines	Hardwoods
Tree Improvement	X	X	X	N	N	N	X
Site Preparation	X	X	X	X	N	N	X
Reforestation							
Planting	X	X	X	X	O	N	X
Seeding	O	X	N	O	O	O	X
Natural Regeneration	X	X	X	X	X	X	X
Protection	X	X	X	X	N	N	X
Stocking Control (thinning):							
Pre-Commercial	X	X	X	X	O	X	X
Commercial	X	X	X	X	O	X	X
Salvage of Dead Material	X	X	X	X	X	N	X
Cutting Methods:							
Clearcut	X	X	X	X	X	N	X
Shelterwood	X	X	N	X	O	N	X
Selection	X	X	N	X	O	X	X

*Various combinations of these activities provide the acceptable range of management intensity for timber production (36 CFR 291.2(b)(2)).

X = Appropriate practice.
O = Not an appropriate practice.
N = Appropriate, but not a standard practice. May be acceptable where justified.

(0019) (FDR)

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	08 Make Christmas trees, firewood and other roundwood products available in areas where other resource objectives can be accomplished through commercial sales or personal use. (2502SJ) (FDR)	
Reforestation (E04)	01 Establish a satisfactory stand on cutover areas, emphasizing natural regeneration within five years after final harvest except: a. For permanent openings that serve specific management objectives; b. When other resource objectives dictate a different period such as spruce-fir clearcuts where planting must occur within three years after harvest; ~~c. In those lodgepole pine stands where the period for natural regeneration should be extended up to seven years after clearcutting; and~~ d. When provided for otherwise in specific management prescriptions. (0013) (FDR)	~~a. Establish a seven-year regeneration period for lodgepole pine stands meeting the following criteria:~~ ~~(1) Natural regeneration is expected to provide satisfactory stocking within 7 years after cutting,~~ ~~(2) Establishment of trees is not impaired by competing vegetation, and~~ ~~(3) Maintenance of favorable site condition does not require additional site preparation.~~ ~~(6005) (FDR)~~ b. Minimum stocking standards by productivity and forest cover type.

Forest Cover Type	Site Prod. (Ft. 3/A/Yr.)	Planting* Densities (Trees/A)
Spruce-fir	85+	340-1000
	50-84	340-1000
	20-49	340-1000
Aspen	All	---
Mixed Conifer	85+	340-680
	50-84	340-680
	20-49	340-680
Lodgepole Pine	85+	360-680
	50-84	360-540
	20-49	300

Amendment #12 removes the seven year regeneration option for lodgepole pine (9/1/91)

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Reforestation (E04)		

Ponderosa Pine	85+	680-1000
	50-84	680-1000
	20-49	680-1000

Forest Cover Type	Site Prod. (Ft. 3/A. Yr.)	Seedling Stocking /Acre Min.	Desir. *
Spruce-Fir	85+	200	340
	50-84	200	280
	20-49	150	155
Aspen	All	300	600
Mixed Conifer	85+	205	310
	50-84	205	255
	20-49	190	240
Lodgepole Pine	85+	245	340
	50-84	200	280
	20-49	150	250
Ponderosa Pine	85+	205	310
	50-84	205	255
	20-49	190	240

Forest Cover Type	Site Prod. (Ft. 3/A. Yr.)	Percent of Plots or Transects That are Stocked Minimum	Desired
Spruce-fir	All	75	100
Aspen	All	75	100
Mixed Conifer	All	75	100
Lodgepole Pine	All	75	100
Ponderosa Pine	All	70	100

Forest cover Seedling Height

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Reforestation
(E04)

type	(inches) Minimum	Desired
Spruce-fir	3"	18"
Aspen	12"	45"
Mixed Conifer	3"	18"
Lodgepole Pine	3"	18"
Ponderosa Pine	3"	18"

* Lower densities are recommended to meet minimum stocking standards. Higher densities are recommended to meet desired stocking standards, with ample stock for selecting genetically superior trees.
  Minimum stocking standards are to be used where no precommercial cutting will be done, and only one harvest will be made to regenerate the stand.
* Desired stocking standards are to be used where at least one precommercial cut will be done followed by two sawlog harvests before the final cut is done. (Aspen will have only one final cut.)

(8005SJ) (FDR)

02 Do not apply final shelterwood removal cut until the desired number (as specified in Minimum Stocking Standards) of well-established seedling/acre are expected to remain following overwood removal.
(0142) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Reforestation (E04)	03 Use trees of the best genetic quality available which are adapted to the planting site when supplemental planting. (Reference FSM 2475) (0141) (FDR)	
Timber Stand Improvement (E05)	01 Utilize Christmas tree, firewood, and other roundwood opportunities through commercial sales and personal use to accomplish stocking controls. (2505SJ) (FDR)	
Riparian Area Management (F03)	01 Also see Management Prescription 9A for riparian area management. (0404) (FDR)	
	02 Design and implement activities in management areas to protect and manage the riparian ecosystem. (0401) (FDR)	a. Maintain all riparian ecosystems in at least an upper mid-seral successional stage based upon the R2 Riparian Ecosystem Rating System. (6147) (FDR)
	03 Manage riparian areas to reach the latest seral stage possible within the stated objectives. (0402) (FDR)	
	04 Prescribe silvicultural and livestock grazing systems to achieve riparian area objectives. (0403) (FDR)	
	05 Locate and construct arterial and collector roads to maintain the basic natural condition and character of riparian areas. (0087) (FDR)	
	06 Incorporate structures which provide for fish passage in all new roads and trails crossing perennial streams which support a fishery. (3001SJ) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Water Uses Management (F04)	01 Determine and obtain rights to instream flow volumes to protect and maintain stream channel stability and capacity and to accomplish any proposed increase in use or resource activity. (0009) (FDR)	
	02 Protest water right applications of others when such uses will lower streamflows below levels acceptable for National Forest uses and purposes. (0602) (FDR)	
	03 Special Use Permits, easements, rights-of-way, and similar authorizations for use of NFS lands shall contain conditions and stipulations to maintain instream or by-pass flows necessary to fulfill all National Forest uses and purposes. (0604) (FDR)	
Water Resource Improvement and Maintenance (F05 and 06)	01 Maintain instream flows and protect public property and resources. (0010) (FDR)	
	02 Improve or maintain water quality to meet State water quality standards. However, where the natural background water pollutants cause degradation, it is not necessary to implement improvement actions. Short-term or temporary failure to meet some parameters of the State standard, such as increased sediment from road crossing construction or water resource development may be permitted in special cases. (0005) (FDR)	
	03 Develop a schedule of water yield treatments within fourth-order watersheds which attains desired water yield increases while maintaining stream channel stability. (0606) (FDR)	a. Provide mitigation measures necessary to prevent increased sediment yields from exceeding "threshold limits" (as determined by "State of the Art" modeling ^HYSED! or actual measurements) identified for each (fourth-order) watershed. (6320) (FDR) b. The total percent of each fourth-order watershed that could

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Water Resource Improvement and Maintenance (F05 and 06)		be in a clearcut condition, including roads, is shown below in terms of the perennial stream riparian capability area type (see Planning Criteria, Planning Action Two for definitions) at the mouth of the major stream or streams in the watershed.

Riparian Capability Area Types	Percent Clear-Cut
H3N, I2N, I3N, E2M, E2N, E3N	35
M2N, H1M, H1N, H2M, H2N, I1N	25
M1M, M1M, M1N, S1N, S3N, E1M	20
S1M, S2N	15

The above restrictions may be modified on the basis of more detailed analyses of specific watersheds.

(8401SJ) (FDR)

	04 Rehabilitate disturbed areas that are contributing sediment directly to perennial streams as a result of management activities to maintain water quality and re-establish vegetation cover. (0676) (FDR)	a. Reduce to natural rate any erosion due to management activity in the season of disturbance and sediment yields within one year of the activity through necessary mitigation measures such as water-barring and revegetation. (6606) (FDR)
	05 Limit use of herbicides, insecticides, rodenticides, or other chemical agents as part of management activities to times and places where possible transport to or by surface water has a low probability of occurrence. Follow all label requirements concerning water quality protection. (0678) (FDR)	
Minerals Management General (G00)	01 Administer areas with producing sites and known reserves with consideration of ongoing and potential mineral activities. (0640) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management General (G00)	02 Avoid or minimize capital investments, such as developed recreation, in or adjacent to areas with known reserves and alienated mineral rights. (0642) (FDR)	
	03 In areas of actively producing sites or areas containing known reserves, consider only surface resource programs compatible with minerals activities. (0644) (FDR)	
	04 In areas of high to moderate potential for valuable mineral deposits, perform site-specific mineral evaluations prior to making substantial capital investments, such as recreational developments. (0646) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Mining Law Compliance and Administration (G01)	01 Prevent or control adverse impacts on surface resources in accordance with 36 CFR 228. a. Unclassified lands: Provide for reclamation of disturbed lands to achieve the planned uses specified in the Forest Plan, when those lands are no longer needed for mining operations. b. Designated Wilderness, Congressionally designated Wilderness Study Areas, and areas recommended for wilderness designation by RARE II on which Congressional action has not been completed: Provide for reasonable access of the type necessary to the purpose of proposed operations and for restoration of disturbed lands as near as practical to their natural condition when they are no longer needed for operations. c. Other classified lands not withdrawn from operations under the General Mining Laws: Such lands may include Research Natural Areas, National Recreation Areas, "RARE II" Further Planning Areas, Special Interest Areas such as scenic and geologic, National Historic Sites, or some other type of specific classification. The status of classified lands with respect to withdrawal must be checked before an operating plan can be approved. Provide for reasonable protection of the purposes for which the lands were classified and for reclamation of disturbed lands to a condition suitable for the purposes for which the lands were classified. (0025) (FDR) 02 Withdrawals must be for the purpose of protecting specific existing or proposed uses. Initiate actions for withdrawal from entry under the General Mining Laws when 36 CFR 228 and other applicable laws and regulations will not provide the opportunity for protection of surface resources and uses. (0026) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Mining Law Compliance and Administration (G01)	03 Review cases of suspected abuse of the mining laws such as occupancy of the land for purposes other than prospecting, mining and related operations. Initiate appropriate actions to resolve. First action should be administrative. Failure of such action requires examination of claims for validity, followed by appropriate contest proceedings or legal action. (0027) (FDR)	
Minerals Management-Oil, Gas and Geothermal (G02 and 04)	01 Withdrawals of lands from operations of the mineral leasing acts will be requested only in exceptional situations because Federal decisions on mineral disposals under these acts are discretionary on a case-by-case basis. (0029) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF: Minerals Management-Oil, Gas and Geothermal (G02 and 04)

02 Recommendations for or consent to issuance of leases or permits may include lands up to one-half mile within a "no lease" area, subject to no surface use or occupancy on the "no lease" lands. Forest Service (R-2) Supplement F to Form 3109-3, "Surface Use or Occupancy Stipulation," will apply to such "no lease" lands. "No lease" criteria appear under major land type headings below.

a) Unclassified Lands:

1) Forest Service authorization of geophysical prospecting will include terms and conditions controlling operating methods and times to prevent or control adverse impacts on surface resources and uses.

2) Recommendations for and consent to BLM issuance of leases and permits will include all current standard stipulations and the Regionally approved special stipulations that may be necessary for additional protection of specific surface resources and uses. Reclamation requirements will have the objective of returning disturbed lands to the planned uses. These standard and current Regionally-approved special stipulations are in Appendix H to this Forest Plan.

(a) Standard stipulations, in addition to those in the basic lease or permit document, are BLM Form 3109-3, "Stipulation for Lands Under Jurisdiction of the Department of Agriculture" and Forest Service (R-2) Supplement D to BLM Form 3109-3, "Surface Disturbance Stipulation."

(b) Special Region 2 Forest Service stipulations will be used as appropriate to the surface resource situation on the lands involved in a lease or permit. These stipulations are titled as supplements to Form 3109-3 and are listed below:

(1) Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulation." This stipulation notifies a lessee or permittee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management-Oil, Gas and Geothermal (G02 and 04)	(2) Forest Service (R-2) Supplement H to Form 3109-3, "Conditional No Surface Disturbance Stipulation." This stipulation notifies a prospective lessee or permittee that certain described conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage. (3) Forest Service (R-2) Supplement G to Form 3109-3, "Activity Coordination Stipulation." This stipulation notifies the lessee that surface values exist that are sensitive to high levels of activity. In such circumstances, the Forest Service may require that activities on the lease lands, when multiple leaseholds are involved, be conducted by a single operator, similar to the conduct of operations under a unitization agreement approved by the Minerals Management Service. An alternative approach would be joint Forest Service/Minerals Management Service approval of a coordinated plan of operations involving multiple operators. 3) Recommend against or deny consent to BLM for issuance of leases where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation ("no lease" lands). Negative recommendations or consent denials will be based on site-specific consideration of the following criteria: (a) Slopes steeper than 60 percent. (b) High erosion hazard rating. (c) High geologic hazard rating.	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management-Oil, Gas and Geothermal (G02 and 04)	(d) Low visual absorption capacity that prevents reclamation to established visual quality objective (VQO). (e) A conclusion by the Forest Service (FS) and/or the United States Fish and Wildlife Service (USFWS) that the action will jeopardize the survival or recovery of federally listed threatened and endangered (T&E) wildlife or plant species. (f) Intrusions upon the identified critical (USFWS) or essential (FS) habitat of a federally listed (T&E) wildlife or plant species or upon the plant or animal itself. (g) Intrusion upon the habitat of individual plant or animal species listed by a state as threatened or endangered. (h) Intrusion upon the habitat of individual plant or animal species identified by the Regional Forester as needing special management to prevent its need for listing as a threatened or endangered species. b) Designated Wilderness, Congressionally designated Wilderness Study Areas, and areas recommended for Wilderness in RARE II on which Congress has not taken final action: 1) Geophysical prospecting, when authorized, will be subject to terms and conditions insuring that operations will be done by methods and at such times that there will be no significant adverse impacts on surface resources. (a) Geophysical prospecting will be authorized on leased lands and on lands for which the Forest Service will recommend or consent to the issuance of leases and permits ("leasable" lands). (b) Geophysical prospecting may be authorized: (1) For "no lease" lands (see "c." following) adjacent to leased or leasable lands when the operator can show that geophysical	

CONTINUATION OF:
Minerals Management-Oil, Gas and Geothermal (G02 and 04)

information is necessary for exploratory drilling, or for field development on the leased/leasable lands in the event of a discovery of producible oil, gas or geothermal resources on leased lands.

(2) For "no lease" lands when the prospecting proponent can show that the geophysical information is necessary for extending subsurface interpretation from leased/leasable lands across "no lease" lands to other leased/leasable lands. The proponent must also demonstrate that the information can be gained in no other way without significant adverse impacts on surface resources.

2) Unless there is statutory language to the contrary, in which case the statutory provisions control, recommend or consent to BLM for issuance of leases where operations, including surface-based access, product transportation and other necessary ancillary facilities, will not cause irreversible and irretrievable damage to surface resources and where the lands disturbed can be restored as near as practical to natural conditions. In addition to all current standard stipulations, the following special Regional stipulation will be applied and is part of Appendix H to this Forest Plan:

Forest Service (R-2) Supplement R to Form 3109-3, "Wilderness Stipulation." This stipulation gives notice of the special nature of the lands involved; specifies the sequence of geophysical investigations and exploratory drilling, with air mobilization for the latter; and describes the conditions that must be met for surface access should a commercial discovery be made. The stipulation also provides for its automatic rescission and replacement should the Congress return the lands to non-wilderness management.

3) Recommend against or deny consent to BLM for issuance of leases where operational damages on surface resource, including the impacts of surface-based access, product transportation and ancillary facilities neces-

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management-Oil, Gas and Geothermal (G02 and 04)	sary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation ("no lease" lands). Negative recommendations or consent denials will be based on site-specific consideration of the following criteria: (a) Slopes steeper than 40 percent. (b) High erosion hazard rating. (c) High geologic hazard rating. (d) Low visual absorption capacity that prevents restoration as near as practical to established visual quality (VQO). (e) A conclusion by the Forest Service (FS) and/or the United States Fish and Wildlife Service (USFWS) that the action will jeopardize the survival or recovery of federally listed threatened or endangered (T&E) wildlife or plant species. (f) Intrusions upon the identified critical (USFWS) or essential (FS) habitat of a federally listed (T&E) wildlife or plant species or upon the plant or animal itself. (g) Intrusion upon the habitat of individual plant or animal species listed by a state as threatened or endangered. (h) Intrusion upon the habitat of individual plant or animal species identified by the Regional Forester as needing special management to prevent its need for listing as a threatened or endangered species. c) Classified lands other than Wilderness and related, as described in "2" foregoing, which are not by law or otherwise withdrawn from operations under the mineral leasing acts. Examples of such lands include Wild and Scenic River System, RARE II Further Planning Areas, National Recreation Areas, National Historic Sites, Natural Areas, Special Areas--such as geological, scenic and zoological, and some other specific classifications.	

CONTINUATION OF:
Minerals Management-Oil, Gas and Geothermal (G02 and 04)

1) Forest Service authorize geophysical and similar prospecting only when terms and conditions can be applied that will protect the purposes for which the lands were classified.

2) Recommendations for and consent to BLM for issuance of leases and permits will include all current standard stipulations and the current Regionally-approved special stipulations necessary to protect the purposes for which the lands were classified. Standard and special stipulations are in Appendix H to this Forest Plan.

See 1.b(1) under this Management Activity heading, foregoing, for the standard stipulations. Special stipulations to be applied as appropriate are:

(a) Forest Service (R-2) Supplement A to Form 3109-3, "Further Planning Area Stipulation." This stipulation applies to lands identified for further planning in the RARE II decision documents. It specifies the nature and extent of operations allowed and the conditions to be met for their approval.

(b) Forest Service (R-2) Supplement B to Form 3109-3, "Classified Area Stipulation." This stipulation applies to lands classified under 36 CFR 251.23 and 294.1 for specific management purposes. Because of the regulatory provisions, no use or occupancy inconsistent with the classification is permitted. This does not necessarily mean recommendation against or denial of consent to BLM for issuance of leases. The reason is that classified areas may be only small portions of large leaseholds.

(c) Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulations." This stipulation notifies a lessee or permittee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection.

(d) Forest Service (R-2) Supplement E to Form 3109-3, "Wild and Scenic Rivers System Stipulations."

FOREST DIRECTION

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management-Oil, Gas and Geothermal (G02 and 04)	This stipulation establishes operating conditions for lands under study by Congress for inclusion in the National Wild and Scenic Rivers System. It also provides for establishing appropriate operational controls should the lands be included in that system or should the lands not be added to the system.	

(e) Forest Service (R-2) Supplement H to Form 3109-3, "Conditional No Surface Disturbance Stipulation." This stipulation notifies a prospective lessee that certain described conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage.

(f) Forest Service (R-2) Supplement G to Form 3109-3, "Activity Coordination Stipulation." This stipulation notifies the lessee that surface values exist that are sensitive to high levels of activity. In such circumstance, the Forest Service may require that activities on the leased lands, when multiple leaseholds are involved, be conducted by a single operator, similar to the conduct of operations under a unitization agreement approved by the Minerals Management Service. An alternative approach would be joint Forest Service/Geological Survey approval of a plan of operations involving multiple operators.

3) Recommend against or deny consent to BLM for issuance of leases where operation damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation ("no lease" lands). Negative recommendations or consent denials will be based on site-specific consideration of the following criteria:

(a) Would operations destroy or irretrievably damage the characteristics or purposes for

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management-Oil, Gas and Geothermal (G02 and 04)	which the lands were classified? (b) Slopes steeper than 40 percent. (c) High erosion hazard rating. (d) High geologic hazard rating. (e) Low visual absorption capacity that prevents reclamation to established visual quality objective (VQO). (f) A conclusion by the Forest Service (FS) and/or the United States Fish and Wildlife Service (USFWS) that the action will jeopardize the survival or recovery of federally listed threatened or endangered (T&E) wildlife or plant species. (g) Intrusions upon the identified critical (USFWS) or essential (FS) habitat of a federally listed (T&E) wildlife or plant species or upon the plant or animal itself. (h) Intrusion upon the habitat of individual plant or animal species listed by a state as threatened or endangered. (i) Intrusion upon the habitat of individual plant or animal species identified by the Regional Forester as needing special management to prevent its need for listing as a threatened or endangered species. (3501SJ) (FDR)	
Minerals Management-Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	01 Withdrawals of lands from operations of the mineral leasing acts will be requested only in exceptional situations because Federal decisions on mineral disposals under these acts are discretionary on a case-by-case basis. (0029) (FDR)	

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management- Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	02 Withdrawals from disposal of common variety mineral materials are unnecessary. The Forest Service has total discretionary authority for such disposals. (0030) (FDR)	

CONTINUATION OF: Minerals Management- Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)

03 General direction for Unclassified lands, Designated Wilderness, and Classified lands other than Wilderness and related are:

a) Unclassified Lands:

1) Forest Service authorize common variety exploration and disposals under terms and conditions to prevent or control adverse impacts on surface resources and uses. The objective of reclamation requirements will be to return disturbed lands to the planned uses.

2) Recommendations for and consent to BLM for issuance of leases, permits, and coal exploration licenses will include all current standard stipulations and the Regionally-approved special stipulations that may be necessary for additional protection of specific surface resources. The objective of reclamation requirements will be to return disturbed lands to the planned uses. The standard and current Regionally-approved special stipulations are in Appendix H to this Forest Plan.

(a) Standard Stipulations, in addition to those in the basic lease, permit or license document, are BLM Form 3109-3, "Stipulation for Lands Under Jurisdiction of the Department of Agriculture," and Forest Service (R-2) stipulation, Supplement D to BLM Form 3109-3, "Surface Disturbance Stipulation."

(b) Special Forest Service, Region 2, Stipulations will be used as appropriate to the surface resource situation involved in a lease, permit or license. These stipulations are titled as supplements to BLM Form 3109-3 and are listed below:

(1) Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulations." This stipulation notifies a lessee, permittee or licensee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management- Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	(2) Forest Service (R-2) Supplement H to Form 3109-3, "Conditional No Surface Disturbance Stipulation." The usual application of this stipulation for minable minerals will be in exploration permits and licenses. The stipulation notifies a prospective lessee, permittee or licensee that certain described conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage.	

3) Recommend against or deny consent to BLM for issuance of leases, permits or coal exploration licenses where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation. Negative recommendations or consent denials will be based on consideration of the following criteria:

(a) Terrain as it affects waste dumps and tailings disposal--related to dump and tailing stability, adequate room for placement.

(b) Whether or not negative impacts on water quality are preventable.

(c) For surface-based access, product transportation and ancillary facilities necessary to operations; Slopes steeper than 60 percent; high erosion hazard; high geologic hazard.

(d) Low visual absorption capacity that prevents reclamation to established visual quality objective (VQO).

(e) A conclusion by the Forest Service (FS) and/or the United States Fish and Wildlife Service (USFWS) that the action will jeopardize the survival recovery of federally listed threatened

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management- Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	or endangered (T&E) wildlife or plant species. (f) Intrusions upon the identified critical (USFWS) or essential (FS) habitat of a federally listed (T&E) wildlife or plant species or upon the plant or animal itself. (g) Intrusion upon the habitat or individual plant or animal species listed by a state as threatened or endangered. (h) Intrusion upon the habitat of individual plant or animal species identified by the Regional Forester as needing special management to prevent its need for listing as a threatened or endangered species. (i) Application of the coal unsuitability criteria to lands proposed for coal leases (43 CFR 3461). b) Designated Wilderness, Congressionally-designated Wilderness study areas, and areas recommended for Wilderness in RARE II on which Congress has not taken final action. 1) Prospecting for and disposals of common varieties of mineral materials will not be authorized. 2) Coal mining in the National Wilderness Preservation System is prohibited by the Coal Leasing Amendments Act of 1975. Therefore, coal leasing and coal exploration licenses will not be authorized for any of the foregoing described lands. 3) Unless there is statutory language to the contrary, in which case the statutory provisions control, recommend, or consent to BLM for issuance of leases or permits where operations, including surface-based access, product transportation and other necessary ancillary facilities, will not cause irreversible and irretrievable damage to surface resources and where the lands disturbed can be restored as near as practical to natural conditions. In addition to all current standard stipulations, the special stipulation described below will be applied; this stipulation is part of Appendix H to this Forest Plan.	

FOREST DIRECTION

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management- Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	Forest Service (R-2) Supplement S to Form 3109-3, "Wilderness Stipulation." This stipulation provides for rigorous controls over access and all operating conditions and related facilities and operations; gives notice of the special nature of the lands involved; specifies the sequence of exploratory and other operations, with air mobilization for the former; and describes the conditions that must be met for surface access should commercial discovery be made. The stipulation also provides for its automatic rescission and replacement should Congress return the lands to nonwilderness management.	

4) Recommend against or deny consent to BLM for issuance of leases or permits where operational damages on surface resources, including the impacts of surface-based access, product transportation and ancillary facilities necessary to operations, would be irreversible and irretrievable, with no potential for restoration as near as practical to natural conditions. Negative recommendations or consent denials will be based on consideration of the following criteria:

(a) Terrain as it affects waste dumps and tailings disposal--related to dump and tailing stability, adequate room for placement, and whether or not waste and tailings can be handled or treated in a manner that would allow restoration as near as practical to natural conditions.

(b) Whether or not negative impacts on water quality are preventable.

(c) For surface-based access, product transportation and ancillary facilities necessary to operations: Slopes steeper than 40 percent; high erosion hazard; high geologic hazard.

(d) Low visual absorption capacity that prevents restoration to established visual quality objective (VQO).

(e) A conclusion by the Forest Service (FS) and/or the United States Fish and Wildlife Service (USFWS) that the action will jeopardize the sur-

CONTINUATION OF:
Minerals Management-Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)

vival or recovery of federally listed threatened or endangered (T&E) wildlife or plant species.

(f) Intrusions upon the identified critical (USFWS) or essential (FS) habitat of a federally listed (T&E) wildlife or plant species or upon the plant or animal itself.

(g) Intrusion upon the habitat of individual plant or animal species listed by a state as threatened or endangered.

(h) Intrusion upon the habitat of individual plant or animal species identified by the Regional Forester as needing special management to prevent its need for listing as a threatened or endangered species.

c) Classified lands other than Wilderness and related, as described in "b" foregoing, which are not by law or otherwise withdrawn from operations under the mineral leasing acts. Examples of such lands include Wild and Scenic River System, RARE II Further Planning Areas, National Recreation Areas, National Historic Sites, Natural Areas, Special Areas--such as geological, scenic and zoological, and some other specific classifications.

1) Forest Service authorize common variety exploration and disposals under terms and conditions to protect the purposes for which the lands were classified. The objective of reclamation requirements will be to return disturbed lands to a condition suitable for the purposes for which they were classified.

For Special Areas classified under 36 CFR 294 and 251.23 for specific management purposes, the regulatory provisions permit no use or occupancy inconsistent with the classification.

2) Coal mining is prohibited by the Coal Leasing Amendment Act of 1975, within the National System of Trails and the Wild and Scenic Rivers System, including Study rivers designated by that Act. This prohibition also applies to the National Park System and the National Wildlife Refuge System, which lands are not under Forest Service jurisdiction.

FOREST DIRECTION

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management- Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	3) Recommend or consent to BLM for issuance of leases, permits or licenses only when terms and conditions can be applied that will protect the purposes for which the lands were classified. 4) Recommendations and consent to BLM for issuance of leases, permits or licenses will include all current standard stipulations and the current Regionally approved special stipulations necessary to protect the purposes for which the lands were classified. Standard and special stipulations are in Appendix H to this Forest Plan. See 1.b.(1) under this management heading for the standard stipulations. Special stipulations to be applied as appropriate are: (a) Forest Service (R-2) Supplement A to Form 3109-3, "Further Planning Area Stipulation." This stipulation applies to lands identified for further planning in the RARE II decision documents. It specifies the nature and extent of operations allowed and the conditions to be met for their approval. (b) Forest Service (R-2) Supplement B to Form 3109-3, "Classified Area Stipulation." This stipulation applies to lands classified under 36 CFR 294 and 251.23 for specific management purposes. Because of the regulatory provisions, no use or occupancy inconsistent with the classification is permitted. This does not necessarily mean recommendation against or denial of consent to issuance of leases, permits or licenses is necessary. The reason is that classified areas may be only small portions of the lands involved. (c) Forest Service (R-2) Supplement C to Form 3109-3, "Limited Surface Use Stipulation." This stipulation notifies a lessee, permittee or licensee that certain described conditions exist upon the lands involved that require special operating plan provisions for their protection. (d) Forest Service (R-2) Supplement H to Form 3109-3, "Conditional No Surface Disturbance Stipulation." This stipulation notifies the prospective lessee,	

CONTINUATION OF: Minerals Management- Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)

permittee or licensee that certain described conditions exist upon tracts within the proposed lease or permit area that will prevent any surface disturbance affecting those tracts unless an operating plan can be devised that will convince the Forest Service that surface use, occupancy and reclamation can take place without causing irretrievable environmental damage.

5) Recommend against or deny consent to issuance of leases, permits or licenses where operational damages on surface resources including the impacts of surface-based access, product transportation and ancillary facilities necessary to production and related operations, would be irreversible and irretrievable, with no potential for reclamation. Negative recommendations or consent denials will be based on consideration of the following criteria:

(a) Would operations destroy or irretrievably damage the characteristics or purposes for which the lands are classified?

(b) Terrain as it affects waste dumps and tailings disposal--related to dump and tailing stability, adequate room for placement, and whether or not waste and tailings can be handled or treated in a manner that results in no detrimental effects on the purposes for which the lands were classified.

(c) Whether or not negative impacts on water quality are preventable.

(d) For surface-based access, product transportation and ancillary facilities necessary to operations: Slopes steeper than 40 percent; high erosion hazard; high geologic hazard.

(e) Low visual absorption capacity that prevents reclamation to established visual quality objective (VQO).

(f) A conclusion by the Forest Service (FS) and/or the United States Fish and Wildlife Service (USFWS) that the action will jeopardize the sur-

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Minerals Management-Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	vival recovery of federally listed threatened or endangered (T&E) wildlife or plant species. (g) Intrusions upon the identified critical (USFWS) or essential (FS) habitat of a federally listed (T&E) wildlife or plant species or upon the plant or animal itself. (h) Intrusion upon the habitat or individual plant or animal of a species listed by a state as threatened or endangered. (i) Intrusion upon the habitat or individual plant or animal of a species identified by the Regional Forester as needing special management to prevent its need for listing as a threatened or endangered species. (j) Application of the coal unsuitability criteria to lands proposed for coal leases (43 CFR 3461). (3502SJ) (FDR)	
Special Use Management (Non-Recreation) (J01)	01 Act on special use applications according to the following priorities: a. Land and land use activity requests relating to public safety, health and welfare, e.g., highways, powerlines and public service improvements. b. Land and land use activities contributing to increased economic activity associated with National Forest resources, e.g., oil and gas, and energy minerals. c. Land and land use activities that benefit only private users, e.g., road permits, rights-of-way for powerlines, telephones, waterlines, etc. (0065) (FDR) 02 Do not approve any special use applications that can be reasonably met on private or other Federal lands unless it is clearly in the public interest. (0071) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Special Use Management (Non-Recreation) (J01)	03 Bury electrical utility lines of 33 KV or less and telephone lines except when: a. Visual quality objectives of the area can be met using an overhead line. b. Burial is not feasible due to geologic hazard or unfavorable geologic conditions. c. It is not economical as determined by a cost analysis. d. Greater long-term site disturbance would result. e. It is not technically feasible. (0072) (FDR)	
	04 Do not approve special use applications for areas adjacent to developed sites unless the proposed use is compatible with the purpose and use of the developed site. (0389) (FDR)	
Rights-of-way and Land Adjustments (J02, 13, 15, 16, 17, and 18)	01 Acquire rights-of-way on existing Forest System roads and trails that cross private land. (0162) (FDR)	
	02 Insure floodplain and wetland values are approximately equal on both offered and selected tracts in proposed land exchanges or that values are in favor of the United States. (0006) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Rights-of-way and Land Adjustments (J02, 13, 15, 16, 17, and 18)	03 Classify lands or interest in lands for acquisition where lands are valuable for NFS purposes according to the following priorities: a) In designated wilderness areas and other Congressionally classified areas. b) Where lands or rights-of-way are needed to meet resource management goals and objectives. c) Lands which provide habitat for threatened and endangered species of animals and plants. d) Lands which include floodplain or wetlands. e) On lands having historical or cultural resources, outstanding scenic values or critical ecosystems, when these resources are threatened by change of use or when management may be enhanced by public ownership. (4204SJ) (FDR)	
	04 Classify lands for disposal according to the following priorities: a) To States, counties, cities, or other Federal agencies when disposal will serve a greater public interest. b) In small parcels intermingled with mineral or homesteads patents. c) When suitable for development by the private sector, if development (residential, agricultural, industrial, recreational, etc.) is in the public interest. d) When critical or unique resource (wetlands, floodplains, essential big game winter range, threatened or endangered species habitat, historical or cultural resources, critical ecosystems, etc.) effects are mitigated by reserving interests to protect the resource, or by exchange where other critical resources to be acquired are considered to be of equal or greater value. (4205SJ) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Rights-of-way and Land Adjustments (J02, 13, 15, 16, 17, and 18)	05 Effect jurisdictional transfers which achieve the following objectives: a. Reduce duplication of efforts by users and agencies in terms of time, cost, and coordination. b. Improve or maintain user access to the administering agency. c. Decrease travel and enhance management. d. Improve public understanding of applicable laws, regulations, policies, and procedures. e. Develop more effective and efficient work units. f. Reduce administrative cost. (0070) (FDR)	
Property Boundary Location (J06)	01 Locate, mark, and post landlines according to the following priorities: a. Lines needed to meet planned activities; b. Lines needed to protect NFS lands from encroachment, and c. All other lines. (0068) (FDR)	

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Soil Resource Management (KA1)	O1 Maintain soil productivity, minimize man-caused soil erosion, and maintain the integrity of associated ecosystems. a. Use site preparation methods which are designed to keep fertile, friable topsoil essentially intact. b. Give roads and trails special design considerations to prevent resource damage on capability areas containing soils with high shrink-swell capacity. c. Provide adequate road and trail cross drainage to reduce sediment transport energy. d. Revegetate all areas, capable of supporting vegetation, disturbed during road construction and/or reconstruction to stabilize the area and reduce soil erosion. Use less palatable plant species on cuts, fills, and other areas subject to trampling damage by domestic livestock and big game to discourage grazing by herbivores. e. Prevent livestock and wildlife grazing which reduces the percent of plant cover to less than the amount needed for watershed protection and plant health. f. Place tractor-built firelines on the contour, where possible, and avoid use of tractors on highly erodable sites. g. Provide permanent drainage and establish protective vegetative cover on all new temporary roads or equipment ways, and all existing roads which are being removed from the transportation system. h. Minimize soil compaction by reducing vehicle passes, skidding on snow, frozen or dry soil conditions, or by off-ground logging systems. i. Restore soil disturbance caused by human use to soil loss tolerance levels commensurate with the natural ecological processes for the treatment	a. Use the following Standards and Guidelines unless more site specific requirements are developed during project design. 1) Limit intensive ground disturbance if slopes are greater than 30 percent, are unstable, or have highly erodible soils, to the following: a) Limit exposure of mineral topsoil to well distributed small, non-contiguous units which do not exceed 40 percent of an area in aggregate, except for road or trail construction or reconstruction projects. b) Limit soil mixing and exposure of fine textured subsoils (> 35% clay) on sites designated for vegetative production, by allowing only specialized equipment and identifying travel routes and turn around points. 2) Apply Packer's guides in the design for cross drain spacing and buffers. 3) Chisel or rip, on the contour, compacted soils. Soils are considered compacted if there is a 15 percent increase in bulk density or a 59 percent decrease in macro pore space. 4) Do not allow skid trails, unsurfaced roads, and other developments promoting compaction to exceed 20 percent of the total area on highly compactible soils.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Soil Resource (0608) (FDR) (KA1)	areas.	5) Use root cutters, in conjunction with brush raking, only if the depth to fine textured subsoil (> 35% clay) is greater than ten inches. 6) Conduct a slope stability examination before habitation, road construction and/or timber harvest begins on those areas having a high potential for mass movement and areas with slopes greater than 60 percent. 7) Use mechanical ground lead skidding methods which keep the leading end of the log off the ground on slopes greater than 30 percent to minimize gouging. 8) If areas greater than ten acres with highly erosive soils are disturbed, initiate protection measures during and immediately following disturbance. a) Begin revegetation of disturbed areas before the end of the first growing season. b) Monitor and reseed if the ground cover is not sufficient to meet soil loss tolerance levels or 80% of natural production, within two years. 9) When soils or vegetative ground cover are disturbed by management activities (except for site preparation projects) stabilization procedures must be started during the second growing season. Revegetation procedures must ensure enough ground cover

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Soil Resource Management (KA1)		by the end of the fourth growing season to meet soil loss tolerance levels or the amount present before treatment. 10)Limit the use of mechanical equipment, on projects designed to prepare or alter surface soils, to slopes less than 30 percent. (This does not include timber harvest or road and trail construction and reconstruction.) (9101SJ) (FDR)
	02 Identify at the project level, upland areas that are immediately adjacent to Riparian (Prescription 9A) Management Areas. Adjacent upland areas are those portions of a management area which, when subjected to management activities, have a potential for directly affecting the condition of the adjacent Riparian Management Area. The magnitude of effects is dependent upon slope steepness, and the kind, amount, and location of surface and vegetation disturbance within the adjacent upland unit. (0848) (FDR)	a. The following is a guide to identify the approximate extent of adjacent upland areas: Slope gradient of upland areas adjacent to Riparian Management Area. — Upslope distance from boundary of Riparian Management Area. % Slope Range — Feet 0-20 — 100 20-30 — 180 30-40 — 280 40-50 — 400 50-60 — 520 60-70 — 640 70-80 — 760 80-90 — 880 90-100 — 1000 100-150 — 1000-1300 (6698) (FDR) b. Reduce, through designed management practices and appropriate erosion mitigation and vegetation/restoration measures, the project caused on-site erosion rates (calculated with appropriate Universal Soil Loss

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Soil Resource Management (KA1)		Equation methodology) by 75% within the first year after disturbance. Reduce project caused on-site erosion by 95% within five years after initial disturbance (USDA Tech. Pub. SA-TP 11, 1980: USDA SCS Tech. Note No. 10, 1977). (6700) (FDR)
		c. Design continuing mitigation/restoration practices and follow-up maintenance activities to insure that 80% original ground cover (vegetation) recovery occurs within five years after disturbance. (6702) (FDR)
Transportation System Management (L01 & 20)	01 Classify areas as to whether off-road vehicle use is permitted. (0452) (FDR)	a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (FDR)
		b. Prohibit ORV use (except snowmobiles) on areas with slopes over 40 percent and on areas with a high erosion hazard rating except for designated routes. (9337SJ) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	02 Close all newly constructed roads to public motorized use unless documented analysis shows: a. Use does not adversely impact other resources; b. Use is compatible with the ROS class established for the area; c. They are located in areas open to motorized use; d. They provide user safety; e. They serve an identified public need; f. The area accessed can be adequately managed; or g. Financing is available for maintenance or coop-maintenance can be arranged. (0075) (FDR)	
	03 Manage road use by seasonal closure if: a) Use causes unacceptable damage to soil and water resources due to weather or seasonal conditions; b) Use conflicts with the ROS class established for the area; c) Use causes unacceptable wildlife conflict or habitat degradation; d) Use results in unsafe conditions due to weather conditions; e) They serve a seasonal public or administration need; f) Area accessed has seasonal need for protection or nonuse; or g) Use causes unacceptable damage to the road prism due to weather or seasonal conditions. (4704SJ) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	04 Keep existing roads open to public motorized use unless: a) Financing is not available to maintain the facility or manage the associated use of adjacent lands; b) Use causes unacceptable damage to soil and water resources; c) Use conflicts with the ROS class established for the area; d) They are located in areas closed to motorized use and are not "designated routes" in the Forest travel management direction. e) Use results in unsafe conditions unrelated to weather conditions; f) There is little or no public need for them; g) Use conflicts with wildlife management objectives; or h) Use causes unacceptable damage to the road prism. (4705SJ) (FDR) 05 Closed or restricted roads may be used for and to accomplish administrative purposes when: a. Prescribed in management area direction statements; b. Authorized by the Forest Supervisor; and c. In case of emergency. (0078) (FDR)	
Arterial and Collector Road Construction and Reconstruction (L02 thru L09, L16 thru L18)	01 Construct and reconstruct arterial and collector roads to meet multiple resource needs. (0083) (FDR)	a. Construction and reconstruction standards for arterial and collector roads are: Standard: Travel Speed — Arterial: Average 15-50 mph — Collector: Average 10-30 mph Standard: Lanes — Arterial: Generally 2 lanes — Collector: Generally 1 lane

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES		
CONTINUATION OF: Arterial and Collector Road Construction and Reconstruction (L02 thru L09, L16 thru L18)		Surface	All weather, generally asphalt or gravel	Generally gravel or native surface, sometimes asphalt
		Width	Typically 20 to 24 feet, but some single lane with inter-visible 10-foot turnouts	Typically 12 to 16 feet, with inter-visible 10-foot turnouts
		Drainage	Permanent, not to impede traffic	Permanent but may impede traffic
		Cattle-guards	Provide at all fence crossings	Provide at all fence crossings
		(9302SJ)	(FDR)	
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct and reconstruct local roads to provide access for specific resource activities such as campgrounds, trailheads, timber sales, range allotments, mineral leases, etc., with the minimum amount of earthwork. (0084) (FDR)	a. Construction and reconstruction standards for local roads are:		
		Travel Speed	Average less than 20 mph	
		Lanes	Usually single lane except for developed recreation sites.	
		Surface	Varies from asphalt to native surface; majority native surface.	
		Width	Typically 10 thru 14	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Local Road Construction and Reconstruction (L11, 12, & 13)		feet. Turnouts optional depending upon traffic management. Usually not intervisible.
		Drainage: Dips and culverts
		Cattle-guard: Provide at fence crossings where projected use exceeds 12 seasonal average daily traffic.
		(9303SJ) (FDR)
Road Maintenance (L19)	01 Maintain all roads to the following minimum requirements: a. All arterial and open collectors - Level 3; b. All open local roads - Level 2; and c. All closed roads - Level 1. (0079) (FDR)	a. See levels of maintenance in FSM 7730. (6274) (FDR) b. Level 1 maintenance includes upkeep of drainage structures and vegetation cover necessary to prevent erosion. (6324) (FDR)
	02 Maintain structures, bridges, cattleguards, etc., to be structurally sound and safe for use. (0080) (FDR)	
Trail System Management (L23)	01 Maintain all trails for foot and horse travel unless specifically closed to either or both class of user. (0451) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Trail System Management (L23)	02 Maintain all trails to the following minimum requirements: a. Structures (bridges, corduroy, etc.) are structurally sound and safe for specified class of user, b. Maintain drainage structures to prevent unacceptable resource damage, and c. Remove hazards from trails to allow safe passage for specified class of users. A safety hazard is a physical condition of a trail which may cause injury, is unusual or unexpected, and not readily identifiable by the trail user. It is not a condition which is easily identifiable and normally encountered for the type or location of the trail involved. The following examples illustrate this distinction: A hazard is a rotten bridge decking or handrail. A stream crossing where no bridge is provided and the user would expect this on the type and location of the trail is not a hazard. A hazard is a stable-appearing loose rock in a constructed treadway where all other rocks are stable. A trail treadway made up of rocks in a near-natural position, many of which are loose, is not a hazard. A hazard is a perennial bog-hole on a horse trail. An intermittent bog-hole which will dry up by early summer or within a few days following a rain storm is not a hazard. A hazard is a section of trail treadway supported by rotten cribbing. A section of trail where the treadway is obviously slippery is not a hazard. A hazard is a marked ford with holes deeper than the normal channel. A deep ford with a consistent stream bed is not a hazard. (0074) (FDR)	
	03 Provide a full range of trail opportunities in coordination with other Federal, State, and municipal jurisdictions and private industries both on and off NFS lands. (0455) (FDR)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Trail System Management (L23)	04 CONTINENTIAL DIVIDE NATIONAL SCENIC TRAIL (CDNST): Apply Interim Management for the CDNST corridor to identified alternative routes utilizing both existing trails and roads and nonexisting routes which may be used as connecting travel segments. Interim management will establish visual quality objectives for the Foreground and Middleground areas within the corridor. (0354) (FDR)	a. The CDNST corridor is that area which encompasses the foreground and middleground of the seen-area as viewed from the alternative travel routes identified in the CDNST Comprehensive Plan. Interim management which protects the current scenic quality and recreation opportunities will be applied until such time that a specific trail route is formally designated as a part of the CDNST System. (6198) (FDR)
		b. All travel route alternatives within the CDNST corridor have a Visual Management System (VMS) sensitivity Level I classification until a specific trail route is formally designated. Foreground and middleground areas within the corridor will meet the highest visual quality objective available within the existing visual condition class constraints and the visual quality objective of the management area. (6199) (FDR)
	05 Do not mark existing travel routes as being a part of the CDNST system until they have been formally designated. (0355) (FDR)	

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Trail System Management (L23)	06 Upon formal designation of a travel route segment as a part of the CDNST system, manage the segment to emphasize foot travel, provide for horse use where safe to do so, and the continuation of motorized use where presently permitted and considered appropriate in the management direction for the overall management area. Give consideration to the needs of the long-distance traveler. Where motorized use is permitted, limit to snowmobiles operating on snow and vehicles with less than 40 inch width. Where the route coexists with a primitive local road, it may be open to use by larger vehicles. (0356) (FDR)	a. The formally designated CDNST travelway will have a sensitivity Level I classification. Foreground and middleground areas, as seen from the trail, will meet the highest visual quality objective available within the existing visual condition class constraints, and the visual quality objective of the specific management area. (6200) (FDR) b. Mark trail routes using the CDNST logo according to appropriate standards in the Comprehensive Plan. (6201) (FDR) c. All other prescribed direction, standards and guidelines for the specific management area through which the (CDNST) passes apply. (6203) (FDR) d. Maintain trails in accordance with standards in the Trail Handbook (FSH 7709.12). (6129) (FDR) e. Schedule trail maintenance in accordance with Regional Acceptable Work Standards. (FSM 1310 R2 ID No. 1 7/22/82.) (6131) (FDR)
Trail Construction and Reconstruction (L22)	01 Construct or reconstruct trails when needed as part of the transportation system. (0399) (FDR)	a. Cross drains and conveyance structures are planned according to Forest Design Standards. (6326) (FDR)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives for the area considering the following: a. The values of the resources that are threatened by fire, b. The probability of fire occurrence, c. The fuelbed that fires will probably occur in, d. The weather conditions that will probably influence fires that occur, e. The costs of fire protection programs (FFP and FFF), f. The social, economic, political, cultural, environmental, life and property concerns; and g. Management objectives for the area. Use the Fire Management Analysis process (FSH 5109.19) for this analysis. (O111) (FDR)	
Escaped Fire Suppression (P09)	01 Take suppression action on all escaped fires considering the following: a. The values of the resources threatened by the fire (both positive and negative), b. Management objectives for the threatened area(s), c. The fuelbeds the fire may burn in, d. The current and projected weather conditions that will influence fire behavior, e. Natural barriers and fuel breaks, f. Social, economic, political, cultural, and environmental concerns, g. Public safety, h. Firefighter safety; and i. Costs of alternative suppression strategies. Use the escaped fire situation analysis to make this determination (FSM 5130.31). (O112) (FDR)	
Fuel Treatment (P11 thru 14)	01 Maintain fuel conditions which permit fire suppression forces to meet fire protection objectives for the area. (O113) (FDR)	a. Reduce or otherwise treat all fuels so the potential fireline intensity of an area will not exceed 400 BTU's/sec/ft (B.I.-68) on 90% of the days during the regular fire season, or Break up continuous fuel concentrations exceeding the above

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Fuel Treatment (P11 thru 14)		standard into manageable units with fuel breaks or fire lanes, or Provide additional protection for areas exceeding the above standard when such protection will not be required for more than five years. (6056) (FDR)
Vegetation Treated by Burning (P15)	01 Use prescribed fire to accomplish resource management objectives, such as reducing fuel load buildup, wildlife habitat improvement, etc. (0101) (FDR)	
	02 Limit use of prescribed fires on areas adjacent to riparian areas to protect riparian and aquatic values. (0102) (FDR)	
	03 Use unplanned ignitions in all wildernesses and planned and unplanned ignitions on non-wilderness lands to achieve management objectives. (5002SJ) (FDR)	
Air Resource Management (P16)	01 Comply with State and Federal air quality standards. (See FSM 2120) (0094) (FDR)	
Insect and Disease Management/ Suppression (P35)	01 Prevent or suppress epidemic insect and disease populations that threaten forest tree stands with an integrated pest management (IPM) approach consistent with resource management objectives. (0148) (FDR)	

MANAGEMENT AREA DIRECTION

The management area prescriptions included in this section represent the Management Area Direction applicable to specific areas of land. These management area prescriptions, and others, in various combinations were used as the basis for developing the alternatives analyzed in the accompanying final Environmental Impact Statement.

A management area prescription number was assigned to each management area in order to link the prescription to the land area. The location of management areas is illustrated on the Management Area Map inserted inside the back cover of this document. Wilderness Study Areas are an exception to the general application of prescriptions to show management areas.

This Plan identifies both the Piedra (41,500 acres) and West Needle (15,800 acres) Wilderness Study Areas as suitable for wilderness designation. These areas are shown as containing Management Areas 8A, 8B, 8C, and 8D, which are wilderness management areas. Until Congress acts, both areas will be managed to maintain the qualities which make them possible for inclusion in the National Wilderness Preservation System.

The South San Juan Wilderness Expansion Study Area (32,800 acres) is being identified as unsuitable for wilderness designation. The map shows that this area has several management areas which include development in their prescriptions. These prescriptions will not be implemented unless Congress designates this area as non-wilderness. In the interim, this area will also be managed to maintain the qualities which make it possible for inclusion in the National Wilderness Preservation System.

The prescription for each management area consists of a prescription summary and a set of management requirements. The prescription summary identifies the primary emphasis of the prescription. All prescriptions are multiple use prescriptions, but each has a primary emphasis.

Management requirements are presented in three columns: Management Activities, General Direction Statements, and Standards and Guidelines.

Management Activities are work processes that are conducted to produce, enhance, or maintain levels of outputs, or to achieve administrative and environmental quality objectives. Management Activities are identified by a code number and title defined in the Management Information Handbook (FSH 1309.11) dated July 1980. In some cases, management activities were grouped under one activity when it was not appropriate to develop separate requirements. Not all management activities need management requirements. When there are no management requirements listed for an activity, the Forest Direction or direction in laws, regulations, executive orders, or Forest Service directives adequately covers the activity.

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General Direction Statements specify the actions, measures, or treatments (management practices) to be done when implementing the management activity or the condition expected to exist after the general direction is implemented.

Standards and Guidelines are quantifications of the acceptable limits within which the general direction is implemented.

MANAGEMENT AREA SUMMARY

The following summary lists the management emphasis and shows the amended acreage allocations for each management area. This summary information supercedes the Management Area summary on page III-86 of the Forest Plan.

Management Area	Emphasis	Current Forest Plan Acres	Amended Forest Plan Acres	Change
1A	Developed recreation sites (acres are contained within other management areas).	562	562	0
1B	Winter sports sites.	13,042	13,042	0
1D	Utility Corridors (acres were not calculated and are contained within other management areas).	--	--	--
2A	Semi-primitive motorized recreation opportunities.	93,652	94,627	+975
2B	Rural and roaded-natural recreation opportunities.	54,654	61,569	+6,915
3A	Semi-primitive non-motorized recreation opportunities.	386,226	396,561	+10,335
4B	Wildlife habitat for management indicator species.	79,327	95,070	+15,743
5B	Big game winter range.	144,836	150,110	+5,274
6B	Livestock grazing.	289,148	314,626	+25,478
7C	Management of forested areas for wood fiber production and utilization	55,229	0	-55,229
7E	Management of forested areas for wood fiber production and utilization on gentle slopes.	238,477	268,000	+29,553
8A	Pristine wilderness opportunities.	318,273	318,273	0
8B	Primitive wilderness opportunities.	43,671	43,671	0
8C	Semi-primitive wilderness opportunities.	41,951	41,951	0

Management Area	Emphasis	Current Forest Plan Acres	Amended Forest Plan Acres	Change
8D	Limited areas of wilderness providing for high density day use.	8,461	8,461	0
	Maintenance of the qualities of an area which make it possible for inclusion in the National Wilderness Preservation System; to be used on all Wilderness Study Areas, regardless of the Plan's recommendation, until Congress acts. (Acres are shown within other management areas).	(90,100)	(90,100)	0
9A	Riparian areas.	38,413	38,413	0
9B	Increased water yield.	38,739	0	-38,739
10A	Research Natural Areas.	2,302	2,302	0
10C	Chimney Rock Archaeological Area, increased public use.	3,160	3,160	0
10D	Wild and Scenic River corridors.	18,221	18,221	0

PRESCRIPTIONS FOR MANAGEMENT AREAS

The following pages contain prescriptions for the management areas. They are in the same order as listed above. Identification numbers shown in parentheses following each General Direction and Standard and Guideline statement are intended to facilitate future tiering to the Forest Plan and final EIS. Users and reviewers of the Plan will find these identification numbers useful for cross-referencing and identification of mitigation measures.

PRESCRIPTION FOR MANAGEMENT AREA 1A

(Provides for existing and proposed developed recreation sites.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is for developed recreation in existing and proposed campgrounds, picnic grounds, trailheads, visitor information centers, summer home groups, and water-based support facilities. Proposed sites (sites scheduled for development in the Plan) are managed to maintain the site attractiveness until they are developed.

Facilities such as roads, trails, toilets, signs, etc., may be dominant but harmonize and blend with the natural setting. Livestock grazing is generally excluded from developed sites. Existing and proposed sites are withdrawn from locatable mineral entry.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession unless specific vegetation treatment is necessary to meet recreation and visual objectives or for insect and disease control. (0034SJ) (01A)	
Visual Resource Management (A04)	01 Emphasize visually appealing landscapes (vista openings, rock outcroppings, diversity of vegetation, etc.) (0104) (01A)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of: -Partial Retention in Development Level 2 Sites. -Modification in Development Level 3, 4 and 5 Sites. (6136) (01A) b. Sensitivity level: Development Level 3, 4, and 5 sites are Sensitivity Level one. (6221) (01A) c. Apply rehabilitation practices where the above objectives are not currently being met. (6068) (01A)
	02 Facilities may dominate, but will harmonize and blend with the natural foreground and middleground landscape. (0384) (01A)	
Recreation Site Construction and Rehabilitation (A05 AND 06)	01 Design facilities and access to provide site protection, efficient maintenance, and user convenience. Design and develop sites to ensure that developed capacity does not exceed season-long carrying capacity. (0383) (01A)	a. Construct and reconstruct existing and new developed sites in accordance with the guidelines in FSM 2331. (6279) (01A)
	02 Provide at least 10 percent of the units in level 3 and 4 camp and picnic sites to accommodate two or more family groups. (0347) (01A)	

MANAGEMENT PRESCRIPTION 01A

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Management of Developed Recreation Sites (A08, 09, 11 & 13)	01 Maintain all developed sites in accordance with Regional Acceptable Work Standards (FSM 1310 R2 ID No. 1 7/22/82) (0386) (01A)	
	02 Maintain facilities in a safe condition. Replace facilities when rehabilitation costs 50 percent or more of replacement costs or when existing facilities are no longer compatible with site design or ROS classification. (0387) (01A)	a. See FSH 2309.11, Sec. 122. (6222) (01A)
Range Resource Management (D02)	01 Manage livestock grazing to enhance recreation opportunities in existing and proposed recreation sites. (0110) (01A)	a. Construct fences of material other than barbed wire around developed sites. (6281) (01A)
	02 Exclude grazing of recreational stock and livestock in developed recreation sites during the managed recreation use season. (0059) (01A)	a. Maintain vegetation in fair or better range condition. (6061) (01A)
Silvicultural Prescriptions (E03, 06 & 07)	01 Manage tree stands to enhance visual quality and recreation opportunities on existing and proposed recreation sites. (0115) (01A)	
	02 Remove unsafe and or dead trees in developed sites. Plant new trees to provide desired tree cover when natural regeneration is insufficient. (0466) (01A)	a. See Technical Report R-2-1 (1981) Tree Hazards: Recognition and Reduction in Recreation Sites. (6630) (01A)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	03 Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. Manage forest cover types as follows: a) Interior Ponderosa Pine: Develop open park-like groups by growing trees at low densities, planting ground cover or grass understory, and maintaining the groups until they become decadent. b) Aspen: Maintain the aspen community except on sites that are naturally converting to conifers. As pure aspen stands become decadent, clearcut the stand in staged patches and allow natural regeneration to aspen. c) Engelmann Spruce-Subalpine Fir and Mixed Conifer: Maintain a healthy stand condition by removing mature decadent conifers. Do not harvest trees until they approach decadence or pathological maturity. Do not thin except for visual resource enhancement objectives. (2541SJ) (01A)	
Transportation System Management (L01 & 20)	01 Prohibit motorized vehicle use off Forest System Roads and Trails. (4766SJ) (01A)	
Road Maintenance (L19)	01 Maintain roads to accommodate high constant, uninterrupted use. (4767SJ) (01A)	a. Maintain roads to maintenance levels four or five, depending on the experience level provided at individual developed sites. (9344SJ) (01A)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that will protect investments and meet recreation management objectives. (5037SJ) (01A)	a. Wildfire protection levels: Promptly control wildfires burning at all Fire Intensity Levels. (9629SJ) (01A)
Fuel Treatment (P11 thru 14)	01 Maintain fuel conditions which permit fire suppression forces to meet fire protection objectives for the area. (0113) (01A)	a. Reduce or otherwise treat all fuels so the potential fireline intensity of an area will not exceed 100 BTU's/second/feet (B.I. 38) on 90% of the days during the regular

MANAGEMENT PRESCRIPTION 01A

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Fuel Treatment (P11 thru 14)		fire season. (96325J) (01A)

MANAGEMENT PRESCRIPTION 01A

PRESCRIPTION FOR MANAGEMENT AREA 1B

(Provides for existing and potential winter sports sites.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis provides for downhill skiing on existing sites and maintains selected inventoried sites for future downhill skiing recreation opportunities. Management integrates ski area development and use with other resource management to provide healthy tree stands, vegetative diversity, forage production for wildlife and livestock, and opportunities for non-motorized recreation.

Visual resources are managed so that the character is one of forested areas interspersed with openings of varying widths and shapes. Facilities may dominate, but harmonize and blend with the natural setting. Harvest methods in forested areas between ski runs is clear-cutting in aspen, and lodgepole pine, shelterwood in interior ponderosa pine and mixed conifers, and group selection in Engelmann spruce-subalpine fir, or as specified in the permittee's site-specific Master Development Plan.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession unless specific vegetation treatment is necessary to meet recreation and visual objectives or for insect and disease control. (0034SJ) (01B)	
Cultural Resource Management (A02)	01 Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with other resource uses. Limit interpretation to low cost developments such as interpretive signing. (0532SJ) (01B)	
Visual Resource Management (A04)	01 Emphasize visually appealing landscapes (vista openings, rock outcroppings, diversity of vegetation, etc.) (0104) (01B)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of modification. (6204) (01B) b. Apply rehabilitation practices where the above objectives are not currently being met. (6068) (01B)
Recreation Site Construction and Rehabilitation (A05 AND 06)	01 Design and locate improvements on winter sport sites to provide safety to users and to harmonize with the natural environment. (0358) (01B)	a. Follow construction; reconstruction standards specified in the approved Master Development Plan. (6282) (01B)
Management of Developed Recreation Sites (A08, 09, 11 & 13)	01 Provide opportunities for year-round recreation use of the permitted area and facilities. (0359) (01B)	
Range Resource Management (D02)	01 Manage livestock grazing to enhance recreation opportunities in existing and proposed recreation sites. (0110) (01B)	a. Maintain vegetation in fair or better range condition. (6061) (01B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)	02 Utilize low investment management systems such as season-long or deferred grazing, unless improved management systems are warranted in conjunction with management of adjacent areas. (2043SJ) (01B)	
Silvicultural Prescriptions (E03, 06 & 07)	01 Manage forest cover types on the permitted area to enhance visual quality, diversity, and recreation opportunities, and to provide for a healthy forest cover in existing and proposed winter sports sites. (0450) (01B)	
	02 Manage forested areas between ski runs using the following harvest methods: - Clearcut in aspen and lodgepole pine, - Shelterwood in interior ponderosa pine and mixed conifer, - Group selection in Engelmann spruce-subalpine fir, - or those specified in the permittee's Ski Area Master Development Plan. (0760) (01B)	a. Apply harvest treatments to forest cover types as specified below or as specified in the permittee's Ski Area Master Development Plan where these plans exist for the area. (6666) (01B) b. Silvicultural Standards: (These standards may be exceeded on areas managed for old growth) 1. Clearcut:

	Forest Cover Type		
	Lodgepole Pine-	Aspen	Other Forest Cover Types
Rotation Age	90-140 yrs	80-120 yrs	100 or more yrs
Growing Stock Level	80-120	N/A	60 to 120
Thinning Cycle	20-30 yrs	N/A	20 to 30 yrs

MANAGEMENT PRESCRIPTION 01B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		2. Two-Step Shelterwood:

	Forest Cover Type	
	Interior Ponderosa pine & Mixed Conifer	Other Forest Cover Types
Rotation Age	100-160 yrs	100 or more yrs
Growing Stock Level	80-120	60-120
Thinning Cycle	20-30 yrs	20-30

First cut (seed cut):
Remove 40 to 70 percent of the basal area or

Cut to:	BA 25-60	BA 20-60

Second Cut (removal cut):
Remove all overstory when regenerated stand meets minimum stocking standards.

3. Three-Step Shelterwood:

	Forest Cover Type	
	Interior Ponderosa pine & Mixed Conifer	Other Forest Cover Types
Rotation Age	100-160 yrs	100 or more yrs
Growing	80-120	60-120

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Stock Level
		Thinning Cycle: 20-30 yrs; 20-30 yrs.
		First Cut (preparatory cut): Remove 10 to 40 percent of the basal area or
		Cut to: BA 60-80; BA 50-80
		Second Cut (seed cut): Remove 40 to 50 percent of the remaining basal area or
		Cut to: BA 25-50 10-20 yrs after preparatory cut; BA 20-50 10-20 yrs after preparatory cut
		Third Cut (removal cut): Remove all overstory when regenerated stand meets minimum stocking standards.
		4. Selection:
		Forest Cover Type: Engelmann spruce-subalpine fir; Other Forest Cover Types
		Residual BA: 80-120; 80-120
		Cutting Cycle: 20-30 yrs.; 20-40 yrs
		(6294) (01B)

MANAGEMENT PRESCRIPTION 01B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	03 Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. (2539SJ) (01B)	
	04 Limit timber harvest activities to periods of low recreation use activity or to coincide with ski area construction activity. (0468) (01B)	
	05 Utilize firewood material using both commercial and noncommercial methods. (0147) (01B)	
	06 The combined water yield effects of type conversion on ski runs and increased on-site water from stand regeneration must be determined. Do not exceed threshold limits of water quality and drainage system stability deterioration. (0610) (01B)	
	07 For management purposes of forested areas between ski trails or other permanent openings, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0501) (01B)	a. When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Stand Height (ft.) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural Prescriptions (E03, 06 & 07)

Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole Pine	30	75%
Engelmann Spruce-Subalpine fir	30	75%
Aspen	30	75%

1/ Applies to trees specified as minimum stocking level.
2/ Percent of plots or transects that are stocked.

(6014) (01B)

Transportation System Management (L01 & 20)

01 Prohibit motorized travel off development roads and trails except for administrative and resource entry.

(4768SJ) (01B)

MANAGEMENT PRESCRIPTION 01B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Design and locate local roads in the permitted area: a. To facilitate management of tree stands and wildlife as well as recreation; and b. With the minimum of mileage and earthwork. (0467) (01B)	
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that will protect investments and meet recreation management objectives. (5037SJ) (01B)	a. Wildfire protection levels: Promptly control wildfires burning at all Fire Intensity Levels. (9629SJ) (01B)
Fuel Treatment (P11 thru 14)	01 Maintain fuel conditions which permit fire suppression forces to meet fire protection objectives for the area. (0113) (01B)	a. Treat fuels so the fireline intensity on the area will not exceed 100 BTU's/second/feet on 90% of the days during the regular fire season or break up fuel concentrations into blocks no larger than ten acres. (9633SJ) (01B)

PRESCRIPTION FOR MANAGEMENT AREA 1D

(Provides for utility corridors.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is for major oil and gas pipelines, major water transmission and slurry pipelines, electrical transmission lines, and transcontinental telephone lines. Management activities within these linear corridors strive to be compatible with the management goals of the management areas through which they pass.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Require right-of-way clearing and revegetation consistent or compatible with diversity objectives of adjacent management areas. (0038SJ) (01D)	
Visual Resource Management (A04)	01 Design and construct utilities to harmonize with the landscape. (0295) (01D)	a. Use "National Forest Landscape Management", Volume 2-Utilities for principles and concepts. (6153) (01D)
Dispersed Recreation Management (A14 and 15)	01 Manage dispersed recreation opportunities consistent or compatible with adjacent management areas. (0297) (01D)	
Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)	01 Manage wildlife and fish habitat consistent or compatible with adjacent management areas. (0296) (01D)	a. Limit right-of-way clearing width to a maximum of 600 feet to prevent adverse effects on wildlife. (7254SJ) (01D)
Range Resource Management (D02)	01 Manage the range resource consistent or compatible with adjacent management areas. (0298) (01D)	
Silvicultural Prescriptions (E03, 06 & 07)	01 Manage forest cover types consistent or compatible with adjacent management areas. Provide required electrical clearances and minimize the visual impact of the utility right-of-way. (0299) (01D) 02 Utilize firewood material using both commercial and noncommercial methods. (0147) (01D)	

MANAGEMENT PRESCRIPTION 01D

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Rights-of-way and Land Adjustments (J02, 13, 15, 16, 17, and 18)	01 Design, construct and maintain electrical transmission lines in accordance with the rules of the National Electrical Safety Code, ANSI. Unless otherwise indicated on the plan and profile drawings, all construction and clearances of the transmission line shall conform to the latest edition of the National Electrical Safety Code, ANSI issued by the American National Standards Institute. (0473) (01D)	
	02 All design, materials and construction, operation, maintenance and termination practices employed in connection with oil pipelines shall be in accordance with safe and proven engineering practices and shall meet or exceed the following: a. U.S.A. Standard Code for Pressure Piping, ANSI B 31.4, "Liquid Petroleum Transportation system." b. Department of Transportation Regulations, 49 CFR, Part 195, "Transportation of Liquids by Pipeline". (0474) (01D)	
	03 All design, materials and construction, operation, maintenance and termination practices employed in connection with gas piplines shall be in accordance with safe and proven engineering practices and shall meet or exceed the following: a. Department of Transportation Regulations, ASME Gas Piping Standards Committee, "Guide for Gas Transmission and Distrubution Piping System" (3rd Edition, April 1976). b. 49 CFR, Part 192, "Transportation of Natural and other Gas by Pipelines: Minimum Federal Safety Standards." (0475) (01D)	

MANAGEMENT PRESCRIPTION 01D

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Transportation System Management (L01 & 20)	01 Manage the transportation system and travel off development roads and trails consistent or compatible with adjacent management areas. (4780SJ) (01D)	
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost-efficient and that will meet objectives of adjacent management areas. (5033SJ) (01D)	

PRESCRIPTION FOR MANAGEMENT AREA 2A

(Emphasis is on semi-primitive motorized recreation opportunities.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is for semi-primitive motorized recreation opportunities such as snowmobiling, four-wheel driving, and motorcycling both on and off roads and trails. Motorized travel may be restricted or seasonally prohibited to designated routes to protect physical and biological resources.

Visual resources are managed so that management activities are not evident or remain visually subordinate. Past management activities such as historical changes caused by early mining, logging, and ranching may be present which are not visually subordinate but appear to have evolved to their present state through natural processes. Landscape rehabilitation is used to restore landscapes to a desirable visual quality. Enhancement aimed at increasing positive elements of the landscape to improve visual variety is also used.

The harvest method by forest cover type is clearcutting in aspen and lodgepole pine, and shelterwood for all other forest cover types.

Mineral and energy resource activities are generally compatible with goals of this management area subject to appropriate stipulations provided in Management Activities G00 - G07 in Forest Direction.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession in non-commercial forest and non-forest cover types except for Gambel oak. (0040SJ) (02A)	a. Non-commercial and non-forest cover type management:* 1) Gambel Oak: a) Manage 25% of area for oak-brush in blocks up to 20 acres to create a mosaic appearance with an approximation of equal distribution of size clases to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee. b) Manage 75% of the area for natural succession. * These standards and guidelines are applicable only on slopes <60%. (6041SJ) (02A)
	02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions." (0041SJ) (02A)	
Cultural Resource Management (A02)	01 Develop suitable cultural resouce properties for public enjoyment. (0568SJ) (02A)	
Visual Resource Management (A04)	01 Design and implement management activities to provide a visually appealing landscape. Enhance or provide more viewing opportunities and increase vegetation diversity in selected areas. (0150) (02A)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of Partial Retention. (6223) (02A) b. FS System travel routes are Sensitivity Level one. (6224) (02A) c. Apply rehabilitation practices

MANAGEMENT PRESCRIPTION 02A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Visual Resource Management (A04)		where the above objectives are not currently being met. (6068) (02A)
		d. Manage visual resources using the above standards in accordance with FSM 2380 and FSH 2309.16 through FSH 2309.25. (6225) (02A)
Dispersed Recreation Management (A14 and 15)	01 Emphasize semi-primitive motorized recreation opportunities. Increase opportunities for primitive road motorized trail use. Specific land areas or travel routes may be closed seasonally or year-round for compatibility with adjacent area management, to prevent resource damage, for economic reasons, to prevent conflicts of use, and for user safety. (0152) (02A)	a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (02A)
	02 Manage use to allow low to moderate contact with other groups and individuals. (0238) (02A)	a. Maximum use and capacity levels are: -Trail and camp encounters during peak use days are less than 30 other parties per day. -Trail and area-wide use capacity:

ROS Class - Semi-Primitive Motorized

Use Level	Very Low	Low	Moder-ate	High
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08

Reduce the above use level coefficients as necessary to re-

MANAGEMENT PRESCRIPTION 02A

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		flect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biophysical resources will occur. (6227) (02A)
	03 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat. (0154) (02A)	
	04 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (02A)	a. Campsite condition class based upon Frissel, S.S.; Journal of Forestry, May, 1978. (6278) (02A)
	05 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (02A)	
	06 Facilities provided include development level 1 and 2 campgrounds, trails suitable for motorized trailbike use, local roads with primitive surface and parking lots at trail heads. Provide signing compatible with intended use. (0153) (02A)	a. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (02A)
Recreation Management (Private and Other Public Sector) (A16)	01 Encourage development of private sector recreation oriented support services. (0161) (02A)	

MANAGEMENT PRESCRIPTION 02A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)	01 See the "Diversity on National Forests and National Grasslands" and "Silvicultural Prescriptions" management activities for specific vegetation treatment for wildlife objectives. (1526SJ) (02A)	
	02 Favor indicator species through wildlife habitat improvement. (1534SJ) (02A)	a. Hairy Woodpecker and Mountain Bluebird: Protect and/or provide 25 snags/10 acres in all forested types. Also provide for snag replacement. (7245SJ) (02A) b. Goshawk: Prohibit disruptive management activities within 300 feet of any occupied raptor nests during the period May 1 through July 31. (7231SJ) (02A) c. Deer, Elk, Turkey, Mallard, Black Bear and Goshawk: Provide one water source per section where there are no natural water sources. Use primitive materials for construction. (7251SJ) (02A)
Range Resource Management (D02)	01 Manage livestock distribution and stocking rates to be compatible with recreation use. Locate structural improvements to meet visual quality objectives. (0158) (02A)	
	02 Utilize extensive management systems such as season-long or deferred grazing. (2031SJ) (02A)	a. Vary utilization standards with grazing system and ecological condition. Specify standards in the allotment management plan. (6071) (02A)

MANAGEMENT PRESCRIPTION 02A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management	03 Protect regeneration from livestock damage in areas managed for timber production. (2051SJ) (02A)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (02A)
Range Improvement and Maintenance	01 Construct and maintain allotment boundary fences, short drift fences and water developments necessary to implement management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives. (2039SJ) (02A)	
Silvicultural Prescriptions	01 Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, vistas, diversity and insect and disease control. (0159) (02A)	
*** ↕ ***	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction.	a. Silvicultural Standards are specified in the Forest Direction.

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~b. Silvicultural Standards: (These standards may be exceeded on areas managed for old growth)~~

~~1) Clearcut.*~~

~~Forest Cover Type~~	~~Lodgepole Pine~~	~~Aspen~~
~~Rota-~~	~~90-140~~	~~70-90~~

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions

tion Age	Yrs	Yrs
Growing Stock Level	80-140	N/A
Thinning cycle	N/A	N/A

* Does not apply on slopes > 60%. Restrict to blocks < 20 acres in size.

2) Two-Step Shelterwood:*

Forest Cover Type	Interior Ponderosa Pine
Rotation Age	100-140 Yrs
Growing Stock Level	80-120
Thinning Cycle	20-30 Yrs

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		First Cut (seed cut) Cut to BA 30-50 Second Cut (removal cut) Remove all overstory when regenerated stand meets minimum stocking standards * Does not apply on slopes > 30% Restrict to units of < 20 acres in size.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Extend rotation age to 300 years on selected trees within the foreground zone along roads and trails. 3) Three-Step Shelterwood:* Forest Cover Type: Engelmann spruce-Subalpine Fir & Mixed Conifer Rotation Age: 180-200 Yrs Growing Stock Level: N/A Thinning Cycle: N/A First Cut (preparatory cut). Remove up to 30 percent of the basal area. Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~Cut to: BA 60-80 10-20 Yrs after preparatory cut~~ ~~Third Cut (removal cut). Remove all overstory when regenerated stand meets minimum stocking standards.~~ ~~* Does not apply on slopes > 60% Restrict to blocks of < 20 acres in size.~~

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:

Silvicultural Prescriptions

(8055SJ) (02A)

~~03 Apply intermediate treatments in interior ponderosa pine forest cover type to maintain growing stock level standards. (2538SJ) (02A)~~

04 Utilize firewood material using both commercial and noncommercial methods.
(0147) (02A)

05 For management purposes, a cut-over area is considered an opening until such time as:

- Increased water yield drops below 50 percent of the potential increase;
- Forage and/or browse production drops below 40 percent of potential production;
- Deer and elk hiding cover reaches 60 percent of potential;
- Minimum stocking standards by forest cover type and site productivity are met; and
- The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape.

(0500) (02a)

a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following charact--eristics before a cutover area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES		
CONTINUATION OF:				
Silvicultural Prescriptions		Mixed Conifers	190	25
		Lodgepole Pine	150	25
		Engelmann Spruce - Sub - alpine fir	150	25

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Aspen 300 25

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole Pine	30	75%
Engelmann Spruce-Subalpine fir	30	75%
Aspen	30	75%

1/ Applies to trees specified as minimum stocking level.
2/ Percent of plots or transects that are stocked.
(6316) (02A)

Timber Stand Improvement (E05)	01 Control undesirable understory vegetation to favor tree growth in areas managed for timber production. (2551SJ) (02A)	a. Ponderosa Pine: Control Gambel oak in stands on slopes <30% at 10-year intervals starting at a stand age of 30. (8060SJ) (02A)
Special Use Management (Non-Recreation) (J01)	01 Permit special uses which are complementary and compatible with the kind and development level of the associated Forest Service facilities within the area. (0464) (02A)	a. Reference the ROS Users Guide. (6230) (02A)
Transportation System Management (L01 & 20)	01 Manage local constant roads for dispersion of recreationists, hunter access, and pleasure driving. (4752SJ) (02A)	a. Do not exceed an average open local road density of 1 mile/square mile in fourth-order watersheds. (9349SJ) (02A)

MANAGEMENT PRESCRIPTION 02A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)		
	02 Manage local intermittent roads to accommodate light use (SADT O-20). Close to public use. (4728SJ) (02A)	
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct roads to enhance motorized recreation use, 4x4 vehicles, trail bikes and snowmobiles. (4753SJ) (02A)	
	02 Roads will not exceed design guides specified in FSM 7721.3 for local roads. (4754SJ) (02A)	a. Construct all roads with no gravel support. (9335SJ) (02A)
Road Maintenance (L19)	01 Maintain roads to provide quality semi-primitive motorized opportunities and for public safety. (4755SJ) (02A)	a. Maintain local constant roads to maintenance level three when used for project activities and to maintenance level two for general motorized use. (9338SJ) (02A) b. Maintain local intermittent roads to maintenance level two when open for project activities. (9330SJ) (02A)
Trail System Management (L23)	01 Maintain existing motorized routes or construct new routes needed as part of the transportation system. Provide loop routes of one-half to one day's travel time with at least one-half the total route located within the semi-primitive motorized ROS class and utilizing primitive local roads and/or trails suitable for motorized trail bike travel. (0164) (02A)	a. Do not exceed an average motorized trail density of 4 miles per square mile on fourth-order watersheds. (6094) (02A) b. Do not exceed an average motorized trail density of 2 miles per square mile in nonforested areas of fourth-order watersheds. (6093) (02A)

MANAGEMENT PRESCRIPTION 02A

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Trail System Management (L23)		c. Maintain trails to maintenance level three. (9339SJ) (02A)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (02A)	a. Wildfire protection levels in areas managed for timber production: 1) Ponderosa pine on slopes < 30%, with basal area > 40 or stocked, and stand age < 30 years; mixed browse; mixed conifers; Engelmann spruce-subalpine fir; grasslands: a) Promptly control wildfires burning at all Fire Intensity Levels (FIL's). 2) All ponderosa pine other than above; aspen; pinon pine-juniper; Gambel oak: a) Confine or contain wildfires burning at FIL's I and II. b) Effect control of wildfires burning at FIL'S III and higher. (9638SJ) (02A) b. Wildfire protection levels in areas not managed for timber production: 1) Inland ponderosa pine; pinon pine-juniper; Gambel oak; aspen: a) Confine or contain wildfires burning at Fire Intensity Levels (FIL's) I and II. b) Effect control of wildfires

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Fire Planning and Suppression (P01)		burning at FIL'S III and higher. 2) Mixed browse; mixed conifers; Engelmann spruce-subalpine fir; grasslands: a) Effect control of wildfires burning at all FIL'S. (9639SJ) (02A)

MANAGEMENT PRESCRIPTION 02A

Reprinted from Forest Plan (Issued 9/1983)

PRESCRIPTION FOR MANAGEMENT AREA 2B

(Emphasis is on rural and roaded-natural recreation opportunities.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is for rural and roaded-natural recreation opportunities. Motorized and non-motorized recreation activities such as driving for pleasure, viewing scenery, picnicking, fishing, snowmobiling, and cross-country skiing are possible. Conventional use of highway-type vehicles is provided for in design and construction of facilities. Motorized travel may be prohibited or restricted to designated routes, to protect physical and biological resources.

Visual resources are managed so that management activities maintain or improve the quality of recreation opportunities. Management activities are not evident, remain visually subordinate, or may be dominant, but harmonize and blend with the natural setting. Landscape rehabilitation is used to restore landscapes to a desirable visual quality. Enhancement aimed at increasing positive elements of the landscape to improve visual variety is also used.

The harvest method by forest cover type is clearcutting in aspen and lodgepole pine, shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage non-commercial forest and non-forest cover types to meet the standards and guidelines. (0026SJ) (02B)	a. Non-commercial and non-forest cover type management:* 1) Pinon Pine-Juniper: Manage under a 200-year rotation in stands of 10 - 20 acres to create or maintain natural appearing openings. 2) Gambel Oak: Manage 60% of the area for grass to create or maintain natural appearing openings. 3) Mixed Browse: Manage for retention of browse species. 4) Grassland: Manage to retain in parks and grass stands. Retain or enhance viewing opportunities into parks. * These standards and guidelines are applicable only on slopes <60%. (6042SJ) (02B)
	02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions." (0041SJ) (02B)	
Cultural Resource Management (A02)	01 Develop suitable cultural resouce properties for public enjoyment. (0568SJ) (02B)	

MANAGEMENT PRESCRIPTION 02B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Visual Resource Management (A04)	01 Design and implement management activities to provide a visually appealing landscape. Enhance or provide more viewing opportunities and increase vegetation diversity in selected areas. (0150) (02B)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of Partial Retention. (6223) (02B) b. Arterial and collector roads and trails are Sensitivity Level 1. (6268) (02B) c. Manage visual resources using the above standards in accordance with FSM 2380 and FSH 2309.16 through FSH 2309.25. (6225) (02B)
Dispersed Recreation Management (A14 and 15)	01 Provide roaded natural or rural recreation opportunities along Forest arterial, collector and local roads which are open to public motorized travel. Manage recreation use to provide moderate to high incidence of contact with other groups and individuals. Where arterial, collector or local roads or areas are closed to public motorized recreation travel, provide for dispersed non-motorized recreation with a moderate to high incidence of contact with other groups and individuals in a roaded natural or rural setting. (0614) (02B)	a. Maximum use and capacity levels are: -Trail and camp encounters during peak use days may exceed 30 other parties per day. -Trail and area-wide use capacity:

ROS Class - Roaded Natural

Use Level	Very Low	Low	Moderate	High
On Trails PAOT/mile	-	-	-	-
Area-wide PAOT/acre	.04	.08	1.2	2.5

ROS Class - Rural

Use Level	Low	Very Low	Moderate	High
On Trails PAOT/mile	-	-	-	-
Area-wide				

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		PAOT/acre .5 .8 5.0 7.5 - - - - - - - - - - - - - - - - - - Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biophysical resources will occur. (6269) (02B)
		b. Close local roads to public use. Designate routes and areas which can be periodically opened to: - Gathering firewood. - Operating oversnow vehicles. (6328) (02B)
	02 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (02B)	
	03 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (02B)	
	04 Facilities provided include development level 1 and 2 campgrounds, trails suitable for motorized trailbike use, local roads with primitive surface and parking lots at trail heads. Provide signing compatible with intended use. (0153) (02B)	a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (02B) b. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (02B)

MANAGEMENT PRESCRIPTION 02B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		
	05 Prohibit motorized travel off system roads and trails except for designated areas, corridors, parking areas and camping areas. (4769SJ) (02B)	
	06 Close roads and trails to motorized travel when the surface would be damaged to the degree that resulting runoff into adjacent water bodies would exceed sediment yield threshold limits. (0616) (02B)	a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (02B)
Recreation Management (Private and Other Public Sector) (A16)	01 Encourage development of private sector recreation oriented support services. (0161) (02B)	
Range Resource Management (D02)	01 Manage livestock distribution and stocking rates to be compatible with recreation use. Locate structural improvements to meet visual quality objectives. (0158) (02B)	
	02 Utilize extensive management systems such as season-long or deferred grazing. (2031SJ) (02B)	a. Vary utilization standards with grazing system and ecological condition. Specify standards in the allotment management plan. (6071) (02B)
	03 Protect regeneration from livestock damage. (0133) (02B)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (02B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Improvement and Maintenance	01 Construct and maintain allotment boundary fences, short drift fences and water developments necessary to implement management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives. (2039SJ) (02B)	
Silvicultural Prescriptions	01 Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, diversity and insect and disease control. (0159) (02B)	
	02 Manage forest cover types according to the following objectives: a) Interior ponderosa pine on slopes <30%: Manage to retain or create mature character. Mature stands should have moderate to large diameter trees adequate to maintain an open park-like appearance. b) Aspen: Maintain an attractive mix of stands with variety of sizes, heights and ages. Do not convert to conifers. c) Mixed Conifer: Manage for a representation of large tree character. Introduce small scale diversity of different age classes. d) Engelmann Spruce-Subalpine Fir: Manage to strive for a variety of age class distribution (young to old). (2435SJ) (02B)	
	*** 03 Manage forest cover types using the primary and secondary methods specified in the Forest Direction. - Clearcut in aspen and lodgepole. - Shelterwood in interior ponderosa pine, mixed conifer - and Engelmann spruce-subalpine fir. (0463) (02B)	a. Apply harvest treatments to forest cover types as specified below on at lease 80% of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (02B)

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		b. Silvicultural Standards are specified in the Forest Direction. 1) Clearcut.* Forest Cover Type Lodgepole Pine / Aspen Rotation Age: 90-140 Yrs / 70-90 Yrs Growing Stock Level: 80-140 / N/A Thinning cycle: 20-30 Yrs / N/A * Does not apply on slopes > 60%. Restrict to units <5 acres in size. 2) Two-Step Shelterwood:* Forest Cover Type Interior Ponderosa Pine

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~Rotation Age~~ ~~100-140 Yrs~~
		~~Growing Stock Level~~ ~~50-100~~
		~~Thinning Cycle~~ ~~20-30 Yrs~~

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		First Cut (seed cut). Cut to BA 30-50 Second Cut (removal cut) Remove all overstory when regenerated stand meets minimum stocking standards. * Does not apply on slopes > 30%. Restrict to units of < 3 acres in size. Extend rotation age to 300 years on 2 - 5 large trees per acre. 3) Three-Step Shelterwood:*

Forest Cover Type	Engelmann spruce-subalpine fir & Mixed Conifer
Rotation Age	180-200 Yrs
Growing Stock Level	110-130
Thinning Cycle	25-35

First Cut (preparatory cut). Remove up to 30 percent of the basal area.

Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or Cut to: BA 60-80 10-20 Yrs

MANAGEMENT PRESCRIPTION 02B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~after preparatory cut~~
		~~Third Cut (removal cut). Remove all overstory when regenerated stand meets minimum stocking standards.~~
		~~* Does not apply on slopes > 60%. Restrict to units <5 acres in size (8058SJ) (02B)~~
	~~04 Apply intermediate treatments to maintain growing stock level standards. (0140) (02B)~~	
	05 Utilize firewood material using both commercial and noncommercial methods. (0147) (02B)	
	06 For management purposes; a cut-over area is considered an opening until such time as; - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (02B)	a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Height 1/ (% of the adjacent mature stand height)

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES	
CONTINUATION OF:			
Silvicultural Prescriptions		Inland Ponderosa Pine	190	25
		Mixed Conifers	190	25

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Lodgepole Pine 150 25 Engelmann Spruce - Sub-alpine fir 150 25 Aspen 300 25 - Forest Cover Type / Crown Closure (Percent) / Distri-bution 2/ - Inland Ponderosa Pine 30 70% Mixed Conifers 30 75% Lodgepole Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% - 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6316) (02B)
Timber Stand Improvement (E05)	01 Control undesirable understory vegetation to favor tree growth. (25275J) (02B)	a. Ponderosa Pine: Control Gambel oak in stands on slopes <30% at 10-year intervals starting at a stand age of 30. (8060SJ) (02B)

MANAGEMENT PRESCRIPTION 02B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Special Use Management (Non -Recreation) (J01)	01 Permit special uses which are complementary and compatible with the kind and development level of the associated Forest Service facilities within the area. (0464) (02B)	a. Reference the ROS Users Guide. (6230) (02B)
Transportation System Management (L01 & 20)	01 Manage public use of roads with techniques such as, seasonal closure, time of day closures, etc. (012B) (02B)	
	02 Manage local constant roads for medium to high use (SADT above 50) and construct to all season standard. (4770SJ) (02B)	a. Manage the area for a moderate density (one-half to one mile/ square mile) of constant roads. (9333SJ) (02B)
	03 Manage local intermittent roads to accommodate light use (SADT 0-20). (4771SJ) (02B)	a. Close local roads to public use. Designate routes and areas which can be periodically opened to: - Gathering firewood. - Operating oversnow vehicles. (632B) (02B)
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct roads for dispersion of recreationists and pleasure driving. (4772SJ) (02B)	a. Construct or reconstruct local constant roads with full gravel support. Abate dust on high use (SADT above 195) roads. (9345SJ) (02B) b. Construct local intermittent roads with no gravel support. (9346SJ) (02B)
Road Maintenance (L19)	01 Maintain roads to provide quality motorized recreation opportunities and for public safety. (4773SJ) (02B)	a. Maintain local constant roads to maintenance levels four and five. (9347SJ) (02B) b. Maintain local intermittent roads to maintenance level two when open for project activities.

MANAGEMENT PRESCRIPTION 02B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Road Maintenance (L19)		(9330SJ) (02B)
Trail System Management (L23)	01 Maintain existing motorized routes or construct new routes needed as part of the transportation system. Develop loop routes and coordinate them to compliment semi-primitive motorized opportunities in adjacent semi-primitive motorized ROS class areas. (0439) (02B)	a. On all nonforested areas, motorized trail and local road density is not to exceed 4 miles per square mile. (6270) (02B) b. Maintain trails to maintenance levels four and five. (9348SJ) (02B)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (02B)	a. Wildfire protection levels: Promptly control wildfires burning at all Fire Intensity Levels except in areas managed for permanent openings. (9629SJ) (02B)
Fuel Treatment (P11 thru 14)	01 Maintain fuel conditions which permit fire suppression forces to meet fire protection objectives for the area. (0113) (02B)	a. Reduce or otherwise treat all fuels on areas where wildfires are likely to threaten lives or property so the potential fireline intensity of an area will not exceed 100 BTU's/sec/ft (B.I. 38) on 90% of the days during the regular fire season, or Break up continuous fuel concentrations exceeding the above standard into manageable units with fuel breaks or fire lanes. (9634SJ) (02B)

MANAGEMENT PRESCRIPTION 02B

Reprinted from Forest Plan (Issued 9/1983)

PRESCRIPTION FOR MANAGEMENT AREA 3A

(Emphasis is on semi-primitive non-motorized recreation in roaded or non-roaded areas.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is for semi-primitive non-motorized recreation in both roaded and unroaded areas. Recreation opportunities such as hiking, horseback riding, hunting, cross-country skiing, etc., are available. Seasonal or permanent restrictions on human use may be applied to provide seclusion for wildlife such as nesting for raptorial birds, big game rearing areas, and mammals (mountain lion, wolverine, etc.) with large home ranges. Visual resources are managed so that management activities are not visually evident or remain visually subordinate.

Investments in compatible resource uses such as livestock grazing, mineral exploration and development, etc., occur; but roads are closed to public use. Commercial and non-commercial tree harvests occur. The harvest method by forest cover type is clearcutting in aspen and lodgepole pine, shelterwood in interior ponderosa pine, Engelmann spruce-subalpine fir and mixed conifers.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession unless specific vegetation treatment is necessary to meet recreation and visual objectives or for insect and disease control. (0034SJ) (03A)	
Cultural Resource Management (A02)	01 Develop suitable cultural resouce properties for public enjoyment. (0568SJ) (03A)	
Visual Resource Management (A04)	01 Design and implement management activities to provide a visually appealing landscape. Enhance or provide more viewing opportunities and increase vegetation diversity in selected areas. (0150) (03A)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of Partial Retention. (6223) (03A) b. FS System travel routes are Sensitivity Level one. (6224) (03A) c. Apply rehabilitation practices where the above objectives are not currently being met. (6068) (03A) d. Manage visual resources using the above standards in accordance with FSM 2380 and FSH 2309.16 through FSH 2309.25. (6225) (03A)
Dispersed Recreation Management (A14 and 15)	01 Emphasize semi-primitive non-motorized recreation opportunities. Specific land areas or travel routes may be opened seasonally and with specific authorization to accomplish resource management activities. The area is never open for motorized recreation activities except for specifically identified motorized corridors through the area. (0538SJ) (03A)	a. Prohibit or restrict motorized vehicle use (R2 FSH 2309.26). (6228) (03A)
	02 Manage use to allow low to moderate contact with other groups and individuals. (0238) (03A)	a. Maximum use and capacity: -Trail and camp encounters during peak use days are less than 30 other parties

MANAGEMENT PRESCRIPTION 03A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		per day. -Trail and area-wide use capacity: ROS Class - Semi-Primitive Nonmotorized Use Level / Very Low / Low / Moderate / High On Trails PAOT/mile: 2.0 / 3.0 / 9.0 / 11.0 Area-wide PAOT/acre: .004 / .008 / .05 / .08 Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biophysical resources will occur. (6378) (03A)
	03 Provide facilities such as foot and horse trails, single lane local intermittent roads with primitive surface used as trails, development level 1 and 2 campgrounds, and necessary signing. (0394) (03A)	a. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (03A)
	04 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (03A)	

MANAGEMENT PRESCRIPTION 03A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Recreation Management (Private and Other Public Sector) (A16)	01 Encourage development of private sector recreation oriented support services. (0161) (03A)	
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 Maintain wildlife habitat effectiveness. Permanent openings may be employed. Reduce disturbance to wildlife so that no significant long-term negative wildlife effects result. (0155) (03A)	
	02 Provide deer and elk cover. (0612) (03A)	
	03 Favor indicator species through wildlife habitat improvement. (1534SJ) (03A)	a. Hairy Woodpecker and Mountain Bluebird: Protect and/or provide 25 snags/10 acres in all forested types. Also provide for snag replacement. (7245SJ) (03A)
		b. Deer, Elk, Turkey, Mallard, Black Bear and Goshawk: Provide one water source per section where there are no natural water sources. Use primitive materials for construction. (7251SJ) (03A)
Range Resource Management (D02)	01 Manage livestock distribution and stocking rates to be compatible with recreation use. Locate structural improvements to meet visual quality objectives. (015B) (03A)	
	02 Utilize extensive management systems such as season-long or deferred grazing. (2031SJ) (03A)	a. Vary utilization standards with grazing system and ecological condition. Specify standards in the allotment management plan. (6071) (03A)

MANAGEMENT PRESCRIPTION 03A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Improvement and Maintenance	01 Construct and maintain allotment boundary fences, short drift fences and water developments necessary to implement management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives. (2039SJ) (03A)	
Silvicultural Prescriptions	01 Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, diversity and insect and disease control. (0159) (03A)	
	*** 02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. ***	a. Apply harvest treatments to forest cover types as specified below on at lease 80% of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (03A)
	~~- Clearcut in aspen and lodgepole.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ ~~(0463) (03A)~~	b. Silvicultural Standards: are specified in the Forest Direction. ~~1) Clearcut.~~ ~~Forest Cover Type~~

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES		
CONTINUATION OF: Silvicultural Prescriptions		Lodgepole Pine	Aspen	Other Forest Cover Types
		Rotation Age 90-140 Yrs	90-120 Yrs	100 or More Yrs
		Growing Stock 80-140	N/A	60 to 120

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT PRESCRIPTION 03A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Level
		Thinning cycle: 20-30 Yrs; N/A; 20 to 30 yrs
		2) Two-Step Shelterwood:
		Forest Cover Type: Engelmann spruce-sub-alpine fir, Interior Ponderosa Pine & Mixed Conifer; Other Forest Cover Types
		Rotation Age: 100-180 yrs; 100 or more yrs
		Growing Stock Level: 80-160; 60-120
		Thinning Cycle: 20-30 yrs; 20-30 yrs

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		First cut (Seed cut): Remove 40 to 70 percent of the basal area or Cut to: BA 25-60 BA 20-60 Second Cut (Removal cut): Remove all overstory when regenerated stand meets minimum stocking standards. 3. Three-Step Shelterwood: Forest Cover Type

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES	
CONTINUATION OF: Silvicultural Prescriptions		Engelmann spruce-sub-alpine fir, Interior Ponderosa Pine & Mixed Conifer	Other Forest Cover Types
		Rotation Age 100-180 yrs	100 or more yrs
		Growing Stock Level 80-160	60-120
		Thinning Cycle 20-30 yrs	20-30 yrs
		First cut (preparatory cut): Remove 10 to 40 percent of the basal area or Cut to: BA 60-80	BA 50-80
		Second Cut (Seed cut): Remove 40 to 50 percent of the remaining basal area or Cut to: BA 25-50	BA 20-50
		10-20 yrs	10-20 yrs

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~after pre-paratory cut~~ ~~after prepara-tory cut~~
		~~Third Cut (removal cut): Remove all overstory when regenerated stand meets minimum stocking standards.~~
		~~(6300) (03A)~~

03 Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. (2539SJ) (03A)

~~Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.~~

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	04 Apply intermediate treatments to maintain growing stock level standards. (0140) (03A)	
	05 Utilize firewood material using both commercial and noncommercial methods. (0147) (03A)	
	06 For management purposes, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (03A)	a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25
Mixed Conifers	190	25
Lodgepole Pine	150	25
Engelmann Spruce - Sub-alpine fir	150	25
Aspen	300	25

Forest Cover Type	Crown Closure (Percent)	Distri-bution 2/

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES		
CONTINUATION OF: Silvicultural Prescriptions		Inland Ponderosa Pine	30	70%
		Mixed Conifers	30	75%
		Lodgepole Pine	30	75%
		Engelmann Spruce-Subalpine fir	30	75%
		Aspen	30	75%
		1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6316) (03A)		
Water Resource Improvement and Maintenance	01 Permanent openings may be employed to enhance water production. (0497) (03A)			

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT PRESCRIPTION 03A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Special Use Management (Non -Recreation)	01 Permit special uses which are complementary and compatible with the objectives of the management area and which do not change the ROS classification. (0395) (03A)	
	02 Permit special uses which are complementary and compatible with the kind and development level of the associated Forest Service facilities within the area. (0464) (03A)	a. Reference the ROS User Guide. (6230) (03A)
Local Road Construction and Reconstruction	01 Local roads may be constructed for non-recreation purposes. (4757SJ) (03A)	a. Construct all roads with no gravel support. (9335SJ) (03A)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Local Road Construction and Reconstruction (L11, 12, & 13)	02 Close local roads to public motorized use except for specifically identified motorized corridors through the area. (4792SJ) (03A)	
Road Maintenance (L19)	01 Maintain roads to minimum level necessary for administration and resource management entry. (4758SJ) (03A)	a. Maintain local intermittent roads to maintenance level two when open for project activities. (9330SJ) (03A) b. Maintain local roads to level one during periods when access for resource utilization is not required. (9340SJ) (03A)
Trail System Management (L23)	01 Emphasize trails for hikers, cross-country skiers and horse use. (4788SJ) (03A)	a. Maintain trails to maintenance levels three and four. (9341SJ) (03A)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (03A)	a. Wildfire protection levels: 1) Inland ponderosa pine; pinon pine-juniper; Gambel oak; aspen: a) Confine or contain wildfires burning at Fire Intensity Levels (FIL's) I and II. b) Effect control of wildfires burning at FIL'S III and higher. 2) Mixed browse; Mixed conifers; Engelmann spruce-subalpine fir; Grasslands: a) Effect control of wildfires burning at all FIL'S. (9631SJ) (03A)

MANAGEMENT PRESCRIPTION 03A

Reprinted from Forest Plan (Issued 9/1983)

PRESCRIPTION FOR MANAGEMENT AREA 4B

(Emphasis is on habitat for management indicator species.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is on the habitat needs of one or more management indicator species. Species with compatible habitat needs are selected for an area. The goal is to optimize habitat capability, and thus numbers of the species. The prescription can be applied to emphasize groups of species, such as early succession dependent or late succession dependent, in order to increase species richness or diversity.

Vegetation characteristics and human activities are managed to provide optimum habitat for the selected species, or to meet population goals jointly agreed to with the State Fish and Wildlife agencies. Tree stands are managed for specific size, shape, interspersion, crown closure, age, structure, and edge contrast. Grass, forb, and browse vegetation characteristics are regulated. Rangeland vegetation is managed to provide needed vegetation species composition and interspersed grass, forb, and shrub sites or variety in age of browse plants. Fish habitat improvement treatments are applied to lakes and streams to enhance habitats and increase fish populations.

Recreation and other human activities are regulated to favor the needs of the designated species. Roaded-natural recreation opportunities are provided along Forest arterial and collector roads. Local roads and trails are either open or closed to public motorized travel. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open; semi-primitive non-motorized opportunities are provided on those that are closed. A full range of tree harvest methods and rangeland vegetation treatment methods are available. Investments in other compatible resource uses may occur but will be secondary to habitat requirements. Management activities may dominate in foreground and middleground, but harmonize and blend with the natural setting.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage non-commercial forest and non-forest cover types to meet the standards and guidelines. (0026SJ) (04B)	a. Non-commercial and non-forest cover type management: 1) Pinon Pine-Juniper: a) On slopes < 60%: Manage under a 200-year rotation in stands up to 40 acres distributed evenly throughout the type to favor wildlife management indicator species; deer and elk. Seed with forage species. b) On slopes > 60%: Manage for natural succession to favor wildlife management indicator species; deer and elk. 2) Gambel Oak (Includes ponderosa pine sites which are presently non-stocked): a) On slopes < 60%: (1) Manage 50% to 70% of the area for oakbrush under a 200-year rotation with an approximation of equal distribution of size classes to favor wildlife management indicator species; deer, elk, bear, and green-tailed towhee. Protect largest diameter oak in 1 to 3-acre patches up to 10% of area. (2) Manage 30% to 50% of the area for grass to favor wildlife management indicator species; elk. Seed

MANAGEMENT PRESCRIPTION 04B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands		with forage species. b. on slopes . 60%. Manage for natural succession to favor wildlife management indicator species, deer and elk. 3. Mixed Browse: On all slopes, manage under a 100-year rotation to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. Plant additional browse species. 4. Grassland: On all slopes, manage to retain in forage to favor wildlife management indicator species; elk, and for livestock. Reseed with forage species. (6028SJ) (04B)
	*** 02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions" in the Forest Direction. *** (0041SJ) (04B)	

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Dispersed Recreation Management (A14 and 15)	01 Manage human recreational activities so they do not conflict with habitat needs of selected indicator species. (0343) (04B)	
	02 Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and non-motorized opportunities will be available until planned resource activities are implemented. (0527SJ) (04B)	a. Maximum Use and Capacity Levels are:

Recreation use and capacity range during the snow-free period (PAOT/acre):

Trail use and capacity range (PAOT/mile of trail):

Class	Capacity Range* Very Low	Low	Moder-ate	High
ROS Class - Semi-Primitive Non-motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Semi-Primitive Motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Roaded Natural				
On Trails				

MANAGEMENT PRESCRIPTION 04B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		PAOT/mile - - - - Area-wide PAOT/acre .04 .08 1.2 2.5 Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biophysical resources will occur. * VERY LOW applies to alpine. LOW applies to rock, mtn. grass and clearcuts 1-20 years old. MODERATE applies to mtn. grass, PP size class 9, 8 and 7, DF size class 9, 8 and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old. HIGH applies to SF size class 9 and 8, Aspen size class 8 and 7 and clearcuts 20-80 years old. (6426SJ) (04B) b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (04B) c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		and 11b (Sign Handbook). (6226) (04B)
	03 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (04B)	
	04 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (04B)	
	05 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat. (0154) (04B)	
	06 Restrict use to resolve people/wildlife conflicts, favoring wildlife in such conflicts. (0531SJ) (04B)	
Wildlife and Fish Resource Management (G01)	01 Manage for habitat needs of management indicator species. (0340) (04B)	a. Maintain habitat capability at a level at least 80 percent of potential capability. (6261) (04B)
	02 Emphasis on species commonly hunted, fished, or trapped will follow species priorities established by States. (0338) (04B)	a. Maintain at least 90 percent of the habitat needed to support the State population goals for each species. (6260) (04B)
	03 Maintain hiding cover for elk and deer, where present. (0341) (04B)	a. Maintain, along 75 percent of all arterial and collector road edges cover that hides 90 percent of an adult standing deer or elk from human

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife and Fish Resource Management (C01)		view at a distance at 200 feet from the road. (6191) (04B)
		b. In diversity units dominated by forested ecosystems, maintain a minimum of 50 percent of the diversity unit in deer or elk hiding cover. This hiding cover should be well distributed over the unit. Maintain 30 percent of the diversity unit in thermal cover (winter or spring-summer). Hiding cover can be used to meet thermal cover requirements if they indeed coincide biologically. (6334) (04B)
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 See the "Diversity on National Forests and National Grasslands" and "Silvicultural Prescriptions" management activities for specific vegetation treatment for wildlife objectives. (1526SJ) (04B)	
	02 Intensively manage for wildlife habitats. Favor indicator species through resource management activities. (1529SJ) (04B)	a. Deer, Elk, and Bear:
		1) Restrict disruptive human activity in calving and fawning areas during May, June and July.
		2) Maintain a wildlife movement corridor at least 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each one-half square mile where vegetation treatment projects occur.
		(7237SJ) (04B)
		b. Hairy Woodpecker and Mountain Bluebird:
		Protect and/or provide 25 to 30

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)		snags/10 acres in all forested types. Also provide for snag replacement. (7238SJ) (04B) c. Merriam's Turkey 1) Protect three turkey roost tree clumps/section in all ponderosa pine and mixed conifer sale areas, if available. Where deficient, designate four clumps of the largest DBH presently available for future use. The minimum size of a clump is to be one-tenth acre. 2) Provide two turkey food stations per four square miles in known winter concentration areas. 3) Construct four five-acre livestock exclosures/section in known turkey nesting habitat. 4) Provide additional water sources as necessary in deficient low elevation areas to bring the total water sources up to three/section. (7239SJ) (04B) d. Abert's Squirrel Protect or provide for one Abert's sqirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine with a basal area of 180 to 220 and an interlocking canopy)/two acares on all ponderosa pine sale areas. (7240SJ) (04B) e. Pine Marten:

MANAGEMENT PRESCRIPTION 04B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)		Within spruce-fir sale areas on on pine marten habitat, retain at least 20 percent of the area in old growth timber (200+ years) with a canopy closure greater than 30 percent. Where the canopy is totally eliminated, the opening should not be more than 300 feet wide. (7241SJ) (04B) f. Goshawk: Prohibit disruptive management activities within 300 feet of any occupied raptor nests during the period May 1 through July 31. (7231SJ) (04B) g. Merriam's Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee: 1) Construct one brush pile (10'x 20'x4') every three acres in those sale areas where naturally occurring ground litter has been drastically reduced. 2) Fence one-third of the area of all earthen constructed livestock reservoirs to protect lacustrine nesting habitat for small non-game birds and mammals. (7242SJ) (04B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Resource Management (D02)	01 Manage suitable vegetation types for livestock production, with the intent to utilize available forage and maintain forage vigor, while not degrading wildlife habitat. Reduce the number or season of use for permitted livestock where needed to provide sufficient forage for wildlife, especially on big game winter range. (2034SJ) (04B)	a. On big game winter range, livestock will be moved or grazing not allowed when livestock and wild herbivores allowable forage use by grazing system and range type exceeds the following: 1) Rest-rotation system: Use by range type: -Mainly seed reproduction: (Bunchgrass, plains grassland, foothills shrub and alpine range types): 25-30 percent on heavy use pastures. 15-25 percent on light use pastures. -Mainly vegetative reproduction (meadow, sandhill prairie, bluegrass bottoms, and aspen range types): Bluegrass: maximum of 50-60 percent; others, 30-35 percent on heavy use pastures, 15-20 percent on light use pastures. 2) Deferred Rotation System: Use by range type: -Mainly seed reproduction: 15-20 percent on all pastures. -Mainly vegetative reproduction: 20-25 percent on all pastures.

MANAGEMENT PRESCRIPTION 04B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		3) Rotation System Use by range type: -Mainly seed reproduction: Max. of 20-30 percent on last pastures; Max. of 10-20 percent on first used pasture. -Mainly vegetative reproduction: Max. of 25-35 percent on last used pasture. Max. of 15-25 percent on first used pasture. 4) Continuous System (Grazing same time and place every year): Use by range type: -Mainly seed reproduction:

Use by Condition Class on Key Area

Season	Good and Excellent	Fair	Poor	Very Poor
Full Grazing Season or Spring	5-10%	0	0	0
Summer	10-15%	0-5%	0	0
Fall and/or Winter	20-25%	10-15%	0-5%	0

-Mainly vegetative reproduction:

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		Same as primary seed reproduction except increase utilization by 10% on the bluegrass. 5) Alternate Years System: Use by range type on key areas: -Mainly seed reproduction: Condition Class on Key Area — Use Good-Excellent — 25-30% Fair — 15-20% Poor — 0-5% Very Poor — 0 -Mainly vegetative reproduction: Condition Class on Key Area — Use Good-Excellent — 30-35% Fair — 20-25% Poor — 5-10% Very Poor — 0-10% Bluegrass 50-60% on good or better condition and same proper use percent for fall and lower as above. (7632SJ) (04B)
02 Implement rotation grazing systems. (041B) (04B)		a. Vary utilization standards with grazing system and ecological condition. Specify standards in the allotment management plan. (6071) (04B)

MANAGEMENT PRESCRIPTION 04B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management		
	03 Protect regeneration from livestock damage. (0133) (04B)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (04B)
Range Improvement and Maintenance	01 Structural range improvement should be designed to benefit wildlife and livestock. (0416) (04B)	a. Structural improvements will not adversely affect big game movement (FSH 2209.22). (6247) (04B)
Silvicultural Prescriptions	01 Manage forest cover types to provide variety in stand sizes, shapes, crown closure, edge contrast, age structure and interspersion. (0345) (04B)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. ~~- Clearcut in aspen.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ (2526SJ) (04B)	~~a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction.~~ ~~(6074) (04B)~~ *** ↕ *** b. Silvicultural Standards are specified in the Forest Direction. ~~1) Clearcut.~~ ~~Forest Cover Type~~ ~~Lodgepole~~

*** Denotes change from original Plan.

~~Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.~~

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES	
CONTINUATION OF: Silvicultural Prescriptions		Pine	Aspen
		Rotation Age	90-140 Yrs	70-90 Yrs
		Growing Stock Level	80-120	N/A
		Thinning cycle	20-30 Yrs	N/A
		* Does not apply on slopes > 60%		
		2) Two-Step Shelterwood:*		
		Forest Cover Type		
			Interior Ponderosa Pine	
		Rotation Age	100-140 yrs. on 80% of type. 200 + yrs. on 20% of type.	

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Growing Stock Level: 80-120 on 80% of area. 160-180 on 20% of area. Thinning Cycle: 20-30 Yrs First Cut (seed cut). Cut to: BA 30-50 Second Cut (removal cut) Remove all overstory when regenerated stand meets minimum stocking standards.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		* Does not apply on slopes > 30% 3) Three-Step Shelterwood:* Forest Cover Type: Engelmann spruce-Subalpine Fir & Mixed Conifer Rotation Age: 180-200 Yrs Growing Stock Level: 110-130 Thinning cycle: 25-35 Yrs First Cut (preparatory cut). Remove up to 30 percent of the basal area. Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or Cut to: BA 60-80 10-20 yrs after preparatory cut Third Cut (removal cut). Remove all overstory when regeneration stand meets minimum stocking standards.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT PRESCRIPTION 04B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural Prescriptions (E03, 06 & 07)

03 Apply intermediate treatments to maintain growing stock level standards.
(0140) (04B)

04 Utilize firewood material using both commercial and noncommercial methods.
(0147) (04B)

05 For management purposes, a cut-over area is considered an opening until such time as:

- Increased water yield drops below 50 percent of the potential increase;
- Forage and/or browse production drops below 40 percent of potential production;
- Deer and elk hiding cover reaches 60 percent of potential;
- Minimum stocking standards by forest cover type and site productivity are met; and
- The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape.

(0500) (04B)

a. When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Stand Height (ft.) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6
Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

Forest Cover Type	Crown Closure (Percent)	Distribution 2/

MANAGEMENT PRESCRIPTION 04B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Inland Ponderosa Pine 30 70% Mixed Conifers 30 75% Lodgepole Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6014) (04B)
Reforestation (E04)	01 Supplement natural regeneration in some areas to compensate for domestic grazing damage. (2528SJ) (04B)	
Timber Stand Improvement (E05)	01 Control undesirable understory vegetation to favor tree growth. (2527SJ) (04B)	a. Ponderosa Pine: Control Gambel oak in stands on slopes <30% at 10-year intervals starting at a stand age of 30. (8060SJ) (04B)
Transportation System Management (L01 & 20)	01 Manage road use to provide for habitat needs of management indicator species, including road closures and area closures, and to maintain habitat effectiveness. (0342) (04B)	

MANAGEMENT PRESCRIPTION 04B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	02 Manage local constant roads to accomodate medium - light seasonal use (SADT 10-50). Regulate seasonal public use by closure if roadbed damage will occur and where travel conflicts with natural wildlife movements. (4737SJ) (04B)	a. Manage the area for a moderate density (one-half to one mile/ square mile) of constant roads. (9333SJ) (04B)
	03 Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use. (4728SJ) (04B)	
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct transportation facilities to provide maximum economy of timber harvest and safety for the public while giving priority consideration to wildlife needs. Avoid winter range areas and unique wildlife habitats. (4738SJ) (04B)	a. Construct or reconstruct local constant roads with gravel support needed for timber operations and hauling. (9332SJ) (04B)
		b. Construct local intermittent roads with no gravel support unless needed to extend logging seasons. (9328SJ) (04B)
Road Maintenance (L19)	01 Maintain roads for a mix of resource uses and public safety. (4742SJ) (04B)	a. Maintain local constant roads to maintenance level three. (9329SJ) (04B)
		b. Maintain local intermittent roads to maintenance level two when open for project activities. (9330SJ) (04B)
Trail System Management (L23)	01 Provide trails for cross-country skiing, snowmobile, foot, and horse travel where people/wildlife conflicts do not exist. (4740SJ) (04B)	a. Maintain trails to maintenance level two. (9331SJ) (04B)

MANAGEMENT PRESCRIPTION 04B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (04B)	a. Wildfire protection levels: 1) Pinon pine-juniper, gambel oak, grasslands, aspen. a) Confine or contain wildfires burning at Fire Intensity Levels (FIL) I and II. b) Effect control of wildfires burning at FIL's III and higher. 2) Mixed browse, mixed conifers, Engelmann spruce and subalpine fir. a) Promptly control wildfires burning at all FIL's. 3) Inland ponderosa pine. a) When stand age is < 30 years, promptly control wildfires burning at all FIL's. b) When stand age is > 30 years, confine or contain wildfires burning at FIL's I and II; effect control of wildfires burning at FIL's III and higher. (9626SJ) (04B)
Fuel Treatment (P11 thru 14)	01 Maintain fuel conditions which permit fire suppression and prescribed fire to maintain habitat needed for selected species or species population levels. (0344) (04B)	

PRESCRIPTION FOR MANAGEMENT AREA 5B

(Emphasis is on big game winter range in forested areas.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is on forage and cover on winter ranges. Winter habitat for deer, elk, bighorn sheep, and mountain goats is emphasized. Treatments to increase forage production or to create and maintain thermal and hiding cover for big game are applied. Tree stand treatments can be clearcut, shelterwood, single tree selection or group selection. Commercial and non-commercial stand treatments occur. Specific cover-opening ratios, and stand designs are maintained. Treatments to grass, forb, browse, and non-commercial tree species include seeding, planting, spraying, burning, falling and mechanical chopping or crushing. A variety of browse age classes are maintained. Continuous forest cover is maintained on some sites.

Investments in compatible resources occur. Livestock grazing is compatible but is managed to favor wildlife habitat. Structural range improvements benefit wildlife. Management activities are not evident, remain visually subordinate, or dominate in the foreground and middleground but harmonize and blend with the natural setting.

New roads other than short-term temporary roads are located outside of the management area. Short-term roads are obliterated within one season after intended use. Existing local roads are closed and new motorized recreation use is managed to prevent unacceptable stress on big game animals during the primary big game use season.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands	01 Manage non-commercial forest and non-forest cover types to meet the standards and guidelines. (0026SJ) (05B)	a. Non-commercial and non-forest cover type management: 1) Pinon Pine-Juniper: a) On slopes < 60%: Manage under a 200-year rotation in stands up to 40 acres distributed evenly throughout the type to favor wildlife management indicator species; deer and elk. Seed with forage species. c) On slopes > 60%: Manage for natural succession to favor wildlife management indicator species; deer and and elk. Spot burn to improve forage. 2) Gambel Oak (Includes ponderosa pine sites which are presently nonstocked): a) On slopes < 60%: (1) Manage 70% of the area for oakbrush under a 200-year rotation with an approximation of equal distribution of size classes to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee. Protect largest diameter oak in 1 to 3-acre patches up to 10% of area. (2) Manage 30% of the area for grass to favor wildlife management indicator

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)		species; elk. Seed with forage species. b) On slopes > 60%: Manage for natural succession to favor wildlife management indicator species; deer and elk. Spot burn to improve forage. 3) Mixed Browse: On all slopes, manage under a 100-year rotation to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. Plant additional browse species. 4) Grassland: a) On slopes: On all slopes, manage to retain in forage to favor wildlife management indicator species; elk, and for livestock. Reseed with forage species. (6032SJ) (05B)
	*** 02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions" in the Forest Direction. *** (0041SJ) (05B)	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Cultural Resource Management (A02)	01 Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with wildlife requirements. Limit interpretation to low cost developments such as interpretive signing. (0530SJ) (05B)	
Visual Resource Management (A04)	01 Design and implement management activities to blend with the natural landscape. (0332) (05B)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of modification. (6267) (05B)
Management of Developed Recreation Sites (A08, 09, 11 & 13)	01 Design, construct and operate only those developed sites which are needed to meet summer season management objectives, and are appropriate for the established ROS designation. Close all developed sites during the winter management season. (0652) (05B)	
Dispersed Recreation Management (A14 and 15)	01 Restrict use to resolve people/wildlife conflicts, favoring wildlife in such conflicts. (0533SJ) (05B)	
	02 Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and non-motorized opportunities will be available until planned resource activities are implemented. (0527SJ) (05B)	a. Maximum Use and Capacity Levels are: Recreation use and capacity range during the snow-free period (PAOT/acre): Trail use and capacity range (PAOT/mile of trail):

Glass	Capacity Range* Very Low	Low	Moderate	High
ROS Class - Semi-Primitive Non-motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide				

MANAGEMENT PRESCRIPTION 05B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Dispersed
Recreation
Management
(A14 and 15)

PAOT/acre	.004	.008	.05	.08
ROS Class -	Semi-Primitive Motorized			
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class -	Roaded Natural			
On Trails PAOT/mile	-	-	-	-
Area-wide PAOT/acre	.04	.08	1.2	2.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.

* VERY LOW applies to alpine.

LOW applies to rock, mtn. grass and clearcuts 1-20 years old.

MODERATE applies to mtn. grass, PP size class 9, 8 and 7, DF size class 9, 8 and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old.

HIGH applies to SF size class 9

MANAGEMENT PRESCRIPTION 05B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		and 8, Aspen size class 8 and 7 and clearcuts 20-80 years old. (6426SJ) (05B)
		b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (05B)
		c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (05B)
		d. Prohibit open fires when the occurrance of fire rings exceeds Frissell Class 1 site conditions on 10 percent or more of the known campsites. (6330) (05B)
	03 Manage winter use for very low or low densities. Close areas to human use to the degree necessary in winter to prevent disturbance of wildlife. (0754) (05B)	a. Close management area to cross-country ski trail development and to snowmobile use. (6662) (05B)
		b. Do not provide parking or trail head facilities during winter. (6664) (05B)
Wildlife and Fish Resource Management (G01)	01 Provide big-game forage and cover, and habitat. (0310) (05B)	a. Maintain at least 30 percent of the area in created or natural openings. (6177) (05B)
		b. Do not eliminate presence of any browse species. (6168) (05B)
		c. Provide thermal cover for elk or deer on at least 20

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife and Fish Resource Management (G01)		percent of the area. (6179) (05B)
		d. Maintain, along 75 percent of all arterial and collector road edges cover that hides 90 percent of an adult standing deer or elk from human view at a distance at 200 feet from the road. (6191) (05B)
		e. In diversity units dominated by forested ecosystems, maintain a minimum of 50 percent of the diversity unit in deer or elk hiding cover. This hiding cover should be well distributed over the unit. Maintain 30 percent of the diversity unit in thermal cover (winter or spring-summer). Hiding cover can be used to meet thermal cover requirements if they indeed coincide biologically. (6334) (05B)
		f. Maintain habitat effectiveness during winter of at least 90 percent. (6171) (05B)
		g. Maintain habitat capability at a level at least 80 percent of potential capability. (6261) (05B)
		h. Maintain at least 30 percent of shrub plants in mature age, and at least 10 percent in young stage. (6166) (05B)
		i. Maintain at least two shrub species on shrub lands capable of growing two or more shrub

MANAGEMENT PRESCRIPTION 05B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife and Fish Resource Management (C01)		species. (6167) (05B)
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 See the "Diversity on National Forests and National Grasslands" and "Silvicultural Prescriptions" management activities for specific vegetation treatment for wildlife objectives. (1526SJ) (05B)	
	02 Design management activities to favor indicator species endemic to particular habitat types with emphasis on forage and cover on key winter ranges for deer and elk. (1531SJ) (05B)	a. Deer, Elk, and Bear: 1) Restrict disruptive human activity in calving and fawning areas during May, June and July. 2) Maintain a wildlife movement corridor at least 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each one-half square mile where vegetation treatment projects occur. (7237SJ) (05B) b. Hairy Woodpecker and Mountain Bluebird: Protect and/or provide 25 to 30 snags/10 acres in all forested types. Also provide for snag replacement. (7238SJ) (05B) c. Merriam's Turkey 1) Protect three turkey roost tree clumps/section in all ponderosa pine and mixed conifer sale areas, if available. Where deficient, designate four clumps

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)		of the largest DBH presently available for future use. The minimum size of a clump is to be one-tenth acre. 2) Provide two turkey food stations per four square miles in known winter concentration areas. 3) Construct four five-acre livestock exclosures/section in known turkey nesting habitat. 4) Provide additional water sources as necessary in deficient low elevation areas to bring the total water sources up to three/section. (7239SJ) (05B) d. Abert's Squirrel Protect or provide for one Abert's sqirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine with a basal area of 180 to 220 and an interlocking canopy)/two acares on all ponderosa pine sale areas. (7240SJ) (05B) e. Goshawk: Prohibit disruptive management activities within 300 feet of any occupied raptor nests during the period May 1 through July 31. (7231SJ) (05B)
Range Resource Management (D02)	01 Manage grazing to favor big-game and to achieve the wildlife populations identified in state-wide comprehensive wildlife plans. (0315) (05B)	a. Maintain vegetation in fair or better range condition. (6172) (05B)

MANAGEMENT PRESCRIPTION 05B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		b. Limit livestock use of browse and herbaceous plant production to that not needed by big game. (6173) (05B)
		c. On big game winter range, livestock will be moved or grazing not allowed when livestock and wild herbivores allowable forage use by grazing system and range type exceeds the following:
		1) Rest-rotation system:
		Use by range type:
		-Mainly seed reproduction: (Bunchgrass, plains grassland, foothills shrub and alpine range types):
		20-25 percent on heavy use pastures. 10-15 percent on light use pastures.
		-Mainly vegetative reproduction (meadow, sandhill prairie, bluegrass bottoms, and aspen range types):
		Bluegrass: maximum of 45-50 percent; others, 25-30 percent on heavy use pastures, 10-15 percent on light use pastures.
		2) Deferred Rotation System:
		Use by range type:
		-Mainly seed reproduction: 10-15 percent on all pastures.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Range Resource Management (D02)

-Mainly vegetative reproduction:
15-20 percent on all pastures.

3) Rotation System

Use by range type:

-Mainly seed reproduction:
Max. of 15-20 percent on last pastures;
Max. of 5-10 percent on first used pasture.

-Mainly vegetative reproduction:
Max. of 20-25 percent on last used pasture.
Max. of 10-15 percent on first used pasture.

4) Continuous System (Grazing same time and place every year):

Use by range type:

-Mainly seed reproduction:

	Use by Condition Glass on Key Area			
Season	Good and Excellent	Fair	Poor	Very Poor
Full Grazing Season or Spring	0-5%	0	0	0
Summer	5-10%	0	0	0
Fall and/or	15-20%	5-10%	0	0

MANAGEMENT PRESCRIPTION 05B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		Winter -Mainly vegetative reproduction: Same as primary seed reproduction except increase utilization by 10% on the bluegrass. 5) Alternate Years System: Use by range type on key areas: -Mainly seed reproduction: Condition Class on Key Area — Use Good-Excellent — 20-25% Fair — 5-15% Poor — 0-5% Very Poor — 0 -Mainly vegetative reproduction: Condition Class on Key Area — Use Good-Excellent — 25-30% Fair — 10-20% Poor — 0-5% Very Poor — 0 Bluegrass 45-50% on good or better condition and same proper use percent for fall and lower as above. (7629SJ) (05B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF:		
Range Resource Management		
	02 Utilize extensive management systems such as season-long or deferred grazing. (0231SJ) (05B)	
	03 Protect regeneration from livestock damage. (0133) (05B)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (05B)
Range Improvement and Maintenance	01 Structural range improvement should be designed to benefit wildlife and livestock. (0416) (05B)	a. Structural improvements will not adversely affect big game movement (FSH 2209.22). (6247) (05B)
Silvicultural Prescriptions	01 Manage forest cover types to achieve and maintain desired thermal and hiding cover, cover-opening ratios and other habitat needs associated with tree cover. (0345) (05B)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF:		
Silvicultural Prescriptions ***	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. ~~- Clearcut in aspen.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ (2526SJ) (05B)	~~a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction.~~ ~~(607A) (05B)~~ *** b. Silvicultural Standards are specified in the Forest Direction.

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		1) Clearcut.* Forest Cover Type Lodgepole Pine / Aspen Rotation Age: 90-140 Yrs / 70-90 Yrs Growing Stock Level: 80-120 / N/A Thinning cycle: 20-30 Yrs / N/A * Does not apply on slopes > 60% 2) Two-Step Shelterwood:* Forest Cover Type Interior Ponderosa Pine

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES	
CONTINUATION OF: Silvicultural Prescriptions		Rotation Age	100-140 yrs. on 80% of type. 200 + yrs. on 20% of type.
		Growing Stock Level	80-120 on 80% of area. 160-180 on 20% of area.
		Thinning Cycle	20-30 Yrs
		First Cut (seed cut). Cut to	BA 30-50

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Second Cut (removal cut) Remove all overstory when regenerated stand meets minimum stocking standards.
		* Does not apply on slopes > 30%
		3) Three-Step Shelterwood:*
		Forest Cover Type: Engelmann spruce-Subalpine Fir & Mixed Conifer
		Rotation Age: 180-200 Yrs
		Growing Stock Level: 110-130
		Thinning cycle: 25-35 Yrs
		First Cut (preparatory cut). Remove up to 30 percent of the basal area.
		Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or Cut to: BA 60-80 10-20 yrs after preparatory cut
		Third Cut (removal cut). Remove

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT PRESCRIPTION 05B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		(8041SJ) (05B)
	03 Apply intermediate treatments to maintain growing stock level standards. (0140) (05B)	
	04 Utilize firewood material using both commercial and noncommercial methods. (0147) (05B)	
	05 For management purposes, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (05B)	a. When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Stand Height (ft.) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6
Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural Prescriptions (E03, 06 & 07)

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole Pine	30	75%
Engelmann Spruce-Subalpine fir	30	75%
Aspen	30	75%

1/ Applies to trees specified as minimum stocking level.
2/ Percent of plots or transects that are stocked.

(6014) (05B)

Timber Stand Improvement (E05)	01 Control undesirable understory vegetation to favor tree growth necessary for cover on winter range. (2552SJ) (05B)	a. Ponderosa Pine: Control Gambel oak in stands on slopes <30% at 10-year intervals starting at a stand age of 30. (8060SJ) (05B)

MANAGEMENT PRESCRIPTION 05B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Minerals Management-Coal, Leasable Uranium and Non-Energy Common Minerals Materials (G03, 05, 06 and 07)	01 Limit cumulative effects of surface coal mining operations in big game key winter range. (3528SJ) (05B)	a. Limit simultaneous operation of surface coal mining to no more than 30% of any contiguous tract of each 1,000 acres of big game key winter range. (8626SJ) (05B)
Special Use Management (Non-Recreation) (J01)	01 Eliminate special uses that conflict with wintering animals. (0320) (05B)	
Rights-of-way and Land Adjustments (J02, 13, 15, 16, 17, and 18)	01 Acquire private lands needed for big-game winter range. (0319) (05B)	
Transportation System Management (L01 & 20)	01 Allow new roads in the management area only if needed to meet priority goals outside the management area or to meet big game goals on the management area. Obliterate temporary roads within one season after planned use ends. (0762) (05B)	a. New permanent or temporary roads constructed in the management area must meet the following criteria: 1) There is no feasible alternative to build the road outside the area, and the road is essential to achieve priority goals and objectives of contiguous management areas, or to provide access to land administered by other government agencies or to contiguous private land. 2) The State Fish and Wildlife agency has been fully involved in the road location, planning and alternative evaluation. 3) Planned management of road use during winter will prevent or minimize disturbance of wintering big game animals, or

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)		will allow hunting and other management activities needed to meet wildlife management objectives. 4) Roads are constructed to the minimum standards necessary to provide safety for the road use purpose. 5) Roads cross the winter range in the minimum distance feasible to facilitate the necessary use. 6) Road traffic and road cut or fill slopes must not block big game movement in delineated migration routes or corridors. (666B) (05B)
		b. Manage the area for a low density (zero to one-half mile/square mile) of constant roads. (9334SJ) (05B)
	02 Close existing roads, prohibit off-road vehicle use and manage non-motorized use to prevent stress on big game animals. (0764) (05B)	a. Opening of existing roads during winter can be approved if the following criteria are met: 1) There is no reasonable alternative for owners or managers of contiguous private land or public land to reach their lands during winter. 2) Road use, off-road vehicle use, or non-motorized use of the area is essential and is the minimum necessary to meet priority resource management goals and objectives. 3) The State Fish and Wild-

MANAGEMENT PRESCRIPTION 05B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)		life Agency is fully involved in planning human use of area during winter. (6670) (05B)
Trail System Management (L23)	01 Provide trails only when needed to access other management areas. (4735SJ) (05B)	a. Maintain trails to maintenance level two. (9331SJ) (05B)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (05B)	a. Wildfire protection levels: 1) Pinon pine-juniper, gambel oak, grasslands, aspen. a) Confine or contain wildfires burning at Fire Intensity Levels (FIL) I and II. b) Effect control of wildfires burning at FIL's III and higher. 2) Mixed browse, mixed conifers, Engelmann spruce and subalpine fir. a) Promptly control wildfires burning at all FIL's. 3) Inland ponderosa pine. a) When stand age is < 30 years, promptly control wildfires burning at all FIL's. b) When stand age is > 30 years, confine or contain wildfires burning at FIL's I and II; effect control of wildfires burning at FIL's III and higher. (9626SJ) (05B)

PRESCRIPTION FOR MANAGEMENT AREA 6B

(Emphasis is on livestock grazing.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

The area is managed for livestock grazing. Range condition is currently at or above the satisfactory level. Intensive grazing management systems are favored over extensive systems. Range condition is maintained through use of forage improvement practices, livestock management, and regulation of other resource activities. Periodic heavy forage utilization occurs. Investment in structural and non-structural range improvements to increase forage utilization is moderate to high. Structural improvements benefit, or at least do not adversely affect wildlife. Conflicts between livestock and wildlife are resolved in favor of livestock. Non-structural restoration and forage improvement practices available are seeding, planting, burning, fertilizing, pitting, furrowing, spraying, crushing, and plowing. Cutting of encroaching trees may also occur.

Investments are made in compatible resource activities. Dispersed recreational opportunities vary between semi-primitive non-motorized and roaded natural. Management activities are evident but harmonize and blend with the natural setting.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage non-commercial forest and non-forest cover types to meet the standards and guidelines. (0026SJ) (06B)	a. Non-commercial and non-forest cover type management:* 1) Pinon pine-Juniper: a) Manage 90% of the area under a 200-year rotation in stands up to 40 acres distributed evenly throughout the type to favor livestock and wildlife management indicator species; deer and elk. Seed with forage species. b) Retain 10% of the area in pinon pine-juniper for shade and habitat diversity. 2) Gambel Oak (Includes ponderosa pine sites which are presently non-stocked): a) Manage 30% of the area for oakbrush under a 100-year rotation with an approximation of equal distribution of size classes for shade and to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee. Protect largest diameter oak in 1 to 3-acre patches up to 10% of area. b) Manage 70% of the area for grass to favor livestock. 3) Mixed Browse: Manage under a 100-year rotation to strive for a variety of age class distribution to favor livestock and wildlife indicator species; deer and elk.

MANAGEMENT PRESCRIPTION 06B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)		4) Grassland: Manage to retain in forage to favor livestock. Reseed with forage species. * These standards and guidelines are applicable only on slopes <60%. (6038SJ) (06B)
	02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions." (0041SJ) (06B)	
Cultural Resource Management (A02)	01 Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with livestock grazing. Limit interpretation to low cost developments such as interpretive signing. (0535SJ) (06B)	
Visual Resource Management (A04)	01 Design and implement management activities to blend with the natural landscape. (0332) (06B)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of modification. (6267) (06B) b. When projects require clearing of vegetation and (or) soil disturbance, use irregular clearing edges and shapes to blend with the natural landscapes. (6185) (06B)
Dispersed Recreation Management (A14 and 15)	01 Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and non-motorized opportunities will be available until planned resource activities are implemented. (0527SJ) (06B)	a. Maximum Use and Capacity Levels are: - - - - - - - - - - - - - - - - - - - Recreation use and capacity range during the snow-free period (PAOT/acre): - - - - - - - - - - - - - - - - - - -

MANAGEMENT PRESCRIPTION 06B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		Trail use and capacity range (PAOT/mile of trail):

Class	Capacity Range* Very Low	Low	Moderate	High
ROS Class - Semi-Primitive Non-motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Semi-Primitive Motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Roaded Natural				
On Trails PAOT/mile	-	-	-	-
Area-wide PAOT/acre	.04	.08	1.2	2.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.

MANAGEMENT PRESCRIPTION 06B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		* VERY LOW applies to alpine. LOW applies to rock, mtn. grass and clearcuts 1-20 years old. MODERATE applies to mtn. grass, PP size class 9, 8 and 7, DF size class 9, 8 and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old. HIGH applies to SF size class 9 and 8, Aspen size class 8 and 7 and clearcuts 20-80 years old. (6426SJ) (06B)
		b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (06B)
		c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (06B)
	02 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (06B)	
	03 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (06B)	

MANAGEMENT PRESCRIPTION 06B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)	04 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat. (0154) (06B)	
	05 Restrict use to resolve people/livestock conflicts, favoring livestock in such conflicts. (0536SJ) (06B)	
Wildlife and Fish Resource Management (C01)	01 Maintain habitat capability for management indicator species. (0329) (06B)	a. Maintain capability at 60 percent of potential capability. (6186) (06B)
	02 Provide adequate forage to sustain big-game population levels agreed to in the Statewide Comprehensive Wildlife Management Plan on NFS lands. (0330) (06B)	a. Allocate no more than 80 percent of available forage to livestock. (6187) (06B)
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 See the "Diversity on National Forests and National Grasslands" and "Silvicultural Prescriptions" management activities for specific vegetation treatment for wildlife objectives. (1526SJ) (06B)	
	02 Design management activities to favor indicator species endemic to particular habitat types. (1527SJ) (06B)	a. Deer, Elk, and Bear: 1) Restrict disruptive human activity in calving and fawning areas during the last two weeks of May and the first two weeks of June. 2) Maintain a wildlife movement corridor at least 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each square mile where vegetation treatment projects occur.

MANAGEMENT PRESCRIPTION 06B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)		(7249SJ) (06B) b. Hairy Woodpecker and Mountain Bluebird: Protect and/or provide 20 snags/10 acres in all forested types. Also provide for snag replacement. (7227SJ) (06B) c. Merriam's Turkey 1) Protect two turkey roost tree clumps/section in all ponderosa-pine sale areas. The minimum size of a clump is to be one-tenth acre. 2) Provide one turkey food station per four square miles in one-third of the known winter concentration areas. 3) Construct two five-acre livestock exclosures/section in known turkey nesting habitat. 4) Provide additional water sources as necessary in deficient low elevation areas to bring the total water sources up to two/section. (7250SJ) (06B) d. Abert's Squirrel Protect or provide for one Abert's squirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine a basal area of 180 to 220 and an interlocking canopy)/six acares on all ponderosa pine sale areas.

MANAGEMENT PRESCRIPTION 06B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)		(7229SJ) (06B) e. Pine Marten: Within spruce-fir sale areas on pine marten habitat, retain at least ten percent of the area in old growth timber (200+ years) with a canopy closure greater than 30 percent. Where the canopy is totally eliminated, the opening should not be more than 300 feet wide. (7230SJ) (06B) f. Goshawk: Prohibit disruptive management activities within 300 feet of any occupied raptor nests during the period May 1 through July 31. (7231SJ) (06B) g. Merriam's Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee: 1) Construct one brush pile (10'x 20'x4') every six acres in those sale areas where naturally occurring ground litter has been drastically reduced. 2) Fence one-third of the area of one out of every three earthen constructed livestock reservoirs to protect lacustrine nesting habitat for small non-game birds and mammals. (7232SJ) (06B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Resource Management (D03)	01 Use only intensive grazing systems or remove livestock when recovery of range condition cannot be accomplished by an intensive grazing system. (0325) (06B)	
	02 Improve range condition to fair or better or forage value rating to moderately high or better (0326) (06B)	a. Base range condition on the standards in Range Analysis Handbook (FSH 2209.21). (6153) (06B)
Range Improvement and Maintenance (D03, 04, 05 and 06)	01 Invest in cost-effective allotment management and associated range improvements. (0327) (06B)	a. Base economic analysis on Project Effectiveness Analysis Handbook (FSH 2209.11). (6209) (06B)
	02 Invest in cost-effective grazing management and rangeland productivity improvements. Where improvements include water developments, a water right in the name of the United States must be obtained. (0328) (06B)	a. Structural improvements will not adversely effect big-game movement. (6182) (06B)
	03 See the "Diversity on National Forests and National Grasslands" management activity for specific vegetation treatment for livestock objectives. Reduce permitted stocking to protect range vegetation projects until improvement is achieved. (2038SJ) (06B)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Silvicultural Prescriptions (E03, 06 & 07)	01 Maintain and manage forested inclusions to provide a high level of forage production, wildlife habitat, and diversity. (0333) (06B)	
***	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. - Clearcut in aspen, mixed conifer, lodgepole pine, and engelmann spruce-subalpine fir. - Shelterwood in interior ponderosa pine. (2529SJ) (06B)	a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (06B) b. Silvicultural Standards are specified in the Forest Direction.

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

	Interior Ponderosa Pine
Rotation Age	100-140 yrs. on 95% of type. 200 + yrs. on 5% of type.
Growing Stock Level	70-90 on 95% of area. 160-180 on 5% of area.
Thinning Cycle	20-30 Yrs
First Cut (seed cut). Cut to	BA 30-50
Second Cut (removal cut) Remove all overstory when regenerated stand meets minimum stocking standards.	

* Does not apply on slopes > 30%

(8049SJ) (06B)

03 Utilize firewood material using both commercial and noncommercial methods.
(0147) (06B)

MANAGEMENT PRESCRIPTION 06B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	04 For management purposes, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (06B)	a. When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Stand Height (ft.) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6
Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole		

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6014) (06B)
Reforestation (E04)	01 Supplement natural regeneration in some areas to compensate for domestic grazing damage. (2528SJ) (06B)	
Timber Stand Improvement (E05)	01 Control undesirable understory vegetation to favor tree growth. (2527SJ) (06B)	a. Ponderosa Pine: Control Gambel oak in stands on slopes <30% at 10-year intervals starting at a stand age of 30. (8060SJ) (06B)
Water Resource Improvement and Maintenance (F05 and 06)	01 Prolong streamflow, increase water yields and meet State water quality standards. (0145) (06B)	a. Use snow fencing in montane meadows or alpine where snow deposition will occur in protected areas. Structures should be constructed with: 1) Ridge crest locations with at least 500 feet of upwind contributing area. 2) Perpendicular orientation to prevailing winds. 3) Northerly to northeasterly exposure of resultant snow drift. (8426SJ) (06B)

MANAGEMENT PRESCRIPTION 06B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Water Resource Improvement and Maintenance (F05 and 06)		
	02 See the "Silvicultural Prescriptions" management activity for specific vegetation treatment for increased water yield. (3026SJ) (06B)	
Transportation System Management (L01 & 20)	01 Manage local constant roads to accommodate medium-light seasonal use (SADT 10-50). Regulate seasonal public use by closure if roadbed damage will occur and where travel conflicts with livestock grazing. (4727SJ) (06B)	a. Manage the area for a moderate-density (one-half to one mile/square mile) of constant roads. (9333SJ) (06B)
	02 Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use. (4728SJ) (06B)	
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct roads to accommodate livestock management with a mix of other resource activities. Design most facilities for multi-resource use. (4750SJ) (06B)	a. Construct or reconstruct local constant roads to 75 percent modified gravel support. (9327SJ) (06B)
		b. Construct local intermittent roads with no gravel support unless needed to extend logging seasons. (9328SJ) (06B)
Road Maintenance (L19)	01 Maintain roads for a mix of resource uses and public safety. (4742SJ) (06B)	a. Maintain local constant roads to maintenance level three. (9329SJ) (06B)
		b. Maintain local intermittent roads to maintenance level two when open for project activities. (9330SJ) (06B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Trail System Management (L23)	01 Provide trails for cross-country skiing, snowmobile, foot, and horse travel. (4732SJ) (06B)	a. Maintain trails to maintenance level two. (9331SJ) (06B)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (06B)	a. Wildfire protection levels: 1) Aspen; pinon pine-juniper; Gambel oak; Interior Douglas-fir and ponderosa pine on slopes below 60% with basal area stocking < 40 or non-stocked: a) Confine or contain wildfires burning at Fire Intensity Levels (FIL's) I and II. b) Effect control of wildfires burning at FIL's III and higher. 2) All other situations: Promptly control wildfires burning at all FIL's. (9628SJ) (06B)

MANAGEMENT PRESCRIPTION 06B

Reprinted from Forest Plan (Issued 9/1983)

PRESCRIPTION FOR MANAGEMENT AREA 7C

(Emphasis is on management of forested areas on steep slopes.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is to develop and maintain healthy tree cover on forested slopes greater than 40 percent. The harvest method by forest cover type is clearcutting in aspen, lodgepole pine, interior ponderosa pine and mixed conifers, and group selection in Engelmann spruce-subalpine fir.

Management activities, although visually dominant, harmonize and blend with the natural setting.

Roaded-natural recreation opportunities are provided along Forest arterial and collector roads. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open; semi-primitive non-motorized opportunities are provided on those that are closed.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage non-commercial forest and non-forest cover types to meet the standards and guidelines. (0026SJ) (07C)	a. Non-commercial and non-forest cover type management:* 1) Pinon pine-Juniper: Manage under a 200-year rotation in stands up to 40 acres distributed evenly throughout the type to favor wildlife management indicator species; deer and elk. Seed with forage species. 2) Gambel Oak: a) Manage 70% of the area for oakbrush under a 100-year rotation with an approximation of equal distribution of size classes to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee. Protect largest diameter oak in 1 to 3-acre patches up to 10% of area. b) Manage 30% of the area for grass to favor wildlife management indicator species; elk. Seed with forage species. 3) Mixed Browse: Manage under a 100-year rotation to strive for a variety of age class distribution from young to mature to favor wildlife manage-indicator species; deer, elk. 4) Grassland: Manage to retain in forage to favor wildlife management indicator species; elk, and for

MANAGEMENT PRESCRIPTION 07C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)		livestock. Reseed with forage species. * These standards and guidelines are applicable only on slopes < 60%. (6027SJ) (07C)
	02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions." (0041SJ) (07C)	
Cultural Resource Management (A02)	01 Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with wood fiber production. Limit interpretation to low cost developments such as interpretive signing. (0526SJ) (07C)	
Visual Resource Management (A04)	01 Meet stated visual quality objective. (0125) (07C)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of: Partial retention within the foreground of arterial/collector roads and primary trails. Modification on all other areas. (6067) (07C) b. Apply rehabilitation practices where the above objectives are not currently being met. (6068) (07C)
Dispersed Recreation Management (A14 and 15)	01 Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and non-motorized opportunities will be available until planned resource activities are implemented. (0527SJ) (07C)	a. Maximum Use and Capacity Levels are: - - - - - - - - - - - - - - - - - - - Recreation use and capacity range during the snow-free period (PAOT/acre): - - - - - - - - - - - - - - - - - - - Trail use and capacity range

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Dispersed
Recreation
Management
(A14 and 15)

(PAOT/mile of trail):

Class	Capacity Range* Very Low	Low	Moder-ate	High
ROS Class - Semi-Primitive Non-motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Semi-Primitive Motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Roaded Natural				
On Trails PAOT/mile	-	-	-	-
Area-wide PAOT/acre	.04	.08	1.2	2.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.

* VERY LOW applies to alpine.

MANAGEMENT PRESCRIPTION 07C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		LOW applies to rock, mtn. grass and clearcuts 1-20 years old. MODERATE applies to mtn. grass, PP size class 9, 8 and 7, DF size class 9, 8 and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old. HIGH applies to SF size class 9 and 8, Aspen size class 8 and 7 and clearcuts 20-80 years old. (6426SJ) (07C)
		b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (07C)
		c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (07C)
	02 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (07C)	
	03 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (07C)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)	04 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat. (0154) (07C)	
	05 Emphasize opportunities for dispersed motorized recreation and direct people to lesser-used areas. (0528SJ) (07C)	
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 See the "Diversity on National Forests and National Grasslands" and "Silvicultural Prescriptions" management activities for specific vegetation treatment for wildlife objectives. (1526SJ) (07C)	
	02 Design management activities to favor indicator species endemic to particular habitat types. (1527SJ) (07C)	a. Deer, Elk, and Bear: 1) Restrict disruptive human activity in calving and fawning areas during the last two weeks of May and the first two weeks of June. 2) Maintain a wildlife movement corridor at least 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each square mile where vegetation treatment projects occur. (7249SJ) (07C) b. Hairy Woodpecker and Mountain Bluebird: Protect and/or provide 20 snags/10 acres in all forested types. Also provide for snag replacement. (7227SJ) (07C)

MANAGEMENT PRESCRIPTION 07C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)		c. Merriam's Turkey 1) Protect two turkey roost tree clumps/section in all ponderosa pine sale areas. The minimum size of a clump is to be one-tenth acre. 2) Provide two turkey food stations per four square miles in one-third of the known winter concentration areas. 3) Construct two five-acre livestock exclosures/section in known turkey nesting habitat. 4) Provide additional water sources as necessary in deficient low elevation areas to bring the total water sources up to two/section. (7228SJ) (07C)
		d. Abert's Squirrel Protect or provide for one Abert's squirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine a basal area of 180 to 220 and an interlocking canopy)/six acares on all ponderosa pine sale areas. (7229SJ) (07C)
		e. Pine Marten: Within spruce-fir sale areas on pine marten habitat, retain at least ten percent of the area in old growth timber (200+ years) with a canopy closure greater than 30 percent. Where the canopy is totally eliminated, the opening

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)		should not be more than 300 feet wide. (7230SJ) (07G) f. Goshawk: Prohibit disruptive management activities within 300 feet of any occupied raptor nests during the period May 1 through July 31. (7231SJ) (07G) g. Merriam's Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee: 1) Construct one brush pile (10'x 20'x4') every six acres in those sale areas where naturally occurring ground litter has been drastically reduced. 2) Fence one-third of the area of one out of every three earthen constructed livestock reservoirs to protect lacustrine nesting habitat for small non-game birds and mammals. (7232SJ) (07G)
Range Resource Management (D02)	01 Utilize improved management systems such as rest-rotation, deferred rotation, rotation, or alternate years. (2026SJ) (07G) 02 Utilize transitory forage that is available where demand exists, and where investments in regeneration can be protected. (0132) (07G)	a. Vary utilization standards with grazing system and ecological condition. Specify standards in the allotment management plan. (6071) (07G)

MANAGEMENT PRESCRIPTION 07G

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)	03 Protect regeneration from livestock damage. (0133) (07C)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (07C)
Range Improvement and Maintenance (D03, 04, 05 and 06)	01 See the "Diversity on National Forests and National Grasslands" management activity for specific vegetation treatment for livestock objectives. (2028SJ) (07C)	
	02 Invest in cost-effective allotment management and associated range improvements. (0327) (07C)	a. Base economic analysis on Project Effectiveness Analysis Handbook (FSH 2209.11). (6290) (07C)
		b. Structural improvements will not adversely affect big-game movement. (6182) (07C)
Silvicultural Prescriptions (E03, 06 & 07)	01 Manage forest cover types using the following harvest methods: - Clearcut all cover types except Engelmann Spruce-Subalpine fir, and - Group selection in Engelmann Spruce-subalpine fir. (0498) (07C)	a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (07C)
		b. Silvicultural Standards: (These stndards may be exceeded on areas managed for old growth.) 1) Clearcut: Forest Cover Type Lodgepole Mixed

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

	Pine	Conifer	Aspen
Rotation Age	90-180 Yrs	180-200 Yrs	70-90 Yrs
Growing Stock Level	80-160	110-130	N/A
Thinning cycle	20-30 Yrs	25-35 Yrs	M/A

2) Selection:

Forest Cover Type	Engelmann spruce-Subalpine Fir
Residual BA	150-180
Thinning Cycle	25-35 Yrs
Q Factor	1.3

(8035SJ) (07C)

02 Apply intermediate treatments to maintain growing stock level standards.
(0140) (07C)

03 Utilize firewood material using both commercial and noncommercial methods.
(0147) (07C)

MANAGEMENT PRESCRIPTION 07C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	04 For management purposes, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (07C)	a. When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Stand Height (ft.) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6
Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole		

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

Pine	30	75%
Engelmann Spruce-Subalpine fir	30	75%
Aspen	30	75%

1/ Applies to trees specified as minimum stocking level.
2/ Percent of plots or transects that are stocked.

(6014) (07C)

b. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cutover area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25
Mixed Conifers	190	25
Lodgepole Pine	150	25
Engelmann		

MANAGEMENT PRESCRIPTION 07C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Spruce - Sub-alpine fir 150 25 Aspen 300 25 Forest Cover Type / Crown Closure (Percent) / Distribution 2/ Inland Ponderosa Pine 30 70% Mixed Conifers 30 75% Lodgepole Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6316) (07C)
Transportation System Management (L01 & 20)	01 Manage local constant roads to accommodate medium-light seasonal use (SADT 10-50). Regulate seasonal public use by closure if roadbed damage will occur. (4793SJ) (07C) 02 Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use. (4728SJ) (07C)	a. Manage the area for a high density (one to three miles/square mile) of constant roads. (9326SJ) (07C)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct roads to support timber management activities along with a mix of other resource activities. Design most facilities for multi-resource use. (4729SJ) (07C)	a. Construct or reconstruct local constant roads to 75 percent modified gravel support. (9327SJ) (07C) b. Construct local intermittent roads with no gravel support unless needed to extend logging seasons. (9328SJ) (07C)
	02 Provide parking areas for dispersed recreationists along system roads. (4730SJ) (07C)	
Road Maintenance (L19)	01 Maintain roads to support timber management activities along with a mix of other resource activities. (4731SJ) (07C)	a. Maintain local constant roads to maintenance level three. (9329SJ) (07C) b. Maintain local intermittent roads to maintenance level two when open for project activities. (9330SJ) (07C)
Trail System Management (L23)	01 Provide trails for cross-country skiing, snowmobile, foot, and horse travel. (4732SJ) (07C)	a. Maintain trails to maintenance level two. (9331SJ) (07C)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (07C)	a. Wildfire protection levels: 1) Pinon pine-juniper, gambel oak, grasslands, aspen. a) Confine or contain wildfires burning at Fire Intensity Levels (FIL) I and II. b) Effect control of wildfires burning at FIL's III and higher.

MANAGEMENT PRESCRIPTION 07C

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Fire Planning and Suppression (P01)		2) Mixed browse, mixed conifers, Engelmann spruce and subalpine fir. a) Promptly control wildfires burning at all FIL's. 3) Inland ponderosa pine. a) When stand age is < 30 years, promptly control wildfires burning at all FIL's. b) When stand age is > 30 years, confine or contain wildfires burning at FIL's I and II; effect control of wildfires burning at FIL's III and higher. (9626SJ) (07C)

PRESCRIPTION FOR MANAGEMENT AREA 7E

(Emphasis is on wood-fiber production and utilization.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is on wood-fiber production and utilization of large roundwood of a size and quality suitable for sawtimber. The harvest method by forest cover type is clearcutting in aspen and lodgepole pine, and shelterwood in Engelmann spruce-subalpine fir, interior ponderosa pine and mixed conifers.

The area generally will have a mosaic of fully stocked stands that follow natural patterns and avoid straight lines and geometric shapes. Management activities are not evident or remain visually subordinate along Forest arterial and collector roads and primary trails. In other portions of the area, management activities may dominate in foreground and middleground, but harmonize and blend with the natural setting.

Roaded-natural recreation opportunities are provided along Forest arterial and collector roads. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open. Semi-primitive non-motorized opportunities are provided on those that are closed.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage non-commercial forest and non-forest cover types to meet the standards and guidelines. (0026SJ) (07E)	a. Non-commercial and non-forest cover type management: 1) Pinon pine-Juniper: Manage under a 200-year rotation in stands up to 40 acres distributed evenly throughout the type to favor wildlife management indicator species; deer and elk. Seed with forage species. 2) Gambel Oak: a) Manage 70% of the area for oakbrush under a 100-year rotation with an approximation of equal distribution of size classes to favor wildlife management indicator species; deer, elk, bear and green-tailed towhee. Protect largest diameter oak in 1 to 3-acre patches up to 10% of area. b) Manage 30% of the area for grass to favor wildlife management indicator species; elk. Seed with forage species. 3) Mixed Browse: Manage under a 100-year rotation to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. 4) Grassland: Manage to retain in forage to favor wildlife management indi-

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)		cator species; elk, and for livestock. Reseed with forage species. (6026SJ) (07E)
	02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions." (0041SJ) (07E)	
Cultural Resource Management (A02)	01 Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with wood fiber production. Limit interpretation to low cost developments such as interpretive signing. (0526SJ) (07E)	
Visual Resource Management (A04)	01 Meet stated visual quality objective. (0125) (07E)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of: Partial retention within the foreground of arterial/collector roads and primary trails. Modification on all other areas. (6067) (07E) b. Apply rehabilitation practices where the above objectives are not currently being met. (6068) (07E)
Dispersed Recreation Management (A14 and 15)	01 Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and non-motorized opportunities will be available until planned resource activities are implemented. (0527SJ) (07E)	a. Maximum Use and Capacity Levels are: - Recreation use and capacity range during the snow-free period (PAOT/acre): - Trail use and capacity range (PAOT/mile of trail): - Capacity Range*

MANAGEMENT PRESCRIPTION 07E

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES			
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		Class	Very Low	Low	Moderate	High
		ROS Class - Semi-Primitive Non-motorized				
		On Trails PAOT/mile	2.0	3.0	9.0	11.0
		Area-wide PAOT/acre	.004	.008	.05	.08
		ROS Class - Semi-Primitive Motorized				
		On Trails PAOT/mile	2.0	3.0	9.0	11.0
		Area-wide PAOT/acre	.004	.008	.05	.08
		ROS Class - Roaded Natural				
		On Trails PAOT/mile	-	-	-	-
		Area-wide PAOT/acre	.04	.08	1.2	2.5

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.

* VERY LOW applies to alpine.

LOW applies to rock, mtn. grass and clearcuts 1-20 years old.

MANAGEMENT PRESCRIPTION 07E

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		MODERATE applies to mtn. grass, PP size class 9, 8 and 7, DF size class 9, 8 and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old. HIGH applies to SF size class 9 and 8, Aspen size class 8 and 7 and clearcuts 20-80 years old. (6426SJ) (07E)
		b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (07E)
		c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (07E)
	02 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (07E)	
	03 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (07E)	
	04 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat. (0154) (07E)	

MANAGEMENT PRESCRIPTION 07E

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)	05 Emphasize opportunities for dispersed motorized recreation and direct people to lesser-used areas. (0528SJ) (07E)	
Wildlife Habitat Improvement and Maintenance (G02, 04, 05 and 06)	01 See the "Diversity on National Forests and National Grasslands" and "Silvicultural Prescriptions" management activities for specific vegetation treatment for wildlife objectives. (1526SJ) (07E)	
	02 Design management activities to favor indicator species endemic to particular habitat types. (1527SJ) (07E)	a. Deer, Elk, and Bear: 1) Restrict disruptive human activity in calving and fawning areas during the last two weeks of May and the first two weeks of June. 2) Maintain a wildlife movement corridor at least 600 feet wide and capable of hiding 90 percent of an elk or deer at 200 feet in each square mile where vegetation treatment projects occur. (7249SJ) (07E) b. Hairy Woodpecker and Mountain Bluebird: Protect and/or provide 20 snags/10 acres in all forested types. Also provide for snag replacement. (7227SJ) (07E) c. Merriam's Turkey 1) Protect two turkey roost tree clumps/section in all ponderosa pine sale areas. The minimum size of a clump is to be one-tenth acre.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)		2) Provide two turkey food stations per four square miles in one-third of the known winter concentration areas. 3) Construct two five-acre livestock exclosures/section in known turkey nesting habitat. 4) Provide additional water sources as necessary in deficient low elevation areas to bring the total water sources up to two/section. (7228SJ) (07E) d. Abert's Squirrel Protect or provide for one Abert's squirrel nest tree clump (0.1 acre of 9" to 22" DBH ponderosa pine a basal area of 180 to 220 and an interlocking canopy)/six acares on all ponderosa pine sale areas. (7229SJ) (07E) e. Pine Marten: Within spruce-fir sale areas on pine marten habitat, retain at least ten percent of the area in old growth timber (200+ years) with a canopy closure greater than 30 percent. Where the canopy is totally eliminated, the opening should not be more than 300 feet wide. (7230SJ) (07E) f. Goshawk: Prohibit disruptive management activities within 300 feet of any

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)		occupied raptor nests during the period May 1 through July 31. (7231SJ) (07E) g. Merriam's Turkey, Deer Mouse, Sharptail Grouse, Mallard, and Green-tailed Towhee: 1) Construct one brush pile (10'x 20'x4') every six acres in those sale areas where naturally occurring ground litter has been drastically reduced. 2) Fence one-third of the area of one out of every three earthen constructed livestock reservoirs to protect lacustrine nesting habitat for small non-game birds and mammals. (7232SJ) (07E)
Range Resource Management (D02)	01 Utilize improved management systems such as rest-rotation, deferred rotation, rotation, or alternate years. (2026SJ) (07E)	a. Vary utilization standards with grazing system and ecological condition. Specify standards in the allotment management plan. (6071) (07E)
	02 Utilize transitory forage that is available where demand exists, and where investments in regeneration can be protected. (0132) (07E)	
	03 Protect regeneration from livestock damage. (0133) (07E)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (07E)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Improvement and Maintenance	01 See the "Diversity on National Forests and National Grasslands" management activity for specific vegetation treatment for livestock objectives. (2028SJ) (07E)	
	02 Invest in cost-effective allotment management or forage value rating to moderately high or better (0327) (07E)	a. Base range condition on the standards in Range Analysis Handbook (FSH 2209.21). (6290) (07E) b. Structural improvements will not adversely affect big-game movement. (6182) (07E)
Silvicultural Prescriptions ***	01 Manage Forest cover types using the primary and secondary methods specified in the Forest Direction. ~~- Clearcut in aspen and lodgepole.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ (0463) (07E)	~~a. Apply harvest treatments to forest cover types as specified below on at least 80% of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction.~~ ~~(6074) (07E)~~ *** b. Structural Standards are specified in the Forest Direction.

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~1) Clearcut:~~

~~Forest Cover Type~~	~~Lodgepole Pine~~	~~Aspen~~
~~Rotation Age~~	~~90-140 Yrs~~	~~70-90 Yrs~~
~~Growing Stock Level~~	~~80-140~~	~~N/A~~

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Thinning cycle 20-30 Yrs N/A
		2) Two-Step Shelterwood:
		Forest Cover Type
		Interior Ponderosa Pine
		Rotation Age 100-140 yrs. on 95% of type. 200 + yrs. on 5% of type.
		Growing Stock Level 80-120 on 95% of area. 160-180 on 5% of area.
		Thinning Cycle 25-35 Yrs
		First Cut (seed cut) Cut to BA 30-50

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Second Cut (removal cut) Remove all overstory when regenerated stands meet minimum stocking standards.
		3) Three-Step Shelterwood:
		Forest Cover Type
		Engelmann spruce-Subalpine Fir & Mixed Conifer
		Rota- 180-200

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		tion Age Yrs
		Growing Stock Level 110-130
		Thinning Cycle 25-35 Yrs
		First Cut (preparatory cut). Remove up to 30 percent of the basal area.
		Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or Cut to: BA 60-80 10-20 Yrs after preparatory cut
	02 Apply intermediate treatments to maintain growing stock level standards. (0140) (07E)	
	03 Utilize firewood material using both commercial and noncommercial methods. (0147) (07E)	Third Cut (removal cut). Remove all overstory when regenerated stand meets minimum stocking standards.
		(8027SJ) (07E)

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	04 For management purposes, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (07E)	a. When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Stand Height (ft.) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6
Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole		

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

Pine	30	75%
Engelmann Spruce-Subalpine fir	30	75%
Aspen	30	75%

1/ Applies to trees specified as minimum stocking level.
2/ Percent of plots or transects that are stocked.

(6014) (07E)

b. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cutover area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25
Mixed Conifers	190	25
Lodgepole Pine	150	25
Engelmann		

MANAGEMENT PRESCRIPTION 07E

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Spruce - Subalpine fir 150 25 Aspen 300 25 Forest Cover Type / Crown Closure (Percent) / Distribution 2/ Inland Ponderosa Pine 30 70% Mixed Conifers 30 75% Lodgepole Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6316) (07E)
Timber Stand Improvement (E05)	01 Control undesirable understory vegetation to favor tree growth. (2527SJ) (07E)	a. Ponderosa Pine: Control Gambel oak in stands at 10-year intervals starting at a stand age of 30. (8029SJ) (07E)
Transportation System Management (L01 & 20)	01 Manage local constant roads to accommodate medium-light seasonal use (SADT 10-50). Regulate seasonal public use by closure if roadbed damage will occur. (4793SJ) (07E)	a. Manage the area for a high density (one to three miles/square mile) of constant roads. (9326SJ) (07E)

MANAGEMENT PRESCRIPTION 07E

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	02 Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use. (4728SJ) (07E)	
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct roads to support timber management activities along with a mix of other resource activities. Design most facilities for multi-resource use. (4729SJ) (07E)	a. Construct or reconstruct local constant roads to 75 percent modified gravel support. (9327SJ) (07E) b. Construct local intermittent roads with no gravel support unless needed to extend logging seasons. (9328SJ) (07E)
	02 Provide parking areas for dispersed recreationists along system roads. (4730SJ) (07E)	
Road Maintenance (L19)	01 Maintain roads to support timber management activities along with a mix of other resource activities. (4731SJ) (07E)	a. Maintain local constant roads to maintenance level three. (9329SJ) (07E) b. Maintain local intermittent roads to maintenance level two when open for project activities. (9330SJ) (07E)
Trail System Management (L23)	01 Provide trails for cross-country skiing, snowmobile, foot, and horse travel. (4732SJ) (07E)	a. Maintain trails to maintenance level two. (9331SJ) (07E)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (07E)	a. Wildfire protection levels: 1) Pinon pine-juniper, gambel oak, grasslands, aspen. a) Confine or contain wildfires burning at Fire Intensity Levels (FIL) I and II.

MANAGEMENT PRESCRIPTION 07E

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Fire Planning and Suppression (P01)		b) Effect control of wildfires burning at FIL's III and higher. 2) Mixed browse, mixed conifers, Engelmann spruce and subalpine fir. a) Promptly control wildfires burning at all FIL's. 3) Inland ponderosa pine. a) When stand age is < 30 years, promptly control wildfires burning at all FIL's. b) When stand age is > 30 years, confine or contain wildfires burning at FIL's I and II; effect control of wildfires burning at FIL's III and higher. (9626SJ) (07E)

PRESCRIPTION FOR MANAGEMENT AREA 8A

(Provides for pristine wilderness opportunities.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is for the protection and perpetuation of essentially pristine bio-physical conditions and a high degree of solitude for both wildlife and humans with no perceptible evidence of past human use.

All resource management activities are integrated in such a way that evidence of current human use, including permitted and recreation livestock, is not noticeable the following season, or so that natural biological processes are not adversely or artifically changed over time by human use.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Visual Resource Management (A04)	01 Design and implement management activities to maintain a pristine ecosystem. (0218) (08A)	a. The Adopted Visual Quality Objective (VQO) is Preservation. (6132) (08A)
Dispersed Recreation Management (A14 and 15)	01 Provide opportunities for primitive and unconfined recreation featuring solitude and to travel cross-country in an environment where success or failure is directly dependent on ability, knowledge and initiative. (0223) (08A)	
	02 Emphasize recreation opportunities on the most primitive end of the recreation opportunity spectrum. Manage use to provide very infrequent contact with other groups or individuals. (0224) (08A)	a. Maximum use and capacity levels are: - Trail and camp encounters during peak use days are less than 2 other parties per day. - Trail and area-wide use capacity: (1) Open lands, meadow and alpine: 0.001 to 0.002 PAOT per acre. (2) Forested lands and shrub lands: 0.003 to 0.007 PAOT per acre. - Reduce the above use levels where unacceptable changes to the biophysical resources are likely to occur. (6128) (08A)
	03 Limit specially permitted parties to not more than one per 2500 acres. (0226) (08A)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)	04 Prohibit open fires in alpine, krummholz, meadow areas and within riparian areas when: a. Use of dead and down wood for fuel is likely to violate diversity requirements, soil nutrient and erosion protection, or b. Visual resource objectives for the area likely could not be met. (0199) (08A)	
	05 Prohibit open fires when occurrence of fire-rings exceed Frissell class 1 site conditions on 10 percent or more of the known campsites within the management area. (0251) (08A)	a. Provide Frissell condition classes 1 and 2 campsites only. (6133) (08A)
Recreation Management (Private and Other Public Sector) (A16)	01 Manage outfitter-guide operations in the same manner as other visitors. Permit camping only in sites specified in outfitter-guide permits. Keep outfitter-guide activities harmonious with activities of non-guided visitors. Include outfitter-guide operations in calculations of level-of-use capacities. (0208) (08A)	
Wildlife and Fish Resource Management (C01)	01 Manage human activity so that wildlife and plant species population dynamics and distribution occurs naturally. Prohibit fish stocking except for reintroduction of indigenous species or where stocking has been previously authorized and practiced. (0220) (08A)	
Range Resource Management (D02)	01 Manage livestock and herbivorous wildlife forage use in accordance with FSM 2320.3 (36 CFR 293.7). (0182) (08A)	a. Follow established utilization standards for areas, within grazing allotments. (6130) (08A) b. Limit utilization of forage to not more than 30 percent of current annual growth outside established allotments. (6342) (08A) c. Limit trampling of forage to not more than 40 percent of current annual herbaceous vegetation growth, outside established allotments.

MANAGEMENT PRESCRIPTION 08A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)		(6344) (08A)
Special Use Management (Non-Recreation) (J01)	01 Permit only those uses authorized by wilderness legislation, which cannot be reasonably met on non-Wilderness lands. (0211) (08A)	
Soil Resource Management (KA1)	01 Restore soil disturbances caused by human use (past mining, grazing, trail construction and use, camping, etc.) to soil loss tolerance levels commensurate with the natural ecological processes for the treatment area. (0184) (08A)	a. Follow procedures specified in Agricultural Handbook 537 for Utilizing the Universal Soil Loss Equation. (Cautions contained in WO 2550 letter dated 5/28/82 should be noted.) The guidance for K and T factors are in the National Soils Handbook 407.1 (a)(3)(xvii). (6159) (08A) b. Provide Frissell condition classes 1 and 2 campsites only. (6133) (08A)
Trail Construction and Reconstruction (L22)	01 Do not construct or reconstruct trails. (0228) (08A)	
FA&O Construction Reconstruction and Maintenance (L24 AND 25)	01 Prohibit man-made structures and facilities. (0219) (08A)	

PRESCRIPTION FOR MANAGEMENT AREA 8B

(Provides for primitive wilderness opportunities.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is to provide for the protection and perpetuation of natural bio-physical conditions. On-site regulation of recreation use is minimal. Travel is cross-country or by use of a low-density constructed trail system.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Visual Resource Management (A04)	01 Design and implement management activities so that the impact of man is not apparent and the area appears in a condition affected only by natural biotic succession. (0230) (08B)	a. The Adopted Visual Quality Objective (VQO) is Preservation. (6132) (08B)
Dispersed Recreation Management (A14 and 15)	01 Emphasize primitive recreation opportunities requiring a high degree of isolation, solitude, self-reliance and challenge while traveling cross-country or on system trails. (0231) (08B)	
	02 Prohibit open fires in alpine, krummholz, meadow areas and within riparian areas when: a. Use of dead and down wood for fuel is likely to violate diversity requirements, soil nutrient and erosion protection, or b. Visual resource objectives for the area likely could not be met. (0199) (08B)	
	03 Manage use to provide a low incidence of contact with other groups or individuals and to prevent unacceptable changes to the biophysical resources. (0301) (08B)	a. Maximum use and capacity levels are: - Trail and camp encounters during peak use days are less than 6 other parties per day. - Trail and area-wide use capacity:

Use Level	Open Lands	Forest & Shrub Lands
On Trails (PAOT/Mile	0.5-1.0	2-3

(6372) (08B)

b. Area-wide Capacity:
(PAOT/Acre)
Open Lands
Alpine, Krummholz .002
Rock, Mtn. grass .005

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		Forest & Shrub Lands Ponderosa Pine, Douglas-fir, Riparian areas, White Pine .01 Spruce/Fir, Lodgepole Pine, Aspen .02 (6336) (08B)
		c. Reduce visitor use when the level of use exceeds capacity on more than 10 percent of the days during summer and fall use season. (6374) (08B)
	04 Manage sites to provide opportunity for moderate to high degree of solitude. (0626) (08B)	a. Use a minimum site spacing of 500 feet. (6338) (08B)
		b. Occupied site guidelines: (Maximum number of sites occupied at one time.) Lakes <5 acres 2 5-25 acres 3 >25 acres 4 Depending on site suitability/availability Streams and Trails Open areas 2 sites/mile Forested areas 4 sites/mile (6340) (08B)
Recreation Management (Private and Other Public Sector) (A16)	01 Manage outfitter-guide operations in the same manner as other visitors. Permit camping only in sites specified in outfitter-guide permits. Keep outfitter-guide activities harmonious with activities of non-guided visitors. Include outfitter-guide operations in calculations of level-of-use capacities. (0208) (08B)	
Range Resource Management (D02)	01 Manage livestock and herbivorous wildlife forage use in accordance with FSM 2320.3 (36 CFR 293.7). (0182) (08B)	a. Follow established utilization standards for areas, within grazing allotments. (6130) (08B)

MANAGEMENT PRESCRIPTION 08B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Special Use Management (Non -Recreation) (J01)	01 Manage surface occupancy activities authorized prior to wilderness designation to reduce impact on wilderness values consistant with the intent of the occupancy authorization. (0210) (08B)	
	02 Permit only those uses authorized by wilderness legislation, which cannot be reasonably met on non-Wilderness lands. (0211) (08B)	
Soil Resource Management (KA1)	01 Restore soil disturbances caused by human use (past mining, grazing, trail construction and use, camping, etc.) to soil loss tolerance levels commensurate with the natural ecological processes for the treatment area. (0184) (08B)	a. Follow procedures specified in Agricultural Handbook 537 for Utilizing the Universal Soil Loss Equation. (Cautions contained in WO 2550 letter dated 5/28/82 should be noted.) The guidance for K and T factors are in the National Soils Handbook 407.1 (a)(3) (xvii). (6159) (08B)
		b. Provide Frissell condition classes 1 and 2 campsites only. (6133) (08B)
Transportation System Management (L01 & 20)	01 Locate and design required access roads within the management area for authorized activities to minimize the biophysical and visual impact, and to facilitate restoration. (0213) (08B)	a. Roads will not be authorized: - On slopes steeper than 60%; - In areas of high erosion hazard; - In areas of high geologic hazard; - In areas of low visual absorption capacity that are unlikely for successful restoration; - In areas which would adversely affect threatened and endangered plant and animal species. (6165) (08B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	02 Convert roads not needed for authorized activities to trails, or if they are not needed as part of the transportation system, restore them to the established VQO. (0254) (08B)	a. Maintain trails in accordance with standards in the Trail Handbook (FSH 7709.12). (6129) (08B)
		b. Schedule trail maintenance in accordance with Regional Acceptable Work Standards. (FSM 1310 R2 ID No. 1 7/22/82.) (6131) (08B)
	03 Construct or reconstruct trails only when needed to meet objectives of the wilderness transportation system. (0255) (08B)	a. Follow standards specified in FSH 7709.12, FSM 2323.11c and 2323.61d w/R-2 Supplement. (6134) (08B)
		b. Trail density will be less than one mile per square mile. Trails are constructed and maintained for established capacity levels. (6161) (08B)

MANAGEMENT PRESCRIPTION 08B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	04 Construct bridges to only the standard necessary to accommodate the specified class of user. Construct bridges only where no safe opportunity exists to cross a stream or gorge during periods of normal stream flow. A safety hazard is a physical condition of a trail which may cause injury, is unusual or unexpected, and not readily identifiable by the trail user. It is not a condition which is easily identifiable and normally encountered for the type or location of the trail involved. The following examples illustrate this distinction: A hazard is a rotten bridge decking or handrail. A stream crossing where no bridge is provided and the user would expect this on the type and location of the trail is not a hazard. A hazard is a stable-appearing loose rock in a constructed treadway where all other rocks are stable. A trail treadway made up of rocks in a near-natural position, many of which are loose, is not a hazard. A hazard is a perennial bog-hole on a horse trail. An intermittent bog-hole which will dry up by early summer or within a few days following a rain storm is not a hazard. A hazard is a section of trail treadway supported by rotten cribbing. A section of trail where the treadway is obviously slippery is not a hazard. A hazard is a marked ford with holes deeper than the normal channel. A deep ford with a consistent stream bed is not a hazard. (0214) (08B)	
	05 Use corduroy and/or puncheon treads across bogs where no safe and feasible bypass opportunity exists. (0215) (08B)	
	06 Close or sign system trails when not maintained to the safe standard for the specified use. (0216) (08B)	a. Maintain trails in accordance with standards in the Trail Handbook (FSH 7709.12). (6129) (08B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	07 Use signs of unstained wood with routed letters and mounted on unstained posts. (0249) (08B)	a. Follow standards specified in FSH 7109.11a and 11b. (6158) (08B)
	08 Provide signs at trail terminals and trail junctions only. Include only trail identification and identification of terminal points. (0250) (08B)	
FA&O Construction Reconstruction and Maintenance (L24 AND 25)	01 Prohibit construction of new administrative facilities or structures. In the event a substantial portion of the existing administrative facility and/or structure is destroyed, it will not be replaced. (0207) (08B)	

MANAGEMENT PRESCRIPTION 08B

Reprinted from Forest Plan (Issued 9/1983)

PRESCRIPTION FOR MANAGEMENT AREA 8C

(Provides for semi-primitive wilderness opportunities.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is to provide for the protection and perpetuation of essentially natural bio-physical conditions. Solitude and a low level of encounters with other users or evidence of past use is not an essential part of the social setting. Human travel is principally on system trails. Designated campsites are used and show evidence of repeated, but acceptable levels of use.

All resource management activities are integrated in such a way that current human use leaves only limited and site-specific evidence of their passing. Areas with evidence of unacceptable levels of past use are rehabilitated and the affected area restored. Range allotments with authorized permanent structures, and authorized mineral exploration activities requiring multi-year surface occupancy facilities may be present within the area. Scientific and other authorized practices utilizing non-motorized equipment, but requiring up to season-long occupancy are compatible.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Visual Resource Management (A04)	01 Manage for maximum retention of the natural landscape. Design and locate management activities to meet the Visual Quality Objective of Preservation in all areas except where specific surface occupancy is authorized by Wilderness legislation. In these areas, the Visual Quality Objective is Retention. (0173) (08C)	
Dispersed Recreation Management (A14 and 15)	01 Provide semi-primitive recreation opportunities requiring predominately unmodified natural settings, with a moderate to high degree of challenge and risk while traveling cross-country or on trails. (0237) (08C)	
	02 Prohibit open fires in alpine, krummholz, meadow areas and within riparian areas when: a. Use of dead and down wood for fuel is likely to violate diversity requirements, soil nutrient and erosion protection, or b. Visual resource objectives for the area likely could not be met. (0199) (08C)	
	03 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (08C)	
	04 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (08C)	
	05 Manage summer use to allow moderate to high contact with other groups and individuals. (0752) (08C)	a. Areawide Capacity: (PAOT/Acre) Open lands Alpine, Krummholz .004 Rock, Mtn. grass .008 Forest and Shrub lands Ponderosa Pine, Douglas-fir, Riparian areas, White Pine .05 Spruce/fir, Lodgepole Pine, Aspen .08

MANAGEMENT PRESCRIPTION 08C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		(6126) (08C)
		b. Maximum use and capacity levels are: - Trail and camp encounters during peak use days are less than 20 other parties per day. -Trail capacity is displayed below:

Use Level	Open Lands	Forest & Shrub Lands
On Trails (PAOT/Mile)	2-3	9-11

(6346) (08C)

		c. Reduce visitor use when the level of use exceeds capacity on more than 20 percent of the days during the summer use season. (6019) (08C)
	06 Reduce visitor use when the level of use exceeds capacity for more than 20 percent of the summer use season. (0489) (08C)	
	07 Permits for parties larger than the established limit may be issued when their presence can be adequately screened from the sights and sounds of other parties in the area. (0302) (08C)	
	08 Manage location of campsites to provide a moderate degree of solitude. (0628) (08C)	a. Locate campsites at least 300' apart. (6348) (08C)
		b. Occupied Site Guidelines: (Maximum number of sites occupied at one time.) Lakes < 5 acres 2

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		5-25 acres 3 >25 acres 4 Streams Open areas 3 sites/mile Forested areas 6 sites/mile (6350) (08C)
	09 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. (0636) (08C)	a. Allow sites to be occupied 20 days/summer season or to the level required to maintain at least a stable trend in site condition. (6352) (08C) b. Close and restore Frissell condition class 4 sites unless a designated site. Close and restore class 5 sites. (6354) (08C)
Recreation Management (Private and Other Public Sector) (A16)	01 Manage outfitter-guide operations in the same manner as other visitors. Permit camping only in sites specified in outfitter-guide permits. Keep outfitter-guide activities harmonious with activities of non-guided visitors. Include outfitter-guide operations in calculations of level-of-use capacities. (0208) (08C)	
Range Resource Management (D02)	01 Manage livestock and herbivorous wildlife forage use in accordance with FSM 2320.3 (36 CFR 293.7). (0182) (08C)	a. Follow established utilization standards for areas, within grazing allotments. (6130) (08C)
Special Use Management (Non-Recreation) (J01)	01 Manage surface occupancy activities authorized prior to wilderness designation to reduce impact on wilderness values consistant with the intent of the occupancy authorization. (0210) (08C) 02 Permit only those uses authorized by wilderness legislation, which cannot be reasonably met on non-Wilderness lands. (0211) (08C)	

MANAGEMENT PRESCRIPTION 08C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Soil Resource Management (KA1)	01 Restore soil disturbances caused by human use (past mining, grazing, trail construction and use, camping, etc.) to soil loss tolerance levels commensurate with the natural ecological processes for the treatment area. (0184) (08C)	a. Follow procedures specified in Agricultural Handbook 537 for Utilizing the Universal Soil Loss Equation. (Cautions contained in WO 2550 letter dated 5/28/82 should be noted.) The guidance for K and T factors are in the National Soils Handbook 407.1 (a)(3)(xvii). (6159) (08C)
Transportation System Management (L01 & 20)	01 Locate and design required access roads within the management area for authorized activities to minimize the biophysical and visual impact, and to facilitate restoration. (0213) (08C)	a. Roads will not be authorized: - On slopes steeper than 60%; - In areas of high erosion hazard; - In areas of high geologic hazard; - In areas of low visual absorption capacity that are unlikely for successful restoration; - In areas which would adversely affect threatened and endangered plant and animal species. (6165) (08C)
	02 Convert roads not needed for authorized activities to trails, or if they are not needed as part of the transportation system, restore them to the established VQO. (0254) (08C)	a. Maintain trails in accordance with standards in the Trail Handbook (FSH 7709.12). (6129) (08C) b. Schedule trail maintenance in accordance with Regional Acceptable Work Standards. (FSM 1310 R2 ID No. 1 7/22/82.) (6131) (08C)
	03 Construct or reconstruct trails only when needed to meet objectives of the wilderness transportation system. (0255) (08C)	a. Follow standards specified in FSH 7709.12, FSM 2323.11c and 2323.61d w/R-2 Supplement. (6134) (08C)

CONTINUATION OF:
Transportation System Management (L01 & 20)

b. Trail density will not exceed two miles per square mile. Trails are constructed and maintained for moderate to high levels of use as specified below. (6162) (08C)

04 Construct bridges to only the standard necessary to accommodate the specified class of user. Construct bridges only where no safe opportunity exists to cross a stream or gorge during periods of normal stream flow.

A safety hazard is a physical condition of a trail which may cause injury, is unusual or unexpected, and not readily identifiable by the trail user. It is not a condition which is easily identifiable and normally encountered for the type or location of the trail involved. The following examples illustrate this distinction:

A hazard is a rotten bridge decking or handrail. A stream crossing where no bridge is provided and the user would expect this on the type and location of the trail is not a hazard.

A hazard is a stable-appearing loose rock in a constructed treadway where all other rocks are stable. A trail treadway made up of rocks in a near-natural position, many of which are loose, is not a hazard.

A hazard is a perennial bog-hole on a horse trail. An intermittent bog-hole which will dry up by early summer or within a few days following a rain storm is not a hazard.

A hazard is a section of trail treadway supported by rotten cribbing. A section of trail where the treadway is obviously slippery is not a hazard.

A hazard is a marked ford with holes deeper than the normal channel. A deep ford with a consistent stream bed is not a hazard.
(0214) (08C)

MANAGEMENT PRESCRIPTION 08C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	05 Use corduroy and/or puncheon treads across bogs where no safe and feasible bypass opportunity exists. (0215) (08C)	
	06 Close or sign system trails when not maintained to the safe standard for the specified use. (0216) (08C)	a. Maintain trails in accordance with standards in the Trail Handbook (FSH 7709.12). (6129) (08C)
	07 Use signs of unstained wood with routed letters and mounted on unstained posts. (0249) (08C)	a. Follow standards specified in FSH 7109.11a and 11b. (6158) (08C)
	08 Provide signs at trail terminals and trail junctions only. Include only trail identification and identification of terminal points. (0250) (08C)	
FA&O Construction Reconstruction and Maintenance (L24 AND 25)	01 Prohibit construction of new administrative facilities or structures. In the event a substantial portion of the existing administrative facility and/or structure is destroyed, it will not be replaced. (0207) (08C)	

PRESCRIPTION FOR MANAGEMENT AREA 8D

(Provides for limited areas of high-density day-use.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is to provide for the protection and perpetuation of essentially natural bio-physical conditions inside wilderness boundaries which are adjacent to and accessed from urban or rural developments or heavily used developed recreation sites. Human use is characterized by large numbers of day-users traveling relatively short distances into the wilderness.

Management activities are integrated so that the bio-physical wilderness resources are protected from unacceptable change, and day-users are made aware of the purposes of wilderness management. Management is directed towards providing a generally natural appearing setting. A trail system directs the user within the area and leads the overnight user through to other management areas. Opportunities to make official visitor contacts are frequent. There are no developed sites within the wilderness. Facilities such as bridges necessary for user safety or bio-physical resource protection may be present.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Visual Resource Management (A04)	01 Manage for maximum retention of the natural landscape. Design and locate management activities to meet the Visual Quality Objective of Preservation in all areas except where specific surface occupancy is authorized by Wilderness legislation. In these areas, the Visual Quality Objective is Retention. (0173) (08D)	
Dispersed Recreation Management (A14 and 15)	01 Provide semi-primitive recreation opportunities requiring a predominately unmodified natural setting with a low degree of challenge and risk and travel on system trails. (0245) (08D)	a. Designated sites will be spaced only as required for reasonable screening between sites or at least 100 feet apart. (6358) (08D)
		b. Close and restore sites in Frissell condition class 5. Designated sites may occur in Frissell condition class 1 through 4. (6360) (08D)
		c. Prohibit recreation livestock. except for through travel. (6362) (08D)
		d. Require self-contained stoves. Prohibit open campfires. (6364) (08D)
	02 Manage for day-use and through-travel and to prevent unacceptable changes to the biophysical resources. (0243) (08D)	
	03 Allow overnight camping only at designated sites where conflict with day-use can be avoided. (0630) (08D)	a. Maximum use and capacity levels is reached when trail and camp encounters during peak-use days are more than 20 other parties per day.
		AREAWIDE CAPACITY (PAOT/Acre)
		Open Lands
		Alpine, Krummholz .04

MANAGEMENT PRESCRIPTION 08D

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		Rock, Mtn. Grass .08 Forest and Shrub Lands Ponderosa pine, Douglas-fir, Riparian areas, White Pine .5 Spruce/fir, Lodgepole pine, aspen .8 (6125) (08D) b. Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biophysical resources will occur. (6356) (08D)
Recreation Management (Private and Other Public Sector) (A16)	01 Permit only through-travel for outfitter-guide operations during the summer-use season. (0248) (08D)	
Wildlife and Fish Resource Management (C01)	01 Protect habitat requirements over human use, even on a short-term basis. Priorities are: a. State and Federal classified threatened or endangered species needs; b. Permitted livestock where allowed by Wilderness leglislation; and c. Recreation livestock. (0178) (08D)	
Range Resource Management (D02)	01 Prohibit grazing and trailing of permitted livestock except where no feasible alternative access to an allotment is available. (0241) (08D)	

MANAGEMENT PRESCRIPTION 08D

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management (D02)	02 Manage meadows and lakeshores in "good" range condition. Limited areas of "fair" are permissible in areas of user concentrations. However, "fair" areas must be exhibiting an upward trend. (0235) (08D)	a. Base range condition on the standards in Range Analysis Handbook (FSH 2209.21). (6156) (08D)
	03 Prohibit overnight use of recreational stock. (0247) (08D)	
	04 Maintain trailside vegetation in at least a "fair or better" condition based upon natural productivity of the area. (0234) (08D)	a. Base range condition on the standards in Range Analysis Handbook (FSH 2209.21). (6156) (08D)
Special Use Management (Non-Recreation) (J01)	01 Manage surface occupancy activities authorized prior to wilderness designation to reduce impact on wilderness values consistant with the intent of the occupancy authorization. (0210) (08D)	
	02 Permit only those uses authorized by wilderness legislation, which cannot be reasonably met on non-Wilderness lands. (0211) (08D)	
Soil Resource Management (KA1)	01 Restore soil disturbances caused by human use (past mining, grazing, trail construction and use, camping, etc.) to soil loss tolerance levels commensurate with the natural ecological processes for the treatment area. (0184) (08D)	a. Follow procedures specified in Agricultural Handbook 537 for Utilizing the Universal Soil Loss Equation. (Cautions contained in WO 2550 letter dated 5/28/82 should be noted.) The guidance for K and T factors are in the National Soils Handbook 407.1 (a)(3)(xvii). (6159) (08D)
	02 Manage designated campsites to Frissell condition class 3. (0242) (08D)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Transportation System Management (L01 & 20)	01 Locate and design required access roads within the management area for authorized activities to minimize the biophysical and visual impact, and to facilitate restoration. (0213) (08D)	a. Roads will not be authorized: - On slopes steeper than 60%; - In areas of high erosion hazard; - In areas of high geologic hazard; - In areas of low visual absorption capacity that are unlikely for successful restoration; - In areas which would adversely affect threatened and endangered plant and animal species. (6165) (08D)
	02 Convert roads not needed for authorized activities to trails, or if they are not needed as part of the transportation system, restore them to the established VQO. (0254) (08D)	a. Maintain trails in accordance with standards in the Trail Handbook (FSH 7709.12). (6129) (08D) b. Schedule trail maintenance in accordance with Regional Acceptable Work Standards. (FSM 1310 R2 ID No. 1 7/22/82.) (6131) (08D)
	03 Construct or reconstruct trails only when needed to meet objectives of the wilderness transportation system. (0255) (08D)	a. Follow standards specified in FSH 7709.12, FSM 2323.11c and 2323.61d w/R-2 Supplement. (6134) (08D) b. Trail density may exceed two miles per square mile. Trails are constructed and maintained for high levels of use as specified below. (6163) (08D)

MANAGEMENT PRESCRIPTION 08D

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	04 Construct bridges to only the standard necessary to accommodate the specified class of user. Construct bridges only where no safe opportunity exists to cross a stream or gorge during periods of normal stream flow. A safety hazard is a physical condition of a trail which may cause injury, is unusual or unexpected, and not readily identifiable by the trail user. It is not a condition which is easily identifiable and normally encountered for the type or location of the trail involved. The following examples illustrate this distinction: A hazard is a rotten bridge decking or handrail. A stream crossing where no bridge is provided and the user would expect this on the type and location of the trail is not a hazard. A hazard is a stable-appearing loose rock in a constructed treadway where all other rocks are stable. A trail treadway made up of rocks in a near-natural position, many of which are loose, is not a hazard. A hazard is a perennial bog-hole on a horse trail. An intermittent bog-hole which will dry up by early summer or within a few days following a rain storm is not a hazard. A hazard is a section of trail treadway supported by rotten cribbing. A section of trail where the treadway is obviously slippery is not a hazard. A hazard is a marked ford with holes deeper than the normal channel. A deep ford with a consistent stream bed is not a hazard. (0214) (08D)	
	05 Use corduroy and/or puncheon treads across bogs where no safe and feasible bypass opportunity exists. (0215) (08D)	
	06 Close or sign system trails when not maintained to the safe standard for the specified use. (0216) (08D)	a. Maintain trails in accordance with standards in the Trail Handbook (FSH 7709.12). (6129) (08D)

MANAGEMENT PRESCRIPTION 08D

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	07 Use signs of unstained wood with routed letters and mounted on unstained posts. (0249) (08D)	a. Follow standards specified in FSH 7109.11a and 11b. (6158) (08D)
	08 Provide signs at trail terminals and trail junctions only. Include only trail identification and identification of terminal points. (0250) (08D)	
FA&O Construction Reconstruction and Maintenance (L24 AND 25)	01 Prohibit construction of new administrative facilities or structures. In the event a substantial portion of the existing administrative facility and/or structure is destroyed, it will not be replaced. (0207) (08D)	

MANAGEMENT PRESCRIPTION 08D

Reprinted from Forest Plan (Issued 9/1983)

PRESCRIPTION FOR MANAGEMENT AREA 9A

(Emphasis is on riparian area management.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Emphasis is on the management of all of the component ecosystems of riparian areas. These components include the aquatic ecosystem, the riparian ecosystem (characterized by distinct vegetation), and adjacent ecosystems that remain within approximately 100 feet measured horizontally from both edges of all perennial streams and from the shores of lakes and other still water bodies. All of the components are managed together as a land unit comprising an integrated riparian area, and not as separate components.

The goals of management are to provide healthy, self-perpetuating plant communities, meet water quality standards, provide habitats for viable populations of wildlife and fish, and provide stable stream channels and still water-body shorelines. The aquatic ecosystem may contain fisheries habitat improvement and channel stabilizing facilities that harmonize with the visual setting and maintain or improve wildlife or fish habitat requirements. The linear nature of streamside riparian areas permits programming of management activities which are not visually evident or are visually subordinate.

Forest riparian ecosystems are treated to improve wildlife and fish habitat diversity through specified silvicultural objectives. Both commercial and non-commercial vegetation treatments are used to achieve multi-resource benefits. Clearcutting is used to regenerate aspen clones. Other forest cover types are treated with either small-group or single-tree selection methods.

Livestock grazing is at a level that will assure maintenance of the vigor and regenerative capacity of the riparian plant communities. Vehicular travel is limited on roads and trails at times when the ecosystems would be unacceptably damaged. Developed recreation facility construction for overnight use is prohibited within the 100-year floodplain.

The management area over which this prescription is to be applied will also be affected by several management activities in the Forest-wide direction. Most notable is the direction involving upland zones, in the Water Resource Improvement and Maintenance management activity, and elsewhere.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession unless specific vegetation treatment is necessary to meet other resource objectives or for insect and disease control. (0033SJ) (09A)	
Cultural Resource Management (A02)	01 Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with riparian and aquatic values. Limit interpretation to low cost developments such as interpretive signing. (0539SJ) (09A)	
Visual Resource Management (A04)	01 Design and implement management activities which sustain inherent visual values of riparian areas and blend with the surrounding natural landscapes. (0656) (09A)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of Partial Retention. (6135) (09A)
Dispersed Recreation Management (A14 and 15)	01 Semi-primitive nonmotorized, semi-primitive motorized, roaded natural and rural recreation opportunities can be provided. (0445) (09A)	
	02 The recreation opportunity provided as an overall objective will generally be that opportunity being emphasized on the management area adjacent to, or bisected by, the riparian management area. (0542SJ) (09A)	a. Maximum Use and Capacity Levels are: Recreation use and capacity range during the snow-free period (PAOT/acre): Trail use and capacity range (PAOT/mile of trail): Capacity Range*

Class	Very Low	Low	Moderate	High
ROS Class - Semi-Primitive Non-motorized				
On Trails				

MANAGEMENT PRESCRIPTION 09A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		PAOT/mile 2.0 3.0 9.0 11.0
		Area-wide PAOT/acre .004 .008 .05 .08
		ROS Class - Semi-Primitive Motorized
		On Trails PAOT/mile 2.0 3.0 9.0 11.0
		Area-wide PAOT/acre .004 .008 .05 .08
		ROS Class - Roaded Natural
		On Trails PAOT/mile - - - -
		Area-wide PAOT/acre .04 .08 1.2 2.5
		ROS Class - Rural
		On Trails PAOT/mile - - - -
		Area-wide PAOT/acre .5 .8 5.0 7.5
		Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.
		Reduce the above use levels where unacceptable changes to the biophysical resources will occur.
		* VERY LOW applies to alpine. LOW applies to rock, mtn. grass and clearcuts 1-20 years old.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		MODERATE applies to mtn. grass, PP size class 9, 8 and 7, DF size class 9, 8 and 7, Aspen size class 9, SF size class 7, shelterwood cuts 90-120 years old, selection cuts 1-20 years old and clearcuts 80-120 years old. HIGH applies to SF size class 9 and 8, Aspen size class 8 and 7 and clearcuts 20-80 years old.
		(6428SJ) (09A)
		b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (09A)
		c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (09A)
	03 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (09A)	
	04 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (09A)	
	05 Close riparian areas to motorized vehicles operating off roads except at designated right angle crossings. This does not apply to over snow vehicles operating on snow. (4760SJ) (09A)	

MANAGEMENT PRESCRIPTION 09A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 Provide habitat diversity through vegetation treatments, in conjunction with other resource activities, designed to maintain or improve wildlife or fisheries habitat. (0658) (09A)	
	02 Provide habitat for viable populations of all native vertebrate species of fish and wildlife. (0750) (09A)	
	03 Manage riparian areas to reach the latest seral stage possible within the stated objectives. (0402) (09A)	a. Maintain all riparian ecosystems in at least an upper mid-seral successional stage based upon the R2 Riparian Ecosystem Rating System. (6147) (09A)
	04 Manage riparian areas identified as essential habitat for indicator species by retaining suitable habitats. a) Beaver: Introduce and control beaver populations in suitable riparian/aquatic areas with the assistance of State wildlife agencies, where such actions would be beneficial to riparian management. b) Cutthroat, Rainbow, Brown, and Brook Trout: Implement structural and non-structural improvements to maintain or improve fisheries habitat in aquatic ecosystems. In streams and rivers, develop habitat that will provide protective cover for trout during low water and escape and feeding cover during periods of low flow. c) River Otter: Manage river otter habitat under guidelines and trapping regulations jointly agreed to between San Juan National Forest and Colorado Division of Wildlife. (1537SJ) (09A)	
	05 Plan lake and stream habitat improvement projects with the assistance of state wildlife agencies, where aquatic habitats are below productive potential. Plan those improvements that harmonize with the visual setting. (0660) (09A)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	06 Maintain a current fish habitat inventory in cooperation with state wildlife agencies. (0662) (09A)	
	07 Maintain instream flows in cooperation with state wildlife agencies to support a sustained yield of natural fisheries resources. (0664) (09A)	
Range Resource Management (D02)	01 Maintain proper stocking and livestock distribution to protect riparian ecosystems. (0666) (09A)	
	02 Prohibit trailing of livestock along the length of riparian areas except where existing stock driveways occur. Rehabilitate existing stock driveways where damage is occurring in riparian areas. Relocate them outside riparian areas if possible, and if necessary to achieve riparian-area goals. (0108) (09A)	
	03 Where ground cover standards are not met or other riparian ecosystem degradation is occurring from grazing: a) Implement intensive management systems (rest-rotation, deferred-rotation or rotation) which remove grazing from riparian areas at least part of the year, or; b) Reduce stocking to a level that will allow degraded areas to recover, or; c) Use temporary site specific exclusion fencing. (2040SJ) (09A)	
	04 Favor utilization of non-riparian forage over riparian by developing off-stream water sources and placement of salt blocks out of riparian areas. (2041SJ) (09A)	

MANAGEMENT PRESCRIPTION 09A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Silvicultural Prescriptions (E03, 06 & 07)	01 Manage forest cover types to perpetuate tree cover and provide healthy stands, high water quality and wildlife and fish habitat. (0088) (09A)	
	02 Manage Forest Cover Types using the following harvest methods: - Clearcut in aspen, and - Selection (Group or Single tree) in all other cover types. (0486) (09A)	a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (09A)

b. Silvicultural Standards:
(These standards may be exceeded on areas managed for old growth)

1. Clearcut:

Forest Cover Type	Aspen
Rotation Age	80-120 yrs.

2. Selection (group or single tree):

	All other Forest Cover Types
Rotation Age	90-160
Cutting Cycle	20-30 yrs

For group selection, size of openings are less than two acres.

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

(6154) (09A)

03 Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. Harvest timber to meet wildlife, visual, and other resource needs. Timber production will not be considered a primary management objective in riparian areas.

(2540SJ) (09A)

04 Apply intermediate treatments to maintain growing stock level standards.
(0140) (09A)

05 Adjust stocking levels by site quality, higher stocking should occur on better sites.
(0668) (09A)

06 Utilize firewood material using both commercial and noncommercial methods.
(0147) (09A)

07 Establish a satisfactory stand either naturally or through artificial regeneration methods within a five-year period after disturbance.
(0726) (09A)

08 Prohibit log landing and decking areas within the riparian area.
(0670) (09A)

09 Reduce debris jam potential by cutting stumps to near ground level in the 100-year floodplain.
(0672) (09A)

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	10 For management purposes, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (09A)	a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25
Mixed Conifers	190	25
Lodgepole Pine	150	25
Engelmann Spruce - Sub-alpine fir	150	25
Aspen	300	25

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole		

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6316) (09A)
Water Resource Improvement and Maintenance (F05 and 06)	01 Prevent or remove debris accumulations that reduce stream channel stability and capacity. (0001) (09A)	
	02 Proposed new land-use facilities (roads, campgrounds, buildings) will not normally be located within flood-plain boundaries for the 100-year flood. Protect present and all necessary future facilities that cannot be located out of the 100-year floodplain by structural mitigation (deflection structures, riprap, etc.). (0488) (09A)	a. Implement mitigation measures when present or unavoidable future facilities are located in the active floodplain to ensure that State water quality standards, sediment threshold limits, bank stability criteria, flood hazard reduction and instream flow standards are met during and immediately after construction. (6604) (09A)
	03 Prevent stream channel instability, loss of channel cross-sectional areas, and loss of water quality resulting from activities that alter vegetative cover. (0007) (09A)	
	04 Maintain sediment yield within threshold limits. The effects on water and sediment yields from vegetation manipulation and road construction projects will be determined through the use of appropriate modeling and/or quantification procedures to determine sediment yield threshold limits and water yield increase potentials. (0632) (09A)	a. Limit Changes in Channel rating or classification scores to an increase of 10 percent or less. Use channel stability criteria established by Cooper, 1978 and Pfankuch, 1975. Use channel classification criteria established by Rosgen, 1980. (6001) (09A)

MANAGEMENT PRESCRIPTION 09A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Water Resource Improvement and Maintenance (F05 and 06)		b. Prescription-induced water yield increases should not exceed prescribed thresholds of allowable increase nor should the total yield of water and sediment exceed maximum allowable amounts as stated in the above references. (6060) (09A)
		c. Maintain at least 80 percent of potential ground cover within 100 ft. from the edges of all perennial streams, lakes and other waterbodies, or to the outer margin of the riparian ecosystem, where wider than 100 feet. (6650) (09A)
	05 Avoid channelization of natural streams. Where channelization is necessary for flood control or other purposes, use stream geometry relationships to re-establish meanders, width/depth ratios, etc. consistent with each major stream type. (0680) (09A)	
	06 Treat disturbed areas resulting from management activities, to reduce sediment yields to the natural erosion rates in the shortest possible time. (0684) (09A)	
	07 Stabilize streambanks which are damaged beyond natural recovery in a reasonable time period with appropriate methods or procedures that emphasize control by vegetation. (0686) (09A)	
	08 Design and locate settling ponds to reduce downstream sediment yield and to prevent washout during high water. Locate settling ponds outside of the active channel. Restore any channel changes to hydralic geometry standards for each stream type. (0688) (09A)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Water Resource Improvement and Maintenance (F05 and 06)	09 Include wildlife and fish habitat, aesthetic, or safety goals when planning projects that result in vegetation type conversion. (0690) (09A)	
	10 Require concurrent monitoring to ensure that mitigative measures are effective and in compliance with state water quality standards. (0692) (09A)	
Soil Resource Management (KA1)	01 Rehabilitate disturbed soils areas where adverse impacts would occur according to the following priorities: -Aquatic ecosystems; -Riparian ecosystems; and -Riparian areas outside of aquatic and riparian ecosystems. (0091) (09A)	
	02 Prevent soil surface compaction and disturbance in riparian ecosystems. Allow use of heavy construction equipment for construction, residue removal, etc., during periods when the soil is least susceptible to compaction or rutting. (0003) (09A)	
	03 Maintain or enhance the long-term productivity of soils within the riparian ecosystem. (0694) (09A)	
Mining Law Compliance and Administration (G01)	01 Minimize detrimental disturbance to the riparian area by mineral activities. Initiate timely and effective rehabilitation of disturbed areas and restore riparian areas to a state of productivity comparable to that before disturbance. (0706) (09A)	a. Prohibit the depositing of soil material from drilling, processing, or site preparation in natural drainageways. (6612) (09A) b. Locate the lower edge of disturbed or deposited soil banks out-side the active floodplain. (6614) (09A) c. Prohibit stockpiling of topsoil or any other disturbed soil in the active floodplain.

MANAGEMENT PRESCRIPTION 09A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Mining Law Compliance and Administration (G01)		(6616) (09A)
		d. Prohibit mineral processing (milling) activities within the active floodplain. (6618) (09A)
		e. Discontinue heavy equipment use when soil compaction, rutting, and puddling is present. (6620) (09A)
	02 Locate mineral removal activities away from the water's edge or outside the riparian area. (0708) (09A)	a. Locate drilling mud pits outside the active floodplain unless alternate locations are more environmentally damaging. If location is unavoidable, seal and dike all pits to prevent leakage. (6624) (09A)
		b. Drain and restore roads, pads, and drill sites immediately after use is discontinued. Revegetate to 80 percent of ground cover in the first year. Provide surface protection during stormflow and snowmelt runoff events. (6626) (09A)
	03 Design and locate placer mine settling ponds to prevent washout during high water. Locate settling ponds outside of the active channel. Restore any channel changes to hydraulic geometry standards for each stream type. (0710) (09A)	a. Permit diversion activities within the riparian zone where technology is available to maintain water quality standards, sediment threshold limits, and instream flow standards. (6622) (09A)
	04 Confine heavy equipment use to areas necessary for mineral extraction. (0712) (09A)	
	05 Locate mining camps outside the active floodplain. (0716) (09A)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Mining Law Compliance and Administration (G01)	06 Require concurrent monitoring to ensure that mitigative measures are effective and in compliance with State water quality standards. (0714) (09A)	
Transportation System Management (L01 & 20)	01 Locate roads and trails outside riparian areas unless alternative routes have been reviewed and rejected as being more environmentally damaging. (0718) (09A)	a. Do not parallel streams when road location must occur in riparian areas except where absolutely necessary. Cross streams at right angles. Locate crossings at points of low bank slope and firm surfaces. (6628) (09A) b. Maintain the natural width-to-depth ratio of the stream at channel crossing. (9342SJ) (09A)
	02 Continue the adjoining road and trail standards for transportation/travel management through riparian zones when feasible. (4761SJ) (09A)	
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Create artificial sediment traps with barriers where the natural vegetation is inadequate to protect the waterway or lake from significant accelerated sedimentation. (0720) (09A)	
	02 Minimize detrimental disturbance to the riparian area by construction activities. Initiate timely and effective rehabilitation of disturbed areas and restore riparian areas so that a vegetation ground cover or suitable substitute protects the soil from erosion and prevents increased sediment yield. (0724) (09A)	a. Establish vegetation ground cover on disturbed areas (excluding the running surface) to at least 60 percent within two years. On low productivity sites, establish to at least 40 percent ground cover. (9343SJ) (09A)
	03 Stabilize fill around road crossings and culverts. (4762SJ) (09A)	

MANAGEMENT PRESCRIPTION 09A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Local Road Construction and Reconstruction (L11, 12, & 13)	04 Schedule construction activities during dry periods, low water periods, or during frozen conditions. (4763SJ) (09A)	
	05 Establish fords only under conditions which will not cause significant streambank erosion. These conditions are where: a. Stream channel and bank are bedrock, rubble or gravel. b. Bank slopes are low with firm surface. (4765SJ) (09A)	
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost-efficient and that will meet objectives of adjacent management areas. (5033SJ) (09A)	
	02 Rehabilitate all firelines prior to demobilizing the fire. Include water bars and seeding. (5027SJ) (09A)	
	03 Discourage location of fire camps in riparian areas. If they are necessary, provide sanitation facilities to avoid surface or ground water pollution. (5028SJ) (09A)	
Fuel Treatment (P11 thru 14)	01 Accomplish fuel removal primarily by hand crews to prevent water quality degradation and to avoid disturbance from dozer-constructed fuel breaks. (5029SJ) (09A)	

PRESCRIPTION FOR MANAGEMENT AREA 9B

(Emphasis is on increased water yield through vegetation manipulation.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is on increased water yield and improved timing of flow through manipulation of forest vegetation. The location, shape, and size of vegetation treatment areas are specifically designed. Clearcutting is the harvest method used with all forest cover types. Management activities in foreground, middleground, and background may dominate, but harmonize and blend with the natural setting.

Livestock grazing occurs but not to the point that regeneration of forested areas or water-yield objectives are impaired. Semi-primitive recreation is the predominant recreation use. Motorized travel may be prohibited.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession in non-commercial forest and non-forest cover types. (0028SJ) (09B)	
	02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions." (0041SJ) (09B)	
	03 Partially maintain vegetation diversity by maintaining present aspen percentage. (0031SJ) (09B)	
Cultural Resource Management (A02)	01 Allow recreation and non-recreation use of suitable cultural resource properties to the extent that such uses do not conflict with other resource uses. Limit interpretation to low cost developments such as interpretive signing. (0532SJ) (09B)	
Visual Resource Management (A04)	01 Management activities in foreground and middleground dominate, but harmonize and blend with the natural setting. Management activities may also dominate but appear natural when seen as background. (0263) (09B)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of modification. (6267) (09B)
Dispersed Recreation Management (A14 and 15)	01 Semi-primitive nonmotorized, semi-primitive motorized, roaded natural and rural recreation opportunities can be provided. (0445) (09B)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)	02 Provide roaded natural recreation opportunities within 1/2 mile of Forest arterial, collector and local roads with better than primitive surfaces which are open to public travel. Provide semi-primitive motorized recreation opportunities with a low to moderate incidence of contact with other groups and individuals within 1/2 mile of designated local roads with primitive surfaces and trails open to motorized recreation use. Where local roads are closed to public motorized recreation travel, provide for dispersed non-motorized recreation opportunities. Manage recreation use to provide for the incidence of contact with other groups and individuals appropriate for the established ROS class. Provide semi-primitive non-motorized recreation opportunities in all areas more than 1/2 mile away from roads and trails open to motorized recreation use. (0650) (09B)	a. Maximum Use and Capacity Levels are: Recreation use and capacity range during the snow-free period (PAOT/acre): Trail use and capacity range (PAOT/mile of trail):

Use Level	Capacity Range: Very Low	Low	Moderate	High
ROS Class - Semi-Primitive Nonmotorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Semi-Primitive Motorized				
On Trails PAOT/mile	2.0	3.0	9.0	11.0
Area-wide PAOT/acre	.004	.008	.05	.08
ROS Class - Roaded Natural				
On Trails PAOT/mile	-	-	-	-
Area-wide PAOT/acre	.04	.08	1.2	2.5
ROS Class - Rural				

MANAGEMENT PRESCRIPTION 09B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)		On Trails PAOT/mile - - - - Area-wide PAOT/acre .5 .8 5.0 7.5 Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25. Reduce the above use levels where unacceptable changes to the biophysical resources will occur. (6402) (09B) b. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88). (6083) (09B) c. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook). (6226) (09B)
	03 Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted. (0174) (09B) 04 Manage site use and occupancy to maintain sites within Frissell condition class 3 except for designated sites which may be class 4. Close and restore class 5 sites. (0175) (09B)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Dispersed Recreation Management (A14 and 15)	05 Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails in alpine shrub and Krummholz ecosystems. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in other alpine, and other ecosystems, where needed to protect soils, vegetation, or special wildlife habitat. (0154) (09B)	
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 Maintain wildlife habitat effectiveness. Permanent openings may be employed. Reduce disturbance to wildlife so that no significant long-term negative wildlife effects result. (0155) (09B)	
	02 Limit investments in wildlife habitat projects to those that do not cause immediate or long-term reductions in water quantity. Favor indicator species through timber management activities where possible. (1533SJ) (09B)	a. Deer, Elk, and Bear: Restrict disruptive human activity in calving and fawning areas during the last two weeks of May and the first two weeks of June. (7233SJ) (09B) b. Hairy Woodpecker and Mountain Bluebird: Protect and/or provide 20 snags/10 acres in all forested types. Also provide for snag replacement. (7227SJ) (09B) c. Goshawk: Prohibit disruptive management activities within 300 feet of any occupied raptor nests during the period May 1 through July 31. (7231SJ) (09B)

MANAGEMENT PRESCRIPTION 09B

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Resource Management (D02)	01 Utilize extensive management systems such as season-long or deferred grazing. (2031SJ) (09B)	a. Vary utilization standards with grazing system and ecological condition. Specify standards in the allotment management plan. (6071) (09B)
	02 Protect regeneration from livestock damage in areas managed for timber production. (2051SJ) (09B)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (09B)
Range Improvement and Maintenance (D03, 04, 05 and 06)	01 Construct and maintain allotment boundary fences, short drift fences and water developments necessary to implement management systems. (2033SJ) (09B)	
Silvicultural Prescriptions (E03, 06 & 07)	01 Harvest forest cover types using the clearcut harvest method. (0265) (09B)	a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (09B) b. Silvicultural Standards: 1) Clearcuts:*

	Forest Cover Type		
	Aspen	Inland Ponderosa Pine	Engelmann spruce-subalpine fir&Mixed Conifer
Rota-	70-90	N/A	180-200

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

tion Age	Yrs		Yrs
Grow-ing Stock Level	N/A	N/A	N/A
Thinning cycle	N/A	N/A	N/A

* The largest increase in water available for stream flow results when 30 to 40 percent of a drainage is harvested in small clearcut patches (3 to 10 acres) dispersed throughout the area of a watershed. (Leaf and Alexander FS Res. Pap. RM 133).

The clearcuts should be concentrated on lower to mid-slope positions in lower energy aspects (N,NE,NW). The clearcuts should be 5 to 7 tree heights in width.

Inland ponderosa pine is not managed for timber production under this prescription. It may be harvested in small clearcut patches for increased water yield; however, regeneration will not be assured within five years of harvest.

(8062SJ) (09B)

02 Utilize firewood material using both commercial and noncommercial methods.
(0147) (09B)

MANAGEMENT PRESCRIPTION 09B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	03 For management purposes, a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential; - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (09B)	a. When the Visual Quality Objective of an area is modification or maximum modification, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Stand Height (ft.) 1/
Inland Ponderosa Pine	190	6
Mixed Conifers	190	6
Lodgepole Pine	150	6
Engelmann Spruce-Subalpine fir	150	6
Aspen	300	6

Forest Cover Type	Crown Closure (Percent)	Distribution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole		

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (6014) (09B)
Reforestation (E04)	01 Plant trees of known genetic qualities to establish new stands. (0275) (09B)	
Water Resource Improvement and Maintenance (F05 and 06)	01 Prolong streamflow, increase water yields and meet State water quality standards. (0145) (09B)	a. Use snow fencing in montane meadows or alpine where snow deposition will occur in protected areas. Structures should be constructed with: 1) Ridge crest locations with at least 500 feet of upwind contributing area. 2) Perpendicular orientation to prevailing winds. 3) Northerly to northeasterly exposure of resultant snow drift. (8426SJ) (09B)
	02 See the "Silvicultural Prescriptions" management activity for specific vegetation treatment for increased water yield. (3026SJ) (09B)	a. In areas not managed for timber production, treat clearcut areas in all forest cover types except aspen every 20 years to keep in equivalent clearcut condition. (8430SJ) (09B)

MANAGEMENT PRESCRIPTION 09B

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Transportation System Management (LO1 & 20)	O1 Manage local constant roads to accommodate medium-light seasonal use (SADT 10-50). Regulate seasonal public use by closure if roadbed damage will occur and where travel conflicts with livestock grazing. (4727SJ) (09B)	a. Manage the area for a moderate density (one-half to one mile/ square mile) of constant roads. (9333SJ) (09B)
	O2 Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use. (4728SJ) (09B)	
Local Road Construction and Reconstruction (L11, 12, & 13)	O1 Construct roads to the minimum standards required for activities that accomplish the water yield objectives. (4751SJ) (09B)	a. Construct or reconstruct local constant roads with gravel support needed for timber operations and hauling. (9332SJ) (09B)
		b. Construct local intermittent roads with no gravel support unless needed to extend logging seasons. (9328SJ) (09B)
Road Maintenance (L19)	O1 Maintain roads as necessary to accomplish water yield objectives. (4794SJ) (09B)	a. Maintain local constant roads to maintenance level three. (9329SJ) (09B)
		b. Maintain local intermittent roads to maintenance level two when open for project activities. (9330SJ) (09B)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Trail System Management (L23)	01 Provide trails for cross-country skiing, snowmobile, foot, and horse travel. (47328J) (09B)	a. Maintain trails to maintenance level two. (9331SJ) (09B)
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives within the vegetation cover types. (5026SJ) (09B)	a. Wildfire protection levels: Promptly control wildfires burning at all Fire Intensity Levels except in areas managed for permanent openings. (9629SJ) (09B)

MANAGEMENT PRESCRIPTION 09B

Reprinted from Forest Plan (Issued 9/1983)

PRESCRIPTION FOR MANAGEMENT AREA 10A

(Provides for research natural areas.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Emphasis is on research, study, observations, monitoring, and educational activities that are non-destructive and non-manipulative, and that maintain unmodified conditions.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession in all cover types. (0036SJ) (10A)	
Cultural Resource Management (A02)	01 Allow use of the area for research and educational purposes. a) Ensure that research conducted on archaeological properties is compatible with the intent of Research Natural Area designation. Non-destructive research techniques will be preferred. Research can only be conducted by, or under the direct supervision of, professional level archaeologists or related academic disciplines, and such research will only be completed under a Forest Service and State Historic Preservation Office approved research plan/design. b) Use data salvage type mitigation only as a last alternative to preserve resources that cannot in any feasible way be protected in their field situations, due to uncontrollable natural or human factors. c) Allow and promote the use of suitable archaeological properties for public education purposes, as long as such use does not degrade designation quality. d) Prohibit uses of archaeological properties other than for research or public education. (0552SJ) (10A)	
Visual Resource Management (A04)	01 Meet stated visual quality objective. (0125) (10A)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of retention. (6215) (10A)
Recreation Site Construction and Rehabilitation (A05 AND 06)	01 Prohibit construction of developed recreation sites. (0368) (10A)	

MANAGEMENT PRESCRIPTION 10A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Dispersed Recreation Management (A14 and 15)	01 Discourage or prohibit any public use which contributes to impairment of research or educational values. (0369) (10A)	a. Reference FSM 4063.36. (6291) (10A)
	02 Semi-primitive non-motorized opportunities will be available. (0553SJ) (10A)	
	03 Permit and encourage use by scientists and educators. (0370) (10A)	
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 Prohibit any direct habitat manipulation. (0371) (10A)	
Range Resource Management (D02)	01 Restrict grazing by livestock to that essential for the maintenance of a specific vegetation type. (0372) (10A)	
Range Improvement and Maintenance (D03, 04, 05 and 06)	01 Do not develop livestock distribution and control structures except boundary fences when there is grazing in adjacent areas. (2045SJ) (10A)	
Silvicultural Examination and Prescription	01 Prohibit any logging activity. (0373) (10A)	
Water Resource Improvement and Maintenance (F05 and 06)	01 Limit the construction of water developments to the minimal research facilities needed to measure quality, quantity, and other hydrological characteristics. (3027SJ) (10A)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Special Use Management (Non -Recreation) (J01)	01 Use special use permits or cooperative agreements to authorize and document scientific activity. (0374) (10A)	a. Reference FSM 4063.37. (6217) (10A)
Withdrawals, Modifications and Revocations (J04)	01 Withdraw from mineral entry in conformance with Section 204 of Federal Land Policy and Management Act of 1976 (PL 94-579). (0375) (10A)	
Property Boundary Location (J06)	01 Monument all corners or turning points and document and record the monumentation in the establishment report. Mark boundaries in the field when appropriate to ensure integrity of the area. (0376) (10A)	
Transportation System Management (L01 & 20)	01 Generally, physical improvements, such as roads are not permitted. (0377) (10A)	
	02 Prohibit motorized vehicle use off Forest System Roads and Trails. (4766SJ) (10A)	
Trail System Management (L23)	01 Limit trails to those needed for access to conduct research and for educational purposes. (0378) (10A)	
Fire Planning and Suppression (P01)	01 Extinguish wildfires endangering the RNA. Allow fires within the RNA to burn undisturbed unless they threaten persons or property outside the area, or the uniqueness of the RNA. (0379) (10A)	a. Leave fire-caused debris for natural decay. (6218) (10A) b. Control wildfires occurring within the Narraguinnep RNA as documented in the Reclassification Report, May 15, 1962. (9635SJ) (10A)
Fuel Treatment (P11 thru 14)	01 Do not reduce fire hazard within the RNA. (0380) (10A)	

MANAGEMENT PRESCRIPTION 10A

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Law Enforcement (P24 thru 27)	01 Use special closures when necessary to protect the RNA from actual or potential damage from public use. (0381) (10A)	a. Issue closure order under provisions of 36 CRF 261.50 (FSM 4063.3). (6219) (10A)
Protection (P40)	01 Take no action against endemic insects, diseases or wild animals. (0382) (10A)	

PRESCRIPTION FOR MANAGEMENT AREA 10C

(Provides for special interest areas.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Emphasis is on management of areas of unusual scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics to protect and where appropriate, foster public use and enjoyment of these areas.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession unless specific vegetation treatment is necessary for public safety, to meet recreation and visual objectives or for insect and disease control. (0039SJ) (10C)	
Cultural Resource Management (A02)	01 Manage cultural resources for protection, preservation, investigation, and a relatively high degree of public use. a) Maintain the reconstructed ruins to present standards; new sites will be excavated and reconstructed as necessary to facilitate interpretive plans and increase in public use. b) Allow supervised public visitation to occur on a regular scheduled basis; however, close the Chimney Rock cuesta (1350 acres) to unsupervised public entry to protect the cultural resources. c) Provide an observation tower and appropriate Visitor Information Service programs for interpretation of the unique archaeological resources. The public information program could include, but is not limited to, programs on the cultural importance of the area as well as efforts to further the survival of the peregrine falcon. d) Issue antiquities permits compatible with area objectives to qualified academic institutions, individuals, and other organizations for study and research. e) Curate and display significant artifacts found in the area either on site or at other suitable facilities. f) Inform the public about the cultural resources found in the area. (0562SJ) (10C)	
Visual Resource Management (A04)	01 Meet stated visual quality objective. (0125) (10C)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of retention. (6215) (10C)

MANAGEMENT PRESCRIPTION 10C

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Recreation Site Construction and Rehabilitation (A05 AND 06)	01 Construct public convenience facilities, including, but not limited to, restrooms in the observation area, an observation tower, self-guided interpretive trails, and an environmental education-interpretive area. (0563SJ)	(10C)
Dispersed Recreation Management (A14 and 15)	01 Make the area available for day use activities such as viewing the ruins, observing wildlife, hunting, and hiking. (0565SJ)	(10C)
Recreation Management (Private and Other Public Sector) (A16)	01 Permit only special land uses directly serving public visitation and interpretation of the ruins. (0561SJ)	(10C)
Wildlife and Fish Resource Management (C01)	01 Maintain the peregrine falcon and improve its habitat at the Chimney Rock site as outlined in Memorandum of Understanding #130051. (1546SJ)	(10C)
	02 Limit public visitation during periods when peregrine falcons are nesting and rearing. (1551SJ)	(10C)
	03 Undertake population reduction programs for any species of wildlife that increases in number to a point of being detrimental to the peregrine falcon habitat. (1548SJ)	(10C)
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 Undertake projects to improve or modify wildlife habitat if such projects do not conflict with peregrine falcon habitat management. (1552SJ)	(10C)

MANAGEMENT PRESCRIPTION 10C

Reprinted from Forest Plan (Issued 9/1983)

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Resource Management (D02)	01 Permit no livestock grazing except the use and grazing of recreation horses. (2050SJ) (10C)	
Silvicultural Prescriptions (E03, 06 & 07)	01 Allow tree removal only for such purposes as public safety, improvement of aesthetics, insect and disease control, ruins research and maintenance, ruins reconstruction, or wildlife habitat improvement. (2547SJ) (10C)	
Mining Law Compliance and Administration (G01)	01 Maintain current withdrawal from mineral entry on the 1,350 acres centered on the Chimney Rock cuesta (withdrawn 4/30/70 under authority of E.O. 10355). Pursue withdrawal of the remaining 1,810 acres of the designated Chimney Rock Archaeological Area. In the event that withdrawal is not made, supervise activities of claimants to insure minimum impact on cultural and wildlife resources. (3530SJ) (10C)	
Special Use Management (Non-Recreation) (J01)	01 Permit only special land uses directly serving public visitation and interpretation of the ruins. (0561SJ) (10C)	
Rights-of-way and Land Adjustments (J02, 13, 15, 16, 17, and 18)	01 Actively pursue acquisition of adjacent or nearby lands essential for protection of significant archaeological values and for an interpretive program that provides a well-rounded understanding of the Chimney Rock occupation. (4244SJ) (10C)	
Property Boundary Location (J06)	01 Survey, mark and post the boundary of the Chimney Rock Archaeological Area. (4243SJ) (10C)	
Transportation System Management (L01 & 20)	01 Develop transportation system only to enhance cultural resource interpretive or maintenance opportunities. (4781SJ) (10C)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Transportation System Management (L01 & 20)	02 Close the Chimney Rock Archaeological Area to all motorized vehicles except those used for maintenance, emergencies, administration, and guided tours, or those authorized by the San Juan National Forest Supervisor. (4782SJ) (10C)	
Local Road Construction and Reconstruction (L11, 12, & 13)	01 Construct no new roads. (4783SJ) (10C)	
Trail System Management (L23)	01 Construct short interpretive trails. (4785SJ) (10C)	
	02 Construct a loop horse and foot trail to allow for public trail use between the main gate and the parking lot. (4786SJ) (10C)	
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives. (5032SJ) (10C)	a. Wildfire protection levels: Promptly control wildfires burning at all Fire Intensity Levels except in areas managed for permanent openings. (9629SJ) (10C)
	02 Use bulldozers in fire suppression only if necessary to protect known ruins, peregrine falcon habitat, or when justified by predicted loss of resource values outside the area. (5034SJ) (10C)	
Fuel Treatment (P11 thru 14)	01 Maintain fuel conditions which permit fire suppression forces to meet fire protection objectives for the area. (0113) (10C)	

MANAGEMENT PRESCRIPTION 10C

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Fuel Treatment (P11 thru 14)	02 Prescribe burn for hazard reduction when archaeological, wildlife and recreational resources are not endangered. (5035SJ) (10C)	
Law Enforcement (P24 thru 27)	01 Closely monitor ruins for deterioration and law violations. Increase law enforcement patrols during periods of public access. (5036SJ) (10C)	

PRESCRIPTION FOR MANAGEMENT AREA 10D

(Provides for Wild and Scenic Rivers.)

MANAGEMENT PRESCRIPTION SUMMARY

General Description and Goals:

Management emphasis is on river segments designated as a component of the National Wild and Scenic River System and those recommended for designation. "Wild Rivers" are managed to be free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and water unpolluted. "Scenic Rivers" are managed to be free of impoundments with shorelines or watersheds still largely primitive and shorelines largely undeveloped but accessible in places by roads. "Recreational Rivers" are managed to be readily accessible by road or railroad, and to maintain developments that may have occurred along the shoreline and impoundments or diversions that may have occurred in the past.

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B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)	01 Manage for natural succession in wild and scenic segments. Provide diversity in recreational river segments through harvest treatments specified under management activity "Silvicultural Prescriptions." (1037SJ) (10D)	
Cultural Resource Management (A02)	01 Allow low-intensity development of cultural resource properties as compatible with river designation; for example, interpretive and protective signing and stabilization of historic structures. Encourage non-recreation use (research, etc.) to the extent that such use enhances the recreation experience or does not present unsolvable conflicts with designation purposes. (0555SJ) (10D)	
Visual Resource Management (A04)	01 Meet stated visual quality objective. (0125) (10D)	a. Do not exceed an Adopted Visual Quality Objective (VQO) of: - Retention on wild and scenic segments - Partial retention on recreational segments. (6431SJ) (10D)
Dispersed Recreation Management (A14 and 15)	01 Provide the following recreation opportunities in the respective river segments: - Wild river segments: Semi-primitive non-motorized recreation in an unmodified setting. - Scenic river segments: Semi-primitive motorized recreation in an essentially unmodified setting. - Recreational river segments: Roaded natural recreation in a generally unmodified setting. (0556SJ) (10D)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Recreation Site Construction and Rehabilitation (A05 AND 06)	01 Provide facilities to meet the overall objective of the various segments. a) Wild river segments: Provide rustic or rudimentary facilities when needed to protect existing camping sites; otherwise, allow no new campgrounds, picnic areas, and trailheads in river corridors. b) Scenic river segments: Provide rustic or rudimentary facilities at existing camping sites, or develop new sites when needed for protection of the site rather than for the comfort of the user. Such sites must be screened from view. Sites may also be provided for boaters on boatable segments which are otherwise inaccessible by trail. c) Recreational river segments: Provide contemporary/ rustic facilities at new sites such as campgrounds, picnic areas, trailheads, parking and boat launching areas for the comfort of users as well as for site protection. Such sites may also be provided for boaters on boatable segments which are otherwise inaccessible by trail. (0557SJ) (10D)	
Wildlife Habitat Improvement and Maintenance (C02, 04, 05 and 06)	01 Permit investments in wildlife habitat projects that do not cause adverse impact to the scenic qualities of the river corridor. (1545SJ) (10D)	
Range Resource Management (D02)	01 Allow domestic livestock to graze within corridors, but decrease grazing where adverse impacts on river banks and vegetation occur. Exclude cattle from sensitive sites and reduce numbers or period of use in areas where grazing degradation has occured. (2046SJ) (10D) 02 Prohibit trailing (driving) of livestock within the iver corridor except for established stock driveways. (2047SJ) (10D)	

MANAGEMENT PRESCRIPTION 10D

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Improvement and Maintenance (D03, 04, 05 and 06)	01 Limit investments of range cultural practices to broadcast seeding of native forage species and noxious weed control. (2048SJ) (10D)	
	02 Limit investments in structural improvements to those needed for proper distribution and river area protection. Control bank trampling. (2049SJ) (10D)	
Silvicultural Prescriptions (E03, 06 & 07)	01 Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. Harvest timber only to maintain healthy stands and to enhance visual, wildlife, and other values of the corridor. (2545SJ) (10D)	
	02 Manage forest cover types using the following harvest methods: - Clearcut in aspen. - Selection in conifer cover types. (2546SJ) (10D)	a. Silvicultural Standards: 1) Aspen: Patch clearcut in units o one to three acres. 2) Conifer cover types: Remove no more than 30 percent of the basal area in any one cutting period (30) years with selection harvest methods. (8061SJ) (10D)
Rights-of-way and Land Adjustments (J02, 13, 15, 16, 17, and 18)	01 Do not dispose of National Forest lands within corridor. All private land within the established river corridor boundary is subject to the scenic easement or acquisition program. (4241SJ) (10D)	

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Transportation System Management (L01 & 20)	01 Manage motorized vehicle use on the respective segments as follows: - Wild river segments: Prohibit motorized vehicle use (including snowmobiles) off Forest System roads and trails. Close existing trails to motorized vehicle use. - Scenic and Recreational river segments: Prohibit motorized travel off development roads and trails except for oversnow vehicle use. (4779SJ) (10D)	
Fire Planning and Suppression (P01)	01 Provide a level of protection from wildfire that is cost efficient and that will meet management objectives. (5032SJ) (10D)	a. Wildfire protection levels: 1) Inland ponderosa pine; pinon pine-juniper; Gambel oak; aspen; grasslands: a) Confine or contain wildfires burning at Fire Intensity Levels (FIL's) I and II. b) Promptly control wildfires burning at FIL's III and higher. 2) Mixed browse; mixed conifers; Engelmann spruce-supalpine fir: a) Promptly control wildfires burning at all FIL's. (9636SJ) (10D) b. Do not allow tractor use for fire suppression within river corridors. (9637SJ) (10D)

MANAGEMENT PRESCRIPTION 10D

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IV . Monitoring and Evaluation

CHAPTER IV

MONITORING AND EVALUATION

The following monitoring item supplements the timber monitoring requirement, Forest Plan, Chapter IV, page IV-4.

- Monitoring Item: Demand for live green sawtimber.

- Data Sources: (TSA) Automated Timber Sale Accounting System,
  (TSPIRS) Timber Sale Program Information Reporting System.

- Type of Data:
  - Sawtimber Volume offered (MMBF/Yr.)
  - Sawtimber Volume Sold (MMBF/Yr.)
  - Sawtimber Volume Harvested (MMBF/Yr.)
  - Uncut-Volume-Under-Contract (MMBF/Yr.)
  - Economic efficiency (TSPIRS report 2)

- Frequency: Annual

- Precision: 100 percent

- Actions/Effects to be monitored:
  - Ratio of volume sold to volume offered.
  - Ratio of volume harvested to Allowable Sale Quantity (ASQ).
  - Pool of uncut-volume-under-contract.
  - Economic Indicators; Economic efficiency (TSPIRS Report 2), Bid Price, Harvest Price.

- Allowable Variance: If in any given year the volume of uncut volume under contract falls below two times the amount of sawtimber cut in the most recent year, the Forest Supervisor will consider using the flexibility of the Forest Plan to modify the current timber harvest schedule, within the periodic constraints of the ASQ, to maintain two to three years volume under contract, provided analysis shows such a change to be consistent with existing Standards and Guidelines. The ratio of volume sold to volume offered should simultaneously exceed 90 percent on average basis.

  If any three consecutive years the harvest of sawtimber from the San Juan National Forest exceeds the Allowable Sale Quantity (expressed on an average annual basis) by 15 percent or in any two consecutive years harvest from the San Juan National Forest exceeds the annual Allowable Sale Quantity by 20 percent, or if there are other reasons to indicate a change in demand has/will occur (for example, new mill construction, existing industry mill expansion, increased supply from other local market suppliers), the Forest Supervisor will initiate analysis to determine if an increase or decrease in demand has occurred and will consider amending the Forest Plan to respond to such a change in demand.

CHAPTER IV

MONITORING AND EVALUATION

Monitoring and evaluating the implementation of the Forest Plan provides the decisionmaker with information on the progress toward achieving the goals, objectives, and management requirements of the Forest Plan.

Monitoring will determine:

-if management area prescriptions are applied as directed.

-if management requirements are being followed.

-if the Forest Service is achieving the objectives of the Plan.

-if application of management area prescriptions are responding to public issues and management concerns.

-if effects of implementing the Forest Plan are occurring as predicted.

-if costs of implementing the Forest Plan are as predicted.

-if management practices on adjacent or intermingled non-National Forest lands are affecting the Forest Plan goals and objectives.

-the effects of implementation of the Forest Plan on other agencies.

An annual monitoring action program will be prepared as part of the total San Juan National Forest annual program of work. This annual monitoring program will include the details of the amount and location of monitoring to be accomplished based on the approved program of work and funds available for monitoring. Specific locations, intensity of sampling, person days required, and costs will be identified in the annual monitoring program.

Evaluation of results of the site-specific monitoring program will be documented in an annual review. The significance of the results of the monitoring program will be analyzed by the San Juan National Forest interdisciplinary team and reviewed for action by the management team.

Based on the analysis, any need for further action is recommended to the Forest Supervisor by the management team. The recommendations can include:

-no action needed, monitoring indicates goals, objectives, and management requirements are achieved;

-refer recommended action to the appropriate line officer for improvement of application of management area prescriptions;

-modify the management area prescription as a Forest Plan amendment;

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-modify the allocation of a management area prescription as a Forest Plan amendment;

-revise the projected schedule of outputs; or

-initiate revision of the Forest Plan.

The documented file of the Forest Supervisor's decisions resulting from monitoring and review is maintained for future use in amending or revising the Forest Plan.

The Forest Plan's monitoring requirements appear in Table IV-1. For each activity, practice, or effect to be monitored, one or more measurement techniques and the standard to be met are specified. A frequency for measuring the monitored item is also established.

Reprinted from Forest Plan (issued 9/1983)

TABLE IV-1

Monitoring Requirements

Actions, Effects or Resources to be Monitored	Units	Data Source	Intent	Frequency	Precision/ Reliability	Variability which would initiate Evaluation
Significant changes in land productivity and any problems, needed changes or lack of performance in the application of all prescriptions		-Letters -Program review -Public input -Activity reviews -Environmental Assessments -Staff activities	Judge the effects of applying the standards and guidelines from the Forest Plan	At least once every five years	Varies	When there are strong indications of land productivity deterioration
Actual costs of applying Management Direction from the Forest Plan -Operation and Maintenance (undiscounted) -Capital investment -General Administration -Backlog -Total budget	Dollars	Program Accounting and Management Attainment Reporting System (PAMARS)	Compare actual and planned costs	Annually	Varies	Whenever costs increase at least twice as fast as the rate of inflation
RECREATION						
Developed recreation use use (includes VIS)	Recreation Visitor Days	Management Attainment Report (MAR) or Recreation Information Management (RIM)	Compare actual and planned outputs and services	Annually	85 percent	After five years ±100 percent
Dispersed recreation use (includes wilderness and fish)	Recreation Visitor Days	MAR or RIM	Compare actual and planned outputs and services	Annually	60 percent	After five years ±100 percent
Trail construction/ reconstruction	Miles	MAR	Compare actual and planned outputs and services	Annually	100 percent	±100 percent
WILDERNESS						
Wilderness management	Acres	MAR	Compare actual and planned outputs and services	Annually	100 percent	Any change
WILDLIFE AND FISH						
Wildlife habitat improvement	Acres	MAR	Compare actual and planned outputs and services	Annually	100 percent	±50 percent

Reprinted from Forest Plan (Issued 9/1983)

TABLE IV-1 (Continued)

Monitoring Requirements

Actions, Effects or Resources to be Monitored	Units	Data Source	Intent	Frequency	Precision/ Reliability	Variability which would initiate Evaluation
WILDLIFE AND FISH (Continued)						
Population and habitat trends of management indicator species		-Population estimates by State Wildlife agencies -Professional judgment of FS Wildlife Biologist -Habitat inventory assessments -Resource Information System -Program reviews -Activity reviews -Annual wildlife and fish report -Diversity assessments	Determine habitat capability trends and the relationship to habitat change	At least once every five years	Varies	-Species viability is jeopardized -20 percent change in species habitat distribution -Change in species emphasis by State Fish and Wildlife Agency
RANGE						
Grazing use (livestock)	Animal Unit Months	MAR	Compare actual and planned outputs and services	Annually	95 percent	±25 percent
TIMBER						
Programmed sales offered	Million Board Feet	MAR	Compare actual and planned outputs and services	Annually	100 percent	±25 percent
Reforestation	Acres	MAR	Compare actual and planned outputs and services	Annually	100 percent	±25 percent
Timber stand improvement	Acres	MAR	Compare actual and planned outputs and services	Annually	80 percent	±25 percent
Document restocking of lands specified in the Forest Plan		-Survival checks -Forest Supervisor certification	Determine if lands are adequately restocked	Annually	80 percent	

Reprinted from Forest Plan (Issued 9/1983)

TABLE IV-1 (Continued)

Monitoring Requirements

Actions, Effects or Resources to be Monitored	Units	Data Source	Intent	Frequency	Precision/ Reliability	Variability which would initiate Evaluation
TIMBER (Continued)						
Lands not suitable for timber production		-Stage II inventory -Suitability analysis and documentation listed in the Forest Plan	Determine if lands identified as not suitable for timber production have become suitable	10-year cycle	80 percent	
Size limits for timber harvest areas		-Environmental Assessments -Program review -Activity review	Determine if size limits for harvest areas should be continued	At least once every five years	80 percent	
Levels of insects and disease organisms		-Insect and disease surveys -Stage II Inventory	Determine if insect and disease organisms are increased to potentially damaging levels following management activities	At least once every three years	80 percent	When survey indicates an outbreak could become epidemic
WATER						
Meeting water quality goals	Acre-Feet	MAR	Compare actual and planned outputs and services	Annually	90 percent	±25 percent
MINERALS						
Minerals leases and permits	Operating plans	MAR	Compare actual and planned outputs and services	Annually	100 percent	±100 percent
HUMAN AND COMMUNITY DEVELOPMENT						
Human Resources Program	Enrollee years	MAR	Compare actual and planned outputs and services	Annually	95 percent	±100 percent
LANDS						
Land purchase and acquisition (excluding exchange)	Acres	MAR	Compare actual and planned outputs and services	Annually	100 percent	±100 percent

Reprinted from Forest Plan (Issued 9/1983)

TABLE IV-1 (Continued)

Monitoring Requirements

Actions, Effects or Resources to be Monitored	Units	Data Source	Intent	Frequency	Precision/ Reliability	Variability which would initiate Evaluation
SOILS						
Soil and water improvements (improved watershed condition)	Acres	MAR	Compare actual and planned outputs and services	Annually	80 percent	±50 percent
FACILITIES						
Road construction/ reconstruction (arterial, collector)	Miles	MAR	Compare actual and planned outputs and services	Annually	100 percent	±100 percent
PROTECTION						
Fire management effectiveness index	Dollars/ Thousand Acres	MAR	Compare actual and planned outputs and services	Annually	80 percent	±50 percent
Fuel breaks and fuel treatment	Acres	MAR	Compare actual and planned outputs and services	Annually	80 percent	±25 percent
ECONOMICS						
Returns to the Treasury	Dollars	PAMARS	Compare actual and planned outputs and services	Annually	100 percent	±100 percent

Appendix F
Land Suited for Timber Production

APPENDIX F

LAND SUITED FOR TIMBER PRODUCTION

Identifying lands suited for timber production is a multi-step process. The first step determines whether forest lands are available and capable of producing commercial crops of trees on a sustained basis. These lands are classified as tentatively suited timber lands. Only tentatively suited lands are considered for timber production in the supplemental timber management alternatives. For each supplemental alternative, we select a portion of the tentatively suited lands for timber production. The amount and location of lands selected from the pool of tentatively suited timberlands is based on the commercial harvesting objective and on the issues, concerns, and opportunities addressed in the alternative. These lands chosen for timber production are classified as lands "suited for timber production."

The procedure for selecting suited timberlands in an alternative involves the analysis of many factors. These include the emphasis of the alternative, the management intent selected for each analysis area, past harvesting history, economic efficiency criteria and consideration of the necessary transportation network. A complete discussion of this procedure is included in Appendix B of the final SEIS. The tables below present a general description of the results of the timber suitability analysis.

Table F-1 provides a tabulation of Forest lands and tentatively suited timberlands, and compares changes in tentatively suited timberlands between the original 1983 Forest Plan, and this amendment.

For this amendment, we have reestimated the amount of timberland determined to be tentatively suited for timber production. The revised determination is based on the Forest Stage I timber inventory completed in 1988, and follows procedures for conducting the timberland suitability analysis outlined in FSH 2409.13, Chapter 20 (dtd, August 1985). The previous determination was based on the procedures outlined in Interim Directive #68 to the Forest Service Manual (12/5/80).

The major difference between ID #68 and the 1988 FSM 2410 procedure is in the definition of noncommercial forestland incapable of producing industrial wood. Under ID #68, timberlands were required to meet a minimum criteria of producing at least 20 cubic feet/acre/yr. volume growth. Lands failing to meet this criteria were classified as "not capable". By contrast, the 1985 procedures drop the biological capability screen, and instead uses criteria regarding the commercial potential of a tree species over a 10 year period subsequent to the determination in the capability determination.

The Stage I inventory data upon which the determination of lands tentatively suited for timber production was derived does not sum to the official Forest acreage, but there is less than one-half of one percent difference. The small discrepancy in survey data is considered acceptable.

The Forest used LANDSAT imagery rather than Stage I inventory to conduct the 1983 analysis of tentatively suitable timberlands. The 1988 revised data and the 1983 Forest Plan data display major differences in basic land classification but minor differences in forestland removed from suitability consideration because of legal or administrative status. Under the 1983 Forest Plan, a total of 521,215 acres are classified as non-forest as opposed to 356,800 acres in the 1988 Stage I inventory. The major difference between the two surveys is in their treatment of "woodland" cover types. The 1988 inventory treats pinyon/juniper (48,678 acres) and oak (113,447 acres) as forestland; the 1983 survey places these cover types in the non-forest category. The 1988 survey subtracts 172,450 acres of woodland species from the pool of forest acreage because they are non-commercial cover types with no markets over the next 10 years. The 1983 survey classifies 227,566 acres in a similar category as non-productive.

The two surveys differ in the amount of wilderness forest land withdrawn from timber production. The 1988 Stage I inventory shows 215,865 acres in this classification as opposed to the 157,380 acres derived for the 1983 survey based on LANDSAT data.

The two surveys also differ in timberlands that are not physically suited due to the five year restocking criteria. The 121,219 acres not physically suited in the 1988 determination are ponderosa pine on slopes greater than 35 percent. The results of ongoing study of regeneration problems in this cover type are discussed in Section IX of Appendix B. In contrast to the 121,219 acres, the 1983 survey classified 85,911 acres of ponderosa pine as not technologically suited due to regeneration problems.

The following statistics from the 1963 Stage I inventory, the LANDSAT survey used to develop the 1983 Forest Plan, and the 1988 Stage I inventory highlights the similarities between the 1963 and 1988 Stage I inventories and differences between the two Stage I inventories and the 1983 LANDSAT survey.

	1963 Stage I Inventory	1983 LANDSAT Survey	1988 Stage I Inventory
Total Forested Land	1,559,700	1,346,526	1,504,166
Total Commercial Forestland	1,098,300	1,119,006	1,124,942
Total Non-Productive	171,200	227,566	172,450
Total Non-Forest	290,600	218,963	350,515

Table F-1 Land Capable, Available and Tentatively Suited for Timber Production *

	1992 Timber Mgmt Amendment			1983 Plan
NON-FOREST LAND				
- Non-Forest	350,515			518,963
- Water	6,303			2,252
Subtotal		356,818		
COMMERCIAL FOREST LAND WITHDRAWN FROM TIMBER PRODUCTION				
- National Wilderness Preservation System	215,861			157,380
- Wilderness Study Area	72,732			63,162
- Research Natural Area	823			823
- Archaeological Area	1,233			1,233
- Administrative Sites	9,023			9,023
- Campgrounds	562			0
Subtotal		300,234		
NONCOMMERCIAL FOREST LAND INCAPABLE OF PRODUCING INDUSTRIAL WOOD	172,450			227,566
NOT PHYSICALLY SUITED				
- Restocking within 5 yrs. cannot be assured	121,219			85,911
- Irreversible Resource Damage	0			
- Inadequate Response Information	0			
Subtotal		293,669		
Unsuitable Total		950,721		
TENTATIVELY SUITABLE LAND FOR TIMBER PRODUCTION			910,263	801,874

* Source: 1988 Inventory of San Juan National Forest Book 1, Forest Service Totals by Forest Type and stand size DBH class and species, USDA Forest Service, Region 2, TFP and CFM, 1988.

Table F-2 Comparison of Suitable Timberlands under 1983 Forest Plan and This Amendment

	1983 Forest Suited Acres	Amendment Suited Acres	Percent Change From 1983 Forest Plan
A. By Species			
Aspen	135,020	95,504	-30%
Spruce fir	149,190	115,441	-23%
Ponderosa Pine	111,460	118,001	+6%
Douglas-fir	74,300	46,146	-28%
Total	469,970	375,092	-20%
B. By Size Class			
Sawtimber	424,290	303,318	-29%
Post & Pole	3,620	22,515	+625%
Seedling Sapling	33,550	40,081	+19%
Nonstocked	8,510	9,148	+8%
Total	469,970	375,092	-20%

Table F-3 Periodic Allowable Sale Quantity (ASQ) & Programmed Sale Statement For Periods 1 & 2

		Period 1 1992-1997 (maximum total for 6 years)			Period 2 1998-2007 (maximum total for 10 years)		
COMPONENT	UNITS	ASQ	NON CHARGEABLE*	PROGRAM SALE QUANTITY	ASQ	NON CHARGEABLE*	PROGRAM SALE QUANTITY
ASPEN	MMCF	9.0	2.3	11.3	15.2	3.2	18.4
	MMBF	36.0	9.0	45.0	60.0	15.0	75.0
CONIFER	MMCF	24.8	7.6	32.4	40.8	12.8	53.6
	MMBF	108.0	33.0	141.0	180.0	55.0	235.0
TOTAL	MMCF	33.8	9.9	43.7	56.0	16.0	72.0
	MMBF	144.0	42.0	186.0	240.0	70.0	310.0
AVERAGE ANNUAL	MMCF	5.6	1.6	7.2	5.6	1.6	7.2
	MMBF	24.0	7.0	31.0	24.0	7.0	31.0

* Non chargeable volume: Personal use fuelwood and roundwood products.

Appendix J
San Juan National Forest - Forest Plan Amendments

APPENDIX J IS A COLLECTION OF ALL OF THE PLAN AMENDMENTS PRIOR TO THIS. SOME PARTS OF THIS APPENDIX HAVE DUAL PAGE NUMBERS. THE LOWER NUMBER INDICATES THE APPENDIX J PAGE NUMBER. THE UPPER NUMBER IS THE PAGE NUMBER FROM THE ACTUAL AMENDMENT.

APPENDIX J

San Juan National Forest
Forest Plan Amendments

AMENDMENT #	DATE	SUPERVISOR	TOPIC
1	7/30/86	J. Kirkpatrick	Recreation appendix. Pages J1 - J24.
2	7/30/86	J. Kirkpatrick	To allow minor changes in timing of individual projects in Appendix B, C, and D. Timber Sales, Road Construction Trail Construction.
3	1/14/87	J. Kirkpatrick	Ten-Year Timber Sale Schedule. Pages B2 - B15. 1987 40MMBF to 29.8 MMBF planned sale program.
4	8/14/87	J. Kirkpatrick	East Fork Ski Area Proposal. Prescription area changes.
5	8/14/87	J. Kirkpatrick	East Fork Ski Area Proposal. Prescription Area changes.
6	1/ 6/89	W. Sexton	Adjusts management area boundaries in Cumberland Basin area of La Plata Canyon.
7	1/ 6/89	W. Sexton	Adds Appendix K to the Plan. Incorporates the BLM San Juan/San Miguel Resource Management Plan into the Forest Plan.
8	1/ 6/89	W. Sexton	Amends Wildlife Standards and Guidelines.
Rescind 8	4/28/89	W.Sexton	Rescind Amendment Number Eight.
8	9/7/90	W.Sexton	Animas District management area adjustments. This amendment adjusted four areas.
9	9/7/90	W.Sexton	Pine District management area adjustments. This amendment adjusted four areas.
10	9/7/90	W.Sexton	Mancos District management area adjustments. This amendment adjusted nine areas.
11	9/7/90	W.Sexton	Dolores District management area adjustments. This amendment adjusted twelve areas.
12	9/15/91	W.Sexton	Removes seven year regeneration requirement for lodgepole pine from the Forest Direction, page III-43.

13	7/31/91	W.Sexton	Changes the program budget projection for budget required to fully implement the Forest Plan Mangement Direction.

SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

JULY 1986
Amendment No. 1

Page Code	Superseded	New
J-1 to J-24	0	12

Description and Reason for Amendment

This amendment adds Appendix J, a "recreation appendix", to the Forest Plan. (see Appendix J attached).

When the Forest Plan was issued in September, 1983, it was appealed by the State of Colorado for several reasons, one of which related to the role of recreation in the overall management of the Forest. A Settlement Agreement was signed May 17, 1984 specifying that the San Juan National Forest would develop an appendix describing the recreation program contained in the existing Plan. The attached appendix has been reviewed by the Colorado Department of Natural Resources for format and content, and is hereby issued to satisfy the terms of the agreement.

In accordance with the National Environmental Policy Act and Forest Service Manual 1952.2, I have determined that this amendment will have no significant effect on the human environment and is therefore excluded from documentation in an environmental assessment or environmental impact statement.

JOHN R. KIRKPATRICK
Forest Supervisor

7/30/86
Date

RECREATION APPENDIX
TO THE
SAN JUAN NATIONAL FOREST
LAND MANAGEMENT PLAN

The purpose of this appendix is to summarize and display in a concise manner the nature of the outdoor recreation resource on the San Juan National Forest.

-It describes the role the Forest plays in providing outdoor recreation opportunities for the local area, the state and neighboring states.

-It displays the current patterns and amounts of use currently being made of the Forest's recreation resources and estimates the anticipated demand for future use.

-It discusses the strategies and actions planned to meet these demands while maintaining the opportunities for high quality recreation activities and experiences through a program of integrated forest management.

While the Forest Land and Resource Management Plan provides a long term view of resource management through the year 2030, this appendix generally projects only to 1995.

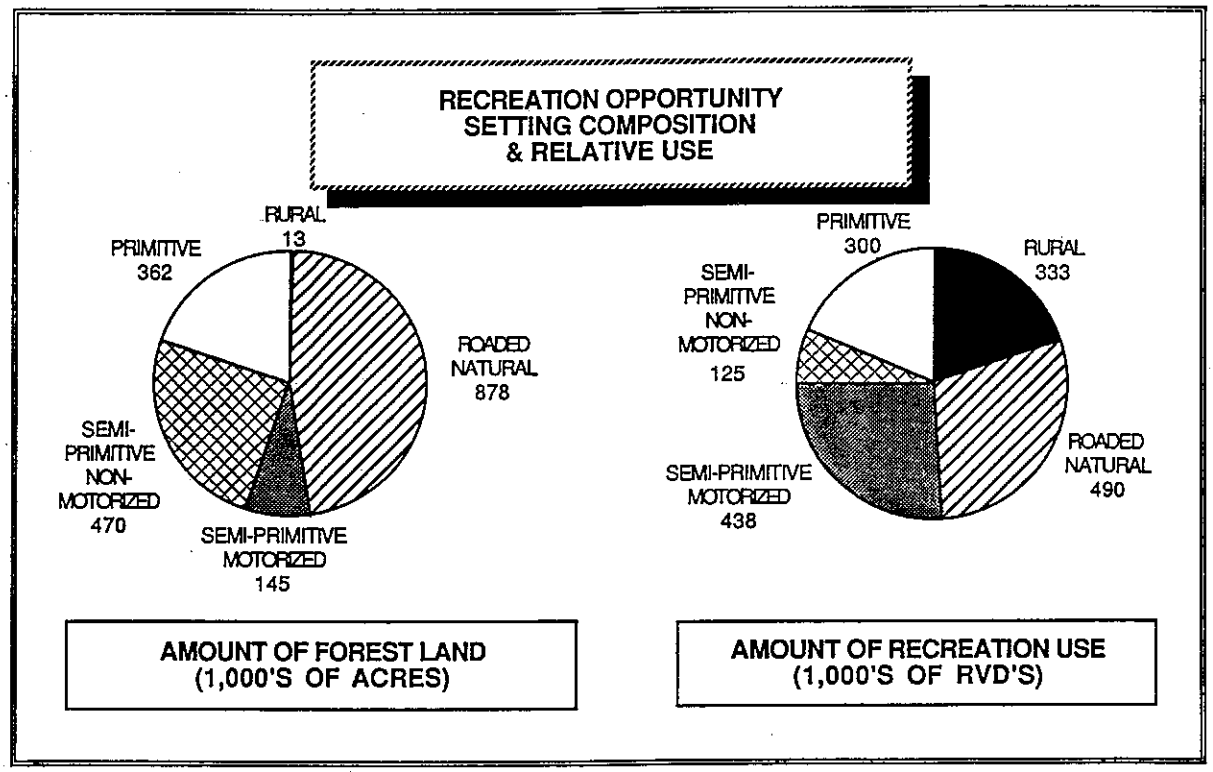
I- THE ROLE OF THE SAN JUAN NATIONAL FOREST IN PROVIDING OUTDOOR RECREATION OPPORTUNITIES

The San Juan National Forest provides a broad range of forest, alpine and wilderness related outdoor recreation opportunities to the residents of southwestern Colorado and northern New Mexico. There are significant numbers of visitors from other parts of the southwestern United States who also frequent the Forest year around to enjoy outdoor recreation opportunities and settings which are either unavailable or different than those in their home states. 1/

RECREATION OPPORTUNITIES

All of the 1,860,000 acres of the San Juan National Forest provide recreation opportunities of some kind. Figure 1 below displays the relative amount of recreation settings that are available on the forest, and the amount of use that occurs within each. It's important to note that the large amount of use occurring in the rural setting (which is a relatively small acreage) is due to high density types of activity associated with highways, while the light use of the primitive setting (a relatively large area) is due to low density types of activity associated with unroaded areas. Figure 2 displays the relative amounts of various recreation activities, and Figure 3 the use by general category.

Figure #1



1/ The San Juan National Forest contains the majority of the alpine lands and much of the historic heritage that make up the recreation and visual resource of Southwestern Colorado. The Rio Grande and Uncompaghre National Forests, Mesa Verde National Park and federal land administered by the Bureau of Land Management also contain similar lands that contribute to the attractiveness of the whole southwestern part of the state.

Figure #2

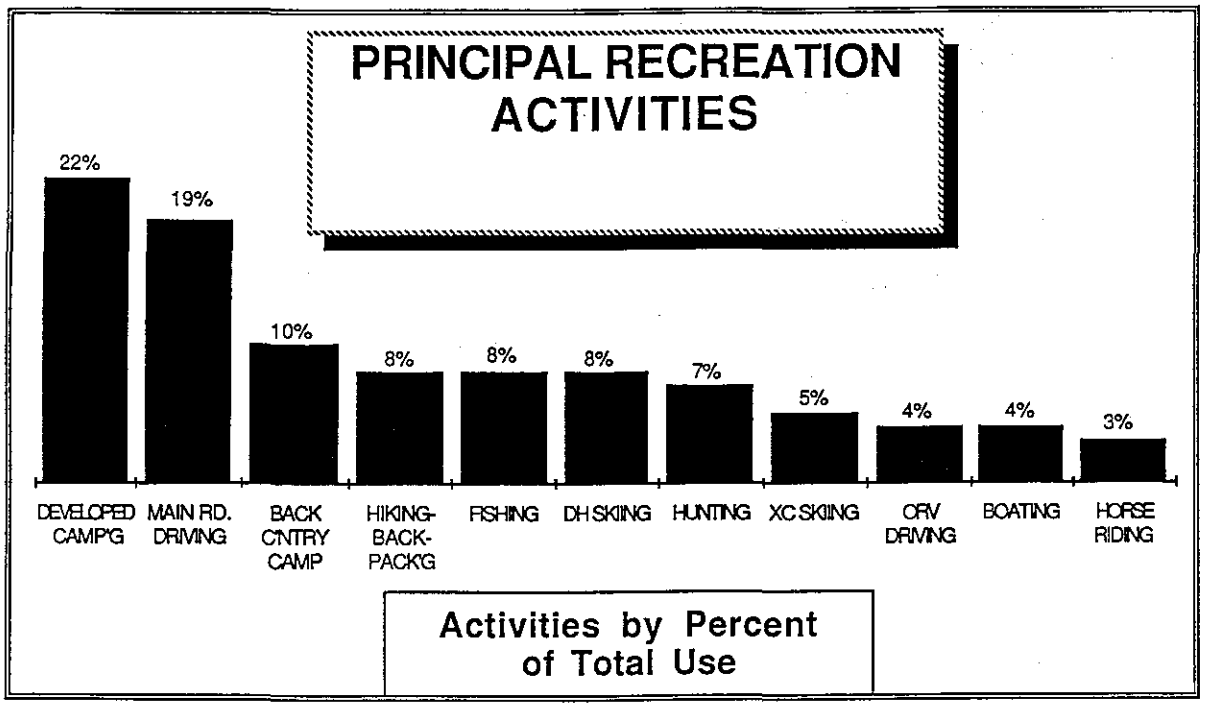
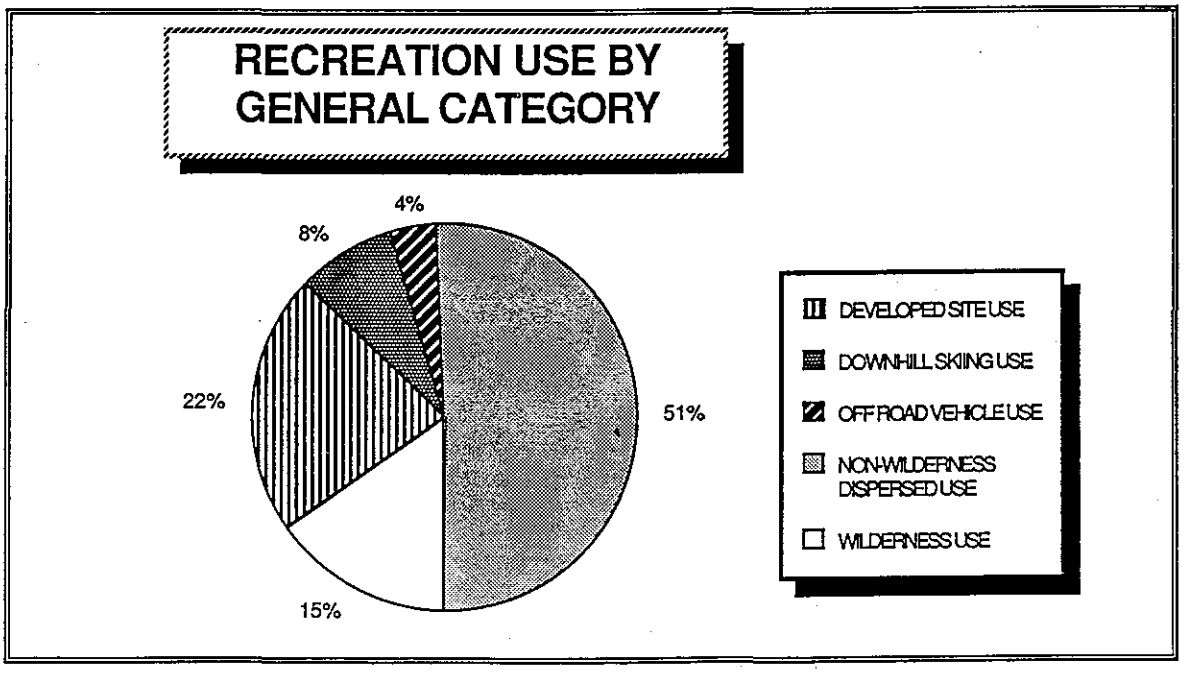


Figure #3



Dispersed Recreation

Except for downhill skiing, the vast majority of the visitors to the Forest participate in dispersed recreation activities of one kind or another. Even those using developed camp and picnic grounds do so largely in connection with various dispersed recreation activities such as hiking, fishing, hunting, ORV travel and sightseeing. Therefore, the road and trail systems on the Forest play an important role in providing access and in dispersing use.

The Forest has approximately 1,090 miles of trails, of which 740 miles are in otherwise "roadless" areas. Principal access to and through the National Forest is provided by Federal and State Highways and county roads. The Forest has 2,905 miles of developed roads, 565 miles of which make up the principal travel network within the Forest. The remaining 2,340 miles serve as local and intermittent access for various management activities throughout the Forest and may or may not provide recreation opportunities.

The 1090 miles of primitive roads traversing the forest and high alpine areas of the San Juan mountains provide outstanding ORV (off-road vehicle) recreation opportunities. These roads and 295 miles of trails which are open to motorized use provide access to 68% of the non-Wilderness area of the Forest. Almost all "ORV" use of the Forest occurs on roads of "primitive" or better standard or on motorized trails. Very little use is literally an off-road variety. About one third of the Forest may be closed to motorized use on a seasonal basis to protect soil and water resources, and road or trail surfaces during wet periods. Less than 1% of the non-wilderness National Forest lands are permanently closed.

Developed Recreation

There are 61 developed sites on the Forest operated by the Forest Service. These include 37 campgrounds, 7 picnic areas, 4 boating sites, 2 group campgrounds, 6 developed trailheads, and 5 observation or interpretive sites. These sites have a combined total capacity of about 6500 persons-at-one-time (PAOT). The 185 day season of managed use is usually from May 15 through November 15.

In addition there are a number of privately owned campgrounds throughout the San Juan Basin. The majority of these campgrounds are located near towns or along major highways. Along with providing overnight camping opportunities for travelers, they also provide a base for people enjoying the recreation opportunities offered by the National Forest and nearby towns.

Downhill Skiing

There are two developed ski areas on the National Forest: Stoner and Purgatory. Stoner is a small area located partially on National Forest land with a capacity of 380 skiers-at-one-time (SAOT) and operated by a nonprofit club. (Stoner was closed during the 1984-85 season). The area is still available for downhill skiing pending resolution of their operational problems.

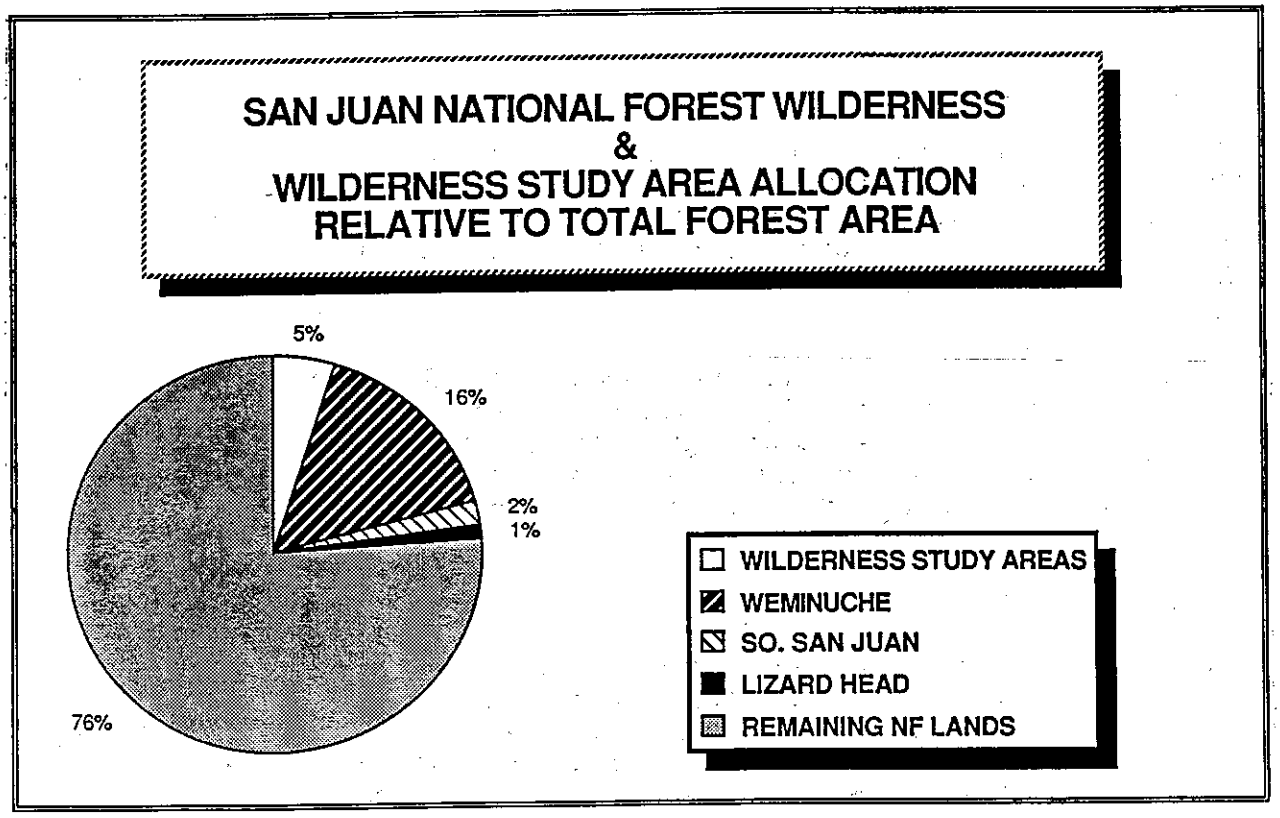
Purgatory is a much larger ski area with a capacity of 8000 SAOT. Purgatory is the only destination ski resort in the San Juan National Forest. Approximately 60-70% of the skiers are from New Mexico, Texas and Arizona. Purgatory is the only major ski area in Colorado than can be driven to from the southwestern states without crossing a major mountain pass. Commercial jet aircraft service at La Plata County Airport and numerous commercial lodging and resort facilities in Durango and the adjacent area further enhance the popularity of Purgatory Ski Area. The ski area operates an Alpine Slide during the summer months which averages about 80 thousand users per summer.

Two additional sites are currently being studied and may become major destination resorts by the end of the decade. These are located in the east and west forks of the San Juan River northeast of Pagosa Springs.

THE WILDERNESS RESOURCE

The San Juan National Forest contains parts of three Wildernesses: the Weminuche, Lizard Head and the South San Juan, which make up nearly 20% (355,000 acres) of the total Forest. The South San Juan Expansion, Piedra and West Needle Wilderness Study Areas comprise an additional 90,000 acres, which are being studied for possible inclusion into the National Wilderness System.

Figure #4



Wildernesses are designated and managed to allow, to the greatest extent possible, the flow of natural ecosytem dynamics unaffected and unhampered by human activities and influences. The nature of the Wilderness resource provides recreation opportunities for those who are interested in primitive recreation activities and experiences that require non-mechanized travel through difficult and challenging terrain and coping with nature on her own terms. It also provides opportunity for those who seek solitude from human-dominated environments.

While recreation has grown to be one of the principle uses of Wilderness, it is not managed primarily for recreational uses. There are minimal facilities inside the wilderness. There are trails, which are designed more for the protection of the resource than for the convenience of the user, minimal signing and other information aids, and no developed campsites or sanitation facilities. If recreational use of Wilderness approaches levels which are detrimental to natural ecosystem dynamics and opportunities for solitude, management actions will be taken to maintain the level and nature of human use at acceptable levels.

Currently the recreational use of the Wildernesses on the Forest is approximately 280,000 (1984) visitor days annually. In much of the Weminuche Wilderness, recreation use is quite low. But in some popular drainages heavy use is creating unacceptable impacts. The Forest is utilizing the Limits of Acceptable Change (LAC) system of wilderness planning to define acceptable or unacceptable resource change.

THE CULTURAL RESOURCE

The San Juan National Forest is rich in cultural history. The first human use of the area probably occurred during the Paleo-Indian period in North America's prehistory, between 10,000 B.C. and 5,000 B.C.. Evidence supports the theory that the Forest was being used by hunting and gathering peoples of the Archaic period from 5,000 B.C. to 100 A.D. However, little is known about the prehistoric use of the Forest area. This remains an exciting opportunity for future archaeological study.

More evidence is available from the Anasazi period (100 A.D. to 1300 A.D.) and beyond through the American Indian, Spanish exploration, and the early mining and ranching periods.

Many Anasazi ruins are found throughout the Forest. A major Anasazi population center is represented at the Chimney Rock Archeological Area and there are numerous other sites that represent the various periods of Anasazi history. Other evidence of the early use and development of the natural resources in the San Juan Mountains are old mines, pack trails, toll roads, narrow gauge railroad routes and prospector and trapper cabins.

THE VISUAL RESOURCE

The visual (or scenic) resources of the San Juan National Forest play a vital role in the attraction, enjoyment and economic value of the recreation use of the Forest. Visual resources also enhance the quality of life for local residents in the southwestern part of the state. The San Juan Mountains are some of the most spectacular in the state and enjoy a national and

international reputation for outstanding scenery.

The vast majority of the Forest (92%) currently retains the natural appearance expected of mountain ecosystems which make up the characteristic landscape of the San Juan Mountains. About 8% of the Forest landscape has been modified to the point that management activities dominate the natural appearing scene. These modifications are the result of roads, utility corridors, mining activities, vegetation treatments, and developed recreation sites.

Human caused visual impacts are increasing most rapidly in the mountain valley landscapes which are the usual location of transportation corridors, agricultural activity, and more recently, residential and private recreational developments. Most of the private land within and adjacent to the Forest lies in these mountain valleys.

UNIQUE FEATURES

Some of the more unique recreation opportunities and attractions are:

- The Chimney Rock ruins provide the only opportunity for recreational guided tours of ancient cultures on the National Forests in Colorado. This area is also a Chaco "outlier" under the Chacoan Protection System.

- The outstanding alpine landscapes with their high peaks, verdant valleys and numerous streams and lakes are some of the most striking in the nation.

- The Durango-Silverton Narrow Gauge Railroad is a national attraction offering visitors an opportunity to relive a part of the historic past, as well as enjoy the outstanding scenery of the Animas River canyon.

- The McPhee Reservoir complex with its opportunities for year round water related activities and camping.

- The opportunity for extremely scenic, high altitude four wheel drive travel, coupled with the historic heritage of early mining days near Silverton.

- The opportunity to hunt, fish and observe abundant populations of wildlife in highly natural surroundings. These are some of the best Colorado has to offer, and the closest to the arid southwest.

- Because of the large size of Weminuche and the relatively remote location of the South San Juan Wilderness, there is an opportunity to travel through and experience the solitude of some of the most remote Wilderness in the state.

- The opportunity to use several cold water reservoirs and lakes (Vallecito, McPhee, Lemon, Emerald) and free flowing rivers (Animas, Dolores, Piedra, San Juan) for a variety of water sports.

- The consistently reliable opportunity to participate in winter sports activities of all kinds in highly scenic and easily accessible mountainous areas.

These resources, combined with the pleasant climate of the adjacent lower elevation land, the relative proximity to the population centers of the arid southwestern United States, and the abundance of historic and prehistoric cultural resource attractions in the area, are the foundation of the flourishing tourist industry and attractiveness of living in southwestern Colorado.

II- INTERRELATIONSHIPS WITH OTHER RESOURCES AND AMONG RECREATION USES

Both those providing recreation experiences and those experiencing recreation are often concerned about the compatibility of recreation with other resource management activities. This is because the quality of recreation experiences often depends on how natural resources are managed. Because a perception of "naturalness" in the recreation environment is important to the recreationist, consideration of recreation and scenic values is woven into all resource management activities on the San Juan National Forest. Presently, recreation visitors find the San Juan to be essentially natural in appearance.

The long term quality and value of recreation can be substantially increased through proper management of resources. However, to mitigate adverse effects on recreation, it may be necessary to spend more money to manage and use these other resources. While it will not always be the case, multiple uses of National Forest resources may dictate this consideration.

The Forest Plan provides two important elements in Chapter III that govern recreation management, and its relationship to other resources, on the San Juan. The first is Forest Direction, which provides minimum conditions that will be maintained for recreation, cultural, visual, and wilderness resources wherever they are found on the Forest. Second is Management Area Direction, comprised of 20 specific, integrated multiple resource prescriptions that detail activities designed to achieve particular objectives on a particular land area. Each prescription, whether the objective is to produce wood fiber, increase water yield, or manage wildlife winter range, contains specific guidance for managing the recreation, cultural, and scenic environment.

The interrelationship among recreation uses, like that among resources, may or may not be complementary. For example, driving for pleasure and picnicking could be complementary activities, while ski touring and snowmobiling are often viewed as incompatible. In addition, human use can affect the biological environment (for example, off-road driving can impact wildlife and water quality) and the social environment (for instance, overcrowding can degrade recreation quality). The transportation system is a key element in human impact on the recreation setting. Roads and trails provide access for recreationists, and therefore determine the location, kind, and amount of recreation. Yet, since roads are considered by many to be adverse intrusions, they can be either an asset or a liability to the recreation setting. The importance of managing transportation systems effectively - in terms of standards, location, maintenance, and closures - in order to maximize their contribution to recreation cannot be overstated.

Changes have occurred over the past three decades in the relative importance to the general public of various recreation activities. For example, within the past few years, use of rivers by private and commercial boaters has grown from virtually nil to a significant activity that is still growing. On the other hand, the number of traditional outfitter and guide operations in wildernesses may have reached wilderness capacity. This commercial accommodation of visitors may have to shift both in location and character. Changes in public tastes for outdoor activities are difficult if not impossible to predict; an agency that attempts to manage for "recreation activities" will thus always be a step behind public demand. The key value of the Forest Plan is that it manages for settings and opportunities, rather than specific activities that may or may not be popular or desired in the future. This type of recreation

management ensures that natural settings will continue to be available for future types and demand of recreation activities.

Another noteworthy interrelationship exists between local communities and private business, and National Forest recreation opportunities. Many businesses, and thus many communities, within the area of the Forest are at least partially dependent upon the attractiveness of the San Juan to recreationists for their economic wellbeing. In addition, it is largely the recreation attractions of southwest Colorado, not commodity values like timber and minerals, which are responsible for the recent population growth of the communities and for the type of resident who settles here.

Resort growth associated with facilities on private land, Purgatory ski area, and two new ski area proposals being studied in the upper San Juan River basin, have the potential to rapidly accelerate the rate of growth and increase the region's dependence upon the recreation resources of the Forest. Increasing community dependence on the Forest environment may shift the type and amount of various goods and services provided by the San Juan National Forest. As more capital improvements are provided by the private sector to accommodate the increasing number of visitors, the Forest Service may increase its emphasis on protection and maintenance of the destination attractions sought by recreationists. The Forest Plan reflects the potential need for this shift in emphasis.

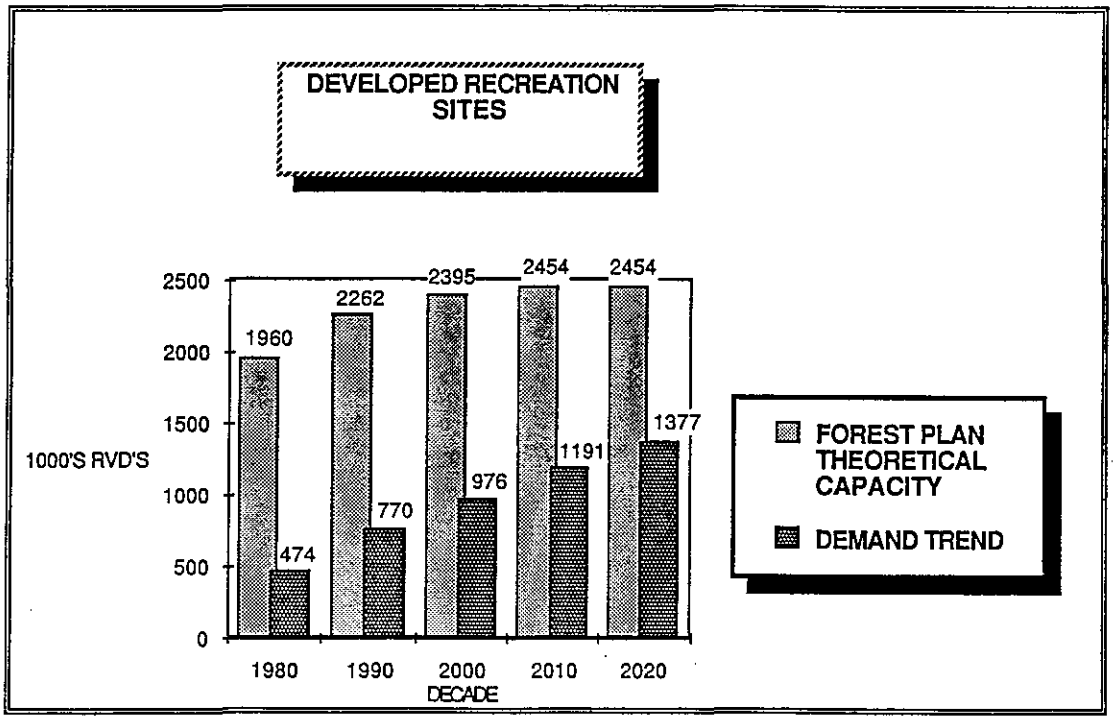
III- RECREATION USE OF THE FOREST

As shown in Figures 1 and 2, seventy percent of the 1.8 million annual recreation visits made to the San Juan National Forest are to dispersed backcountry and Wilderness areas of the Forest. And most of the dozen or so principal activities reflect the user's desire for such settings. Figure 3 illustrates how the amount of use is distributed over the general recreation opportunity settings. The high amount of use in the more developed rural and roaded areas of the Forest reflect the concentrated use characteristic of developed ski areas, resorts and camp and picnic grounds. But even here, many of the users seek the more unconfined forest settings for various activities while using developed sites as a base of operations. The principal attraction of the Forest is its relatively undeveloped and highly scenic backcountry.

In the following charts estimates of future use were developed by considering various factors such as population growth, increasing leisure time, energy and travel cost trends and anticipated recreation related development by the private sector and other public sector agencies. Estimates of potential supply, or capacity, are estimated on the basis of various standards and guidelines designed to protect the natural characteristics of the Forest, and provide high quality recreation experiences, which are safe and appropriately uncrowded.

The Forest has ample existing and potential sites to meet the anticipated demand for camping and picnicing and other developed recreation activity. The objective set forth in the Forest Plan is to rehabilitate and maintain sufficient developed site capacity to meet the expected demand, except for certain peak use periods.

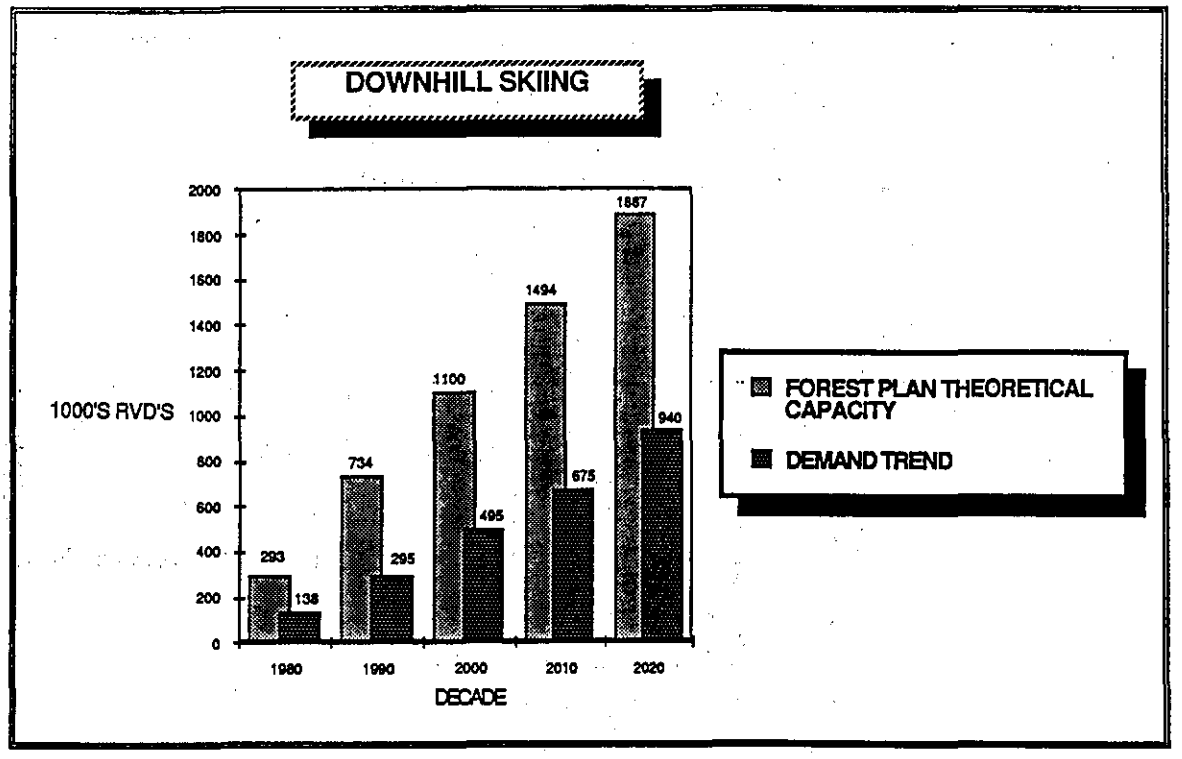
Figure #5



Downhill skiing use on the Forest averages about 51% of capacity on weekdays and 76% on weekends and holidays. The "comfortable capacity" of the Purgatory ski area is exceeded 15-20% of the season. This suggests that the demand and market for quality lift-served skiing will keep up with any increases in capacity.

There are 14 inventoried potential ski areas on the Forest. There is an identified interest by the private sector to develop three of these in the foreseeable future - East Fork, Wolf Creek Valley, and Purgatory Expansion. Development of new ski areas is a joint decision of federal and state government jurisdictions, the private sector and local government entities. It is anticipated that with the development of the above areas supply will keep pace with demand through the year 2000 and beyond.

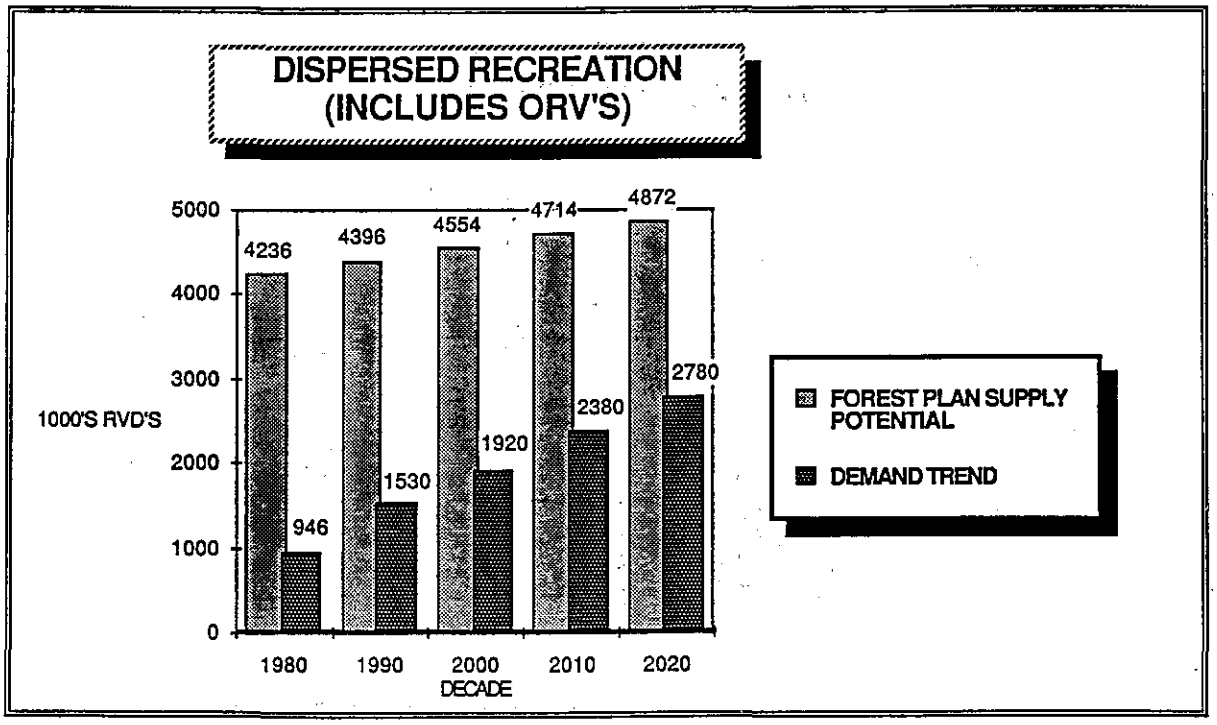
Figure #6



The Forest has the overall potential to handle far greater numbers of visitors participating in dispersed recreation activities than is anticipated will occur in the next several decades. See Figure #7. However this attribute is desirable to maintain. As the population increases, both locally and state-wide, the pressure to alter the kind of recreation settings currently abundant on the San Juan National Forest will surely increase. The experience of the Front Range Forests in the state provides clear evidence that without a long-range strategy the opportunities for remote, wildland recreation can be greatly diminished by population pressures.

The objectives of the Forest Plan are to provide only the amount of roads and trails, trailheads, backcountry campsites, and minimum sanitation facilities necessary and desirable to adequately serve the anticipated demand and distribute the use so that the current high quality dispersed recreation opportunities can be maintained.

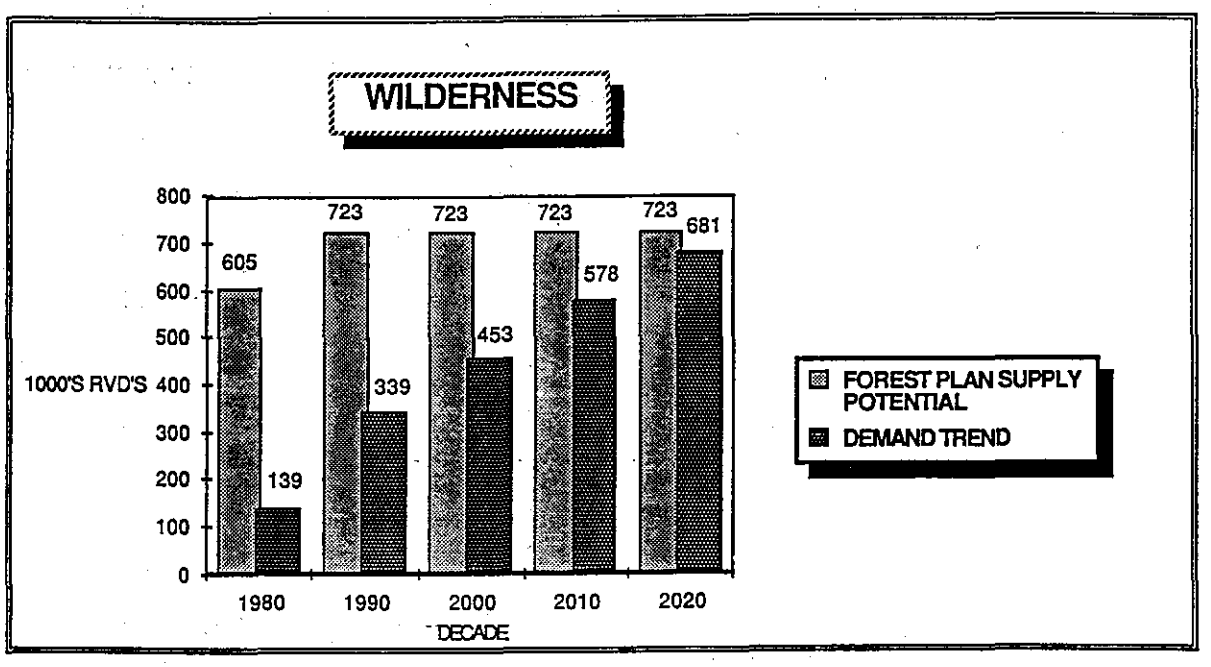
Figure #7



Opportunities for ORV use in outstanding Forest and alpine settings is one of the hallmarks of the Forest. The current and planned network of primitive roads and motorized trails will be ample to meet the anticipated needs of the ORV users. However, it should be understood that most ORV use will be confined to designated roads and trails which may be periodically restricted to protect soil, water, and wildlife resources. Under the implementation of the various management prescriptions in the Forest Plan there will be relatively little cross-country motorized travel.

The current Wildernesses and those areas recommended in the Forest Plan as suitable for inclusion in the National Wilderness System provide slightly more capacity than the anticipated future use. (See Figure #9). Implementation of the Wilderness Management direction in the Forest Plan will maintain use of the Forest's Wilderness at acceptable levels which will protect the Wilderness resource and provide acceptable opportunities for solitude and primitive recreation activities.

FIGURE #8



IV- CURRENT AND FUTURE RECREATION NEEDS

For the ten year period until 1995 the Forest has ample space and transportation system to accommodate use and continue to provide high quality recreation opportunities. The principal needs during the next decade are listed below:

(1) Maintain an equitable balance between motorized and non-motorized recreation opportunities and assure that high quality settings for these activities are maintained.

Management Areas that emphasize non-wilderness recreation opportunities (Prescriptions 1A,1B,2A,2B,3A,10C & 10D in the Forest Plan, Chapter III) account for 569,000 acres (30% of the Forest). In these areas all resource management activities will be planned and implemented to fall within the standards and guidelines contained in the prescriptions. Monitoring systems will include the necessary record keeping and evaluation to assure the cumulative effects of all resource management activities will not cause incompatible changes in the prescribed ROS settings.

Management Areas that emphasize other resource outputs (Prescriptions 4B,5B,6B,7C,7E,9A,9B,& 10A) account for 886,500 acres (47% of the Forest). In these areas changes in the current recreation settings may occur because of the construction of roads and/or the modification of the existing visual condition. However, changes in these areas will be kept to the minimum necessary to accomplish the objectives of the prescription and will be planned to provide quality recreation experiences as an adjunct to the principal resource uses. It is expected that the cumulative change in current ROS classification in these areas will be less than 13% over the 50 year planning period and less than 3% during the next 10 years.

Nineteen percent of the Forest has been designated as Wilderness and an additional 4% is being managed to preserve inherent wilderness characteristics pending Congressional action. The recreation opportunities in these areas will not change.

(2) Significantly reduce the backlog in facility maintenance needs, for both developed sites and the transportation system.

For the past decade and more, little maintenance of campground facilities has been possible because of low funding levels and the effects of inflation on the cost of replacement facilities. Use, on the other hand, has not slacked off and facilities have generally deteriorated.

The Forest's trail system is in equally poor shape. Trail maintenance is necessary on a regular basis to offset the effects of water erosion as well as the wear and tear of use. Trail maintenance is very labor intensive, and the lack of manpower as well as the low levels of funding have resulted in a Forest-wide deterioration of trails. The long term implication of continuing this inadequate level of maintenance is the complete loss of useable and safe trails, and the high cost of complete relocation and reconstruction of hundreds of miles to restore a usable system.

(3) Implement innovative ways of managing recreation facilities and services which emphasize cost effectiveness, and provide opportunities for the private-sector and volunteers to share in their operation and maintenance.

The interest and availability of volunteers and programs designed to encourage their use has opened new cost effective ways of serving the public and managing and caring for Forest recreation facilities. An active volunteer program gives individuals an opportunity to enjoy the benefits of self actualization, education and understanding of natural resource conservation needs and the feeling of contributing to the management of their public lands. But volunteer programs are not without costs; there is a continuing need for training and infrastructure support.

(4) Implement a Wilderness management program designed to reverse the trend toward overcrowding in certain drainages and along currently popular travel routes, and establish a monitoring program designed to consistently provide timely information about the effects of human use on the Wilderness resource.

(5) Maintain the opportunity for Congress to add the Piedra, South San Juan Expansion, and the West Needle Wilderness Study areas to the National Wilderness System.

In order to accomplish the above goals the following specific actions are scheduled for the ten year period from 1985 through 1995:

- **Dispersed Recreation**

Complete and implement a travel management program on a Forest-wide basis that reflects the intent and emphasis of the specific Management Area prescriptions in Chapter III of the Forest Plan. **(Target: 1986)**

Bring the Forest trail system under a consistent maintenance schedule designed to eliminate safety hazards system-wide. **(Target: 1990)**

Provide adequate drainage on 50% of the trail system. **(Target: 1995)**

Reconstruct or relocate 195 miles of existing trails. 2/ **(Target: 1995)** 3/

Construct 32 miles of new trails to help disperse use from heavily used areas. 2/ **(Target: 1995)**

2/ See Ten-year Trail Construction and Reconstruction Summary, Forest Plan, Appendix D.

3/ (Capital Investment will be made in reconstruction and new trail construction on a priority basis using these weighted criteria: Elimination of safety hazards, adequate right-of-way exists, good investment per user capita, reduction of trail-related soil and water impacts, provide trail and trailhead facilities which are adequate and compatible with the intended recreation setting and Management Area objectives, and trails available for use on multi-season basis).

Implement a Forest-wide travel management program by 1987 to reflect the intent and emphasis of the management area prescriptions.

Reconstruct the Burro Bridge and approaches by 1987. 2/

Reconstruct 238 miles of trail by the end of the 1993 RPA period.

Construct 9 of the planned 19 new trailheads by 1990.

Develop and implement a maintenance schedule of 25% of the level 2 primitive road system primarily used for 4x4 vehicle travel. (use same priority criteria as for trails) **(Target: 1986 for schedule; 1987-95 for implementation)**

Developed Recreation:

Provide an additional 350,460 PAOT Days with the opening of McPhee Reservoir sites by 1986. 4/

Provide an additional opportunity for 27,500 PAOT Days camping through improvement and enlargements of existing campgrounds by 1993. (South Mineral, Middle Fork, Transfer, Old Timers, Graham Creek, Pine Point, North Canyon)

To ensure that all developed recreation sites maintain their utility, correct all health and safety deficiencies first, then follow with other maintenance to meet standards.

Four developed sites are being evaluated for closure to provide funds for destination sites rather than for "bed rooms" for the through traveler. Several closures are to direct funds from lightly used sites to heavily used sites. (Thompson Park Campground, Ute Campground, Piedra Picnicground, San Juan Overlook, Dolores Canyon Overlook)

Evaluation of all developed sites will determine if concessionaire operation is a viable means of operating developed sites at reduced costs. Preliminary studies indicate that the McPhee complex, Vallecito Lake complex and San Juan River campgrounds have potential as concession sites, and these will be analyzed further.

There is a growing demand for a day use area and a group use area in the vicinity of Vallecito Lake. A study will be needed to determine the need for and extent of additional development.

Downhill Skiing:

Because of the Forest's location relative to the sun-belt population areas of the Southwest, the demand for downhill skiing opportunities is expected to continue to keep pace with the increased capacity being provided by private developers. The Forest Plan provides for the expansion of the Purgatory ski area by approximately 66% of its current capacity (Greyrock - Cascade), and allocates a small expansion area for Stoner.

2/ See Ten-year Trail Construction and Reconstruction Summary, Forest Plan, Appendix D.

4/ See FEIS page 11. **Proposed Action for Development Sites.**

Currently proponents are planning for the development of East Fork and Windy Pass (Wolf Creek Valley). These proposals are in the Joint Review process with State and local governments. Final EIS's will be issued for Wolf Creek Valley in 1986, and East Fork in 1987.

Wilderness:

The objectives of Wilderness management are to: allow the changes associated with natural ecosystem dynamics, unaffected by human activities and influences; and provide outstanding opportunities for primitive recreation activities and solitude.

To accomplish these conflicting management objectives in each of the three Wildernesses, the Forest will develop detailed implementation schedules of the General Forest Wilderness Direction and the specific Wilderness Management Area prescriptions contained in Chapter III of the Forest Plan. Development of the implementation schedules will require close coordination with the adjacent Uncompahagre and Rio Grande National Forests which share the management responsibilities of the three Wildernesses. **(The Forests will complete the schedule of implementation strategies in 1987.)**

A key issue is the amount and distribution of use, since overuse or poor distribution of use can destroy basic Wilderness resource characteristics. Strategy for planned developments adjacent to the Wildernesses will be to provide a system of roads and trailheads that will encourage better distribution of use before the Wilderness is entered. Of the 19 planned trailheads in the Forest Plan, 11 of them will primarily serve to distribute Wilderness use. **The following trailheads serving Wilderness are planned for improvement or development by 1995:**

Navajo Lake	West Fork	Transfer Park
Fish Creek	Middle Fork	Poison Park
Four Mile	Vallecito Creek	Lizard Head
Turkey Creek	Pine River	

Implementation schedules will also include strategies for:

The systematic inventory of suitable campsites to achieve an equitable allocation of Outfitter & Guide and public campsites while protecting bio-physical resources.

The determination of the extent and location of the effects of atmospheric deposition ("acid rain") and other air quality related impacts on the Wilderness ecosystems. Once this information is available the Forest can, whenever possible, limit or control sources likely to cause unacceptable impacts.

The determination of when, and if, a permit system will be required to control the timing, location and numbers of users to avoid unacceptable levels of use and/or deterioration of Wilderness characteristics.

Cultural Resources:

In 1984 the Forest Service signed an agreement with the State of Colorado which dealt in part with the cultural resource portions of the San Juan National Forest Plan. The Forest Service agreed to:

1) provide the State Historic Preservation Office (SHPO) with the opportunity to review the cultural resource monitoring action program; and

2) consult with the SHPO in developing survey strategies.

These are to be done annually.

Intensive surveys on all parts of the low lands of the Forest have shown that the Anasazi utilized virtually every environmental niche for some purpose and that site density is so high as to make use of predicative modeling (i.e. Class II sample surveys) demonstrably unreliable. On the other hand, most of the Forest above 7500 feet can be assessed using a "mixed strategy" - essentially a predicative Class II survey approach combined with professional judgement.

Visual Resources:

Visual resource management is an important activity used in the implementation of the Forest Plan. Because virtually all areas of the Forest provide some form of recreation opportunity, all activities have the potential to affect the physical settings in which recreation activities take place. If the effect of land management activities degrades the landscape from what is perceived to be acceptable or expected, the overall recreation experience is degraded to some degree.

The Forest service uses the "Visual Management System" to evaluate the effect of human activities and structures in terms of the degree of change made to the characteristic landscape. Also, desired visual conditions can be prescribed for a given area that is deemed appropriate or compatible with an existing or intended recreation opportunity. The desired visual condition is generally a "natural appearing" wildland landscape.

Overall, the characteristic appearance of the San Juan Mountains will change very little due to the various activities and programs called for in the Forest Plan. Less than 1% of the Forest area will be visually modified in any one decade by vegetative treatments.

Unique Features:

The unique recreation opportunities discussed in Part I rely on maintaining the current visual conditions, water and air quality, and the vegetative diversity characteristic of the National Forest. The following are specific management strategies intended to perpetuate these opportunities:

Driving for Pleasure / Viewing Scenery:

These activities require two basic actions: adequate road maintenance, and effective visual management along travel routes.

Highways and county roads are often used by people who are simply out "driving for pleasure". Maintenance of these roads is the responsibility of state and county governments, although 10% of the National Forest receipts are made available through the state to aid in maintenance. Forest arterial and collector roads are maintained, where feasible, through agreements with the counties. The cost/mile is quite high since these roads are maintained for visitor comfort as well as for safety and resource protection. In 1984 the cost on the Forest was $104,000 for 252 miles. This cost is expected to increase over the next ten years, as the road mileage increases and if inflation continues.

The visual quality of roadside areas will be maintained through the proper application of the Visual Management System in all Management Areas. However, similar controls on State, private and other lands adjacent to the National Forest can only come about through private landowners and local government agencies.

The Durango-Silverton Narrow Gauge Railroad:

The Forest Service manages the corridor through which the railroad passes to maintain its historic and scenic integrity. The prescription applied to the corridor emphasizes rural and roaded natural recreation opportunities such as driving for pleasure, viewing scenery, and picnicking along visually sensitive travel routes, while maintaining or enhancing the scenic values inherent in the naturally appearing landscape.

ORV Opportunities:

The strategy of the Forest is to retain ORV opportunities by providing 93,650 acres allocated to management prescription 2A (semi-primitive motorized). Four wheeling will be permitted within these areas as well as on some low standard roads elsewhere on the Forest.

Our management of four wheeling roads in the Silverton area (billed as the 4-Wheel Capital of the World) is coordinated with the Uncompaghre National Forest and the BLM since they have a majority of the road miles available for this purpose

An opportunity exists to accomplish maintenance of the important four wheel routes through agreements with commercial outfitters.

Recreation/Water Relationships:

The strategy for water related recreation opportunity requires looking at both recreational areas and specific activities. Actions can be fitted into two categories: 1) those activities needing developments; and 2) those activities occurring in dispersed areas (water surface activities).

Boating sites: The Forest does not plan to develop any new boat ramps to provide access to lakes and reservoirs. The two large ramps on McPhee Reservoir will adequately serve public needs along with a ramp connected with the proposed marina operation. Other reservoirs such as Vallecito and Williams Creek have ramp capacity to either meet public demand or provide access to

smaller boats only. Launch and takeout sites for white water boaters on rivers throughout the Forest are available but primitive.

Water Surface Activities: The Forest is developing a management plan for surface use of McPhee Reservoir, because of the potential for conflict among users. This plan will be based on ROS classes because the size and shape of the reservoir lends itself to zoning of uses. This type of planning is presently not being considered for other reservoirs and lakes on the Forest.

White water boating is becoming an impact, however this activity is generally limited to the larger rivers on the Forest.

McPhee Reservoir Complex:

The overall strategy in dealing with McPhee Reservoir and its related developments was to establish an acceptable management program before management of the area was transferred to the Forest Service from the Bureau of Reclamation. Management efforts included planning for a concession operated marina, establishing reservoir surface use regulations, determining concession potential for the government-developed sites of McPhee and House Creek, and developing necessary interagency agreements to insure that all agency activities are implemented.

Developed recreation sites include McPhee, House Creek, and five fishing access sites: Dry Canyon, Old McPhee Road, Dolores, Big Bend and Sage Hen. One day use area and two campgrounds are being constructed downstream from the dam. There is also a major whitewater launching site being developed on BLM lands at Bradfield Bridge. All of the developed sites that are part of the reservoir project will contribute an additional 1,150 PAOT capacity to the developed site program of the San Juan National Forest. The anticipated recreation visitor days (RVD'S) for the entire Reservoir, including dispersed areas, will be 239,300, and theoretical capacity will be 355,200.

Dispersed Winter Sports Activities and Opportunities:

The Forest offers a number of good, avalanche free ski touring and snowmobile routes.

Currently the Forest has one cooperative agreement with a local snowmobile club for trail improvements through the use of state tax dollars generated by the sales of snowmobile equipment. Up to now the coop funds have only been used to mark trails and provide for temporary sanitary facilities near the beginning of the trail.

To facilitate ski touring, there are agreements with the State Highway Department for plowing parking areas in special locations.

Hunting:

The San Juan National Forest is recognized as having one of the largest and most productive elk herds in Colorado as well as a sizable deer population. Big game hunting is one of the big attractions for out-of-state and Front Range

hunters and makes a significant positive economic impact in the local communities.

The strategy to deal with the impacts of hunting is to accommodate the number of users generated by unlimited hunting license sales while minimizing the adverse impacts. Adverse impacts to developed roads are avoided through road closures during wet weather and seasonal closures during hunting season. Forest-wide direction is to use seasonal closures if:

Use causes unacceptable damage to soil and water resources due to weather or seasonal conditions;

Use results in unsafe conditions due to weather conditions;

Use causes unacceptable damage to the road prism due to weather or seasonal conditions;

To facilitate hunting use, and other recreation activities, the Forest has complementary direction to keep existing roads open unless:

Financing is not available to maintain the road or manage the associated use served by the road;

Use causes unacceptable damage to soil and water resources;

Use conflicts with the ROS class established for the area;

They are located in areas closed to motorized use and are not "designated routes" in the Forest travel management direction;

Use results in unsafe conditions unrelated to weather conditions;

There is little or no public need for them;

Use conflicts with wildlife management objectives; or

Use causes unacceptable damage to the road prism.

Damage to facilities can be reduced through a better user education program and increased contacts during the hunting seasons.

The wide variety of ROS classes, management units, and wildlife species on the Forest provide for a great diversity of hunting opportunity on the San Juan National Forest.

V. CURRENT FUNDING AND FUTURE NEEDS

Shown below are historic, current, and projected funding levels for recreation and trails on the San Jan National Forest. For comparative purposes all figures are expressed in 1986 thousand dollars.

	Recreation		Trails	
	Operation Maintenance 1/	Construction and Reconstruction	Maintenance	Construction and Reconstruction (including bridges)
1980	1,042		105	70
1981	1,040		120	
1982	618		102	75
1983	895	28 2/	90	6
1984	801	101 2/	79	67
1985	854	16	82	5
AVE 80-85	875	24	96	37
1986 (Current Year)	949		129	46
Projected 1987	1005	185 3/	143	898 3/
1988	1027	213 3/	155	882
1989	1034	104	178	877
1990	1035	58	178	835
1995	1052	216	178	922

1/ Includes visual management, cultural resources, winter sports and wilderness.
2/ Includes funds from Jobs Bill (P.L. 98-8 3/24/83).
3/ Capital Investment Program submissions.

To provide a perspective on how the annual budget is spent for various recreation management activities, below is a composite of a typical year's budget of $850,000.

Developed Site Operation and Maintenance	546,000
Ski Area Administration	16,000
Dispersed Area Management	126,000
Wilderness Management	91,000
Cultural Resources	71,000
TOTAL	850,000

SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

JULY 1986
Amendment No. 2

Page Code	Superseded	New
Unnumbered Page Between Separators for "Appendices" and "Appendix A"	0	1

Description and Reason for Amendment

This amendment changes the Plan text to allow minor changes in the timing of individual projects in Appendices B, C, and D to be made without individual amendments to the Plan. The revised text page is attached.

Given market conditions and demand, the year a given project or activity is proposed may differ. This amendment allows needed flexibility in the Schedules (B, C, and D) in the Forest Plan to provide for these changing conditions. Additions or deletions to the schedules caused by changes in budget or other factors will be considered individual amendments to the Plan.

In accordance with the National Environmental Policy Act and Forest Service Manual 1952.2, I have determined that this amendment will have no significant effect on the human environment and is therefore excluded from documentation in an environmental assessment or environmental impact statement.

JOHN R. KIRKPATRICK
Forest Supervisor

7/30/86
Date

The following appendices have been developed based upon the best available information. The Forest Supervisor may change the proposed schedules to reflect differences between proposed annual budgets and appropriated funds. Such changes shall be considered an amendment to the Forest Plan, but should not be considered significant 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. The action plans will be revised as necessary to reflect the most current resource needs, plans, and policy.

Projects will sometimes be scheduled into different years than are shown in the appendices. This will not result in large changes in outputs in a given year. Changes may result from changes in assigned targets; inability to obtain rights-of-way; inability to obtain landline or cultural resource surveys; or external forces such as insect or disease epidemics; or short-term changes in demand or other market forces. These minor changes will not require an individual amendment to the Plan.

APPENDICES

A. Priorities for Implementation by Management Areas A-1

B. Ten-Year Timber Sale and Reforestation Summaries B-1

C. Ten-Year Arterial, Collector, and Local Roads Needing Capital Investment Work C-1

D. Ten-Year Trail Construction and Reconstruction Summary D-1

E. Proposed Mineral Withdrawals and Revocations E-1

F. Lands Capable, Available, and Suitable for Timber Production and Inventory Summary for the Forest Plan F-1

G. Roads and Trails to Remain open to the Public for Motorized Use Within Management Area 3A G-1

H. Standard and Special Stipulations for Minerals Leasing H-1

I. Fire Management Analysis I-1

J. Recreation Management J-1

*** AMENDMENT NO. 2 - 7/86 ***

SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

JANUARY 1987
Amendment No. 3

Page Code	Superseded	New
B-2 to B-15	10	7

Description and Reason for Amendment

This amendment replaces Appendix B of the Forest Plan, the Ten-Year Timber Sale Schedule. The years 1981-1986 in Appendix B reflect the historical timber sale program, the year 1987 reflects the sale program funded for the current fiscal year, and the years 1988-1990 display the planned sale program for the next three years. Units are in millions of board feet (MMbf).

The program budget allocation for fiscal year 1987 is 67 percent of the budget required to fully implement the Forest Plan. The timber sale objective for 1987 has been reduced by a commensurate amount from 40.0 MMbf to 29.8 MMbf. The planned sale program for fiscal years 1988 to 1990, when averaged, remains at the level of the allowable sale quantity (ASQ) of 40 MMbf per year established by the Forest Plan. The volume of planned sales for each year through the end of the decade is thus as follows:

FY-1987	29.8 MMbf (funded)
FY-1988	40.1 MMbf
FY-1989	38.5 MMbf
FY-1990	41.4 MMbf
TOTAL	149.8 MMbf

four year ave. 37.5 MMbf

Changes to Appendix B, besides reflecting actual accomplishments, include: (1) updated sale volume estimates where site specific inventory has been completed, (2) updated estimates of acres to be harvested by timber type and regeneration harvest method, (3) updated road construction and reconstruction requirements, and (4) rescheduling of planned sales. Rescheduling of sales is the result of cumulative deviations from the past sale schedule, the need to balance District workloads, the need to provide ample time to complete site specific analysis, and sale readvertisements.

In September, 1985, the Assistant Secretary of Agriculture "remanded" the Forest Plan to the Forest Service for additional work, after second level review of an appeal by the Natural Resources Defense Council et al. The remand directed the Forest to clearly establish and articulate the basis for decisions made in formulating alternatives and selecting the Forest Plan. The Forest in response has initiated an effort to evaluate and revise, as necessary, the original Forest Plan analysis to respond fully to the remand direction. As part of the effort, the Forest is reevaluating the timber demand/supply situation. This effort, coupled with other findings which result from the

remand analysis, may lead to further amendment(s) of this timber sale implementation schedule. The remand work is expected to be completed in 1987.

Appendix B forecasts outputs that could be produced through implementation of the listed projects according to the planned schedule. There is no assurance that the outputs will actually occur at the projected level. This is because of the limitations of preliminary planning estimates, and because on-the-ground conditions, changes in laws and regulations, national and local economic conditions, and appropriated budget levels all potentially affect the actual outputs.

The potential environmental, social and economic effects of implementing the sale program represented by Appendix B were documented in the Final Environmental Impact Statement which accompanied the approved Forest Land and Resource Management Plan. During implementation, when the resource management projects listed in Appendix B are designed, more site specific analysis will be performed. Thus the schedule represents preliminary management intent. The actual decision to implement or not implement the project will be made only after a site-specific environmental analysis has been conducted. Appropriate public notification and participation will be solicited and the provisions of NEPA will be followed (40 CFR 1500 to 1508).

Regulations permit amendments that may result in either significant or nonsignificant changes to the Forest Land and Resource Management Plan. I have determined that this change to Appendix B is not significant for the following reasons (Interim Directive # 12 to Chapt. 1920 of the Forest Service Manual):

1. The action does not significantly alter the multiple-use goals and objectives for long term land and resource management, nor is the opportunity to achieve the output in later years foregone.

2. The action represents a short term fluctuation in the implementation schedule.

By this notice I am also rescinding Forest Plan Amendment No. 2, issued July 30, 1986. That amendment made possible minor changes to schedules such as Appendix B without benefit of a separate amendment. Certain recipients of Amendment No. 2 believed this was inappropriate and not in compliance with the regulations governing Forest Plan amendments. The issuance of Amendment No. 3 satisfies this concern, and the original text of the Forest Plan remains intact.

Amendment #3 is subject to administrative review pursuant to 36 CFR 211.18. Notice of appeal must be in writing and submitted to John R. Kirkpatrick, Forest Supervisor, San Juan National Forest, 701 Camino Del Rio, Durango, Colorado 81301. A statement of reasons to support the appeal and any request for oral presentation must be filed within the 45 day period for filing a notice of appeal.

JOHN R. KIRKPATRICK
Forest Supervisor

1/14/87
Date

TEN-YEAR TIMBER SALE SUMMARY

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES R 5/
81	CAN BEAR IT	ANIMAS	7E, 33D0, H21G0-414 7C, 33D0, H32G0-419 T38N, R8W, SEC. 25,35,36	SF	146						T	1.40	0.4	3.3
81	LIFT #6	ANIMAS	2A, 35H1, H52G0-401 1B, 35H2, H21G0-405 T39N, R9W, SEC. 21,22,27,28	SF		90					T	1.55		
81	BUTLER	ANIMAS	2A, 33B0, H22G0-410 6B, 33B0, H22G0-408 T38N, R9W, SEC. 3,4 T39N, R9W, SEC. 26,27,33-35	SF			1201				T	4.20	4.3	10.0
81	SMALL SALES	ANIMAS	VARIOUS	SF			27				T	.54		
81	LONE CONE	DOLORES	4B, 49C0, S21G0-000 4B, 49C0, I31G0-000 4B, 40C0, I32GX-000 T41N, R12W, SEC. 6,7,18	SF,A		39	1406			50	T	SF 5.75 A 0.43	11.1	3.8
81	BOGGY DRAW ASPEN	DOLORES	7E, 51D0, H21D0-037 T38N, R14W, SEC. 3,10,15-17	A		39					T	.63		
81	ROARING FORK #24	DOLORES	2A, 47H1, H21G0-026 T39N, R10W, SEC. 30,31	SF	80						T	.75		
81	SMALL SALES	DOLORES	VARIOUS	SF	800						T	1.46		
81	CHICKEN CREEK	MANCOS	7E, 41A0, H21D0-205 T37N, R13W, SEC. 22-27, 33-34	PP	2684						T	3.50	4.4	5.1
81	SMALL SALES	MANCOS	VARIOUS	A		245					T	2.10		

1/ The Management Area is indicated by a letter and number (example: 7C). This is followed by a four character identification of the Geographic Area (Example: 33D0). The Capability Areas are designated by nine characters (example: H21G0-414).
2/ IC-Intermediate Cut, CC-Clearcut, SW-P-Shelterwood Prep, SW-S-Shelterwood Seed, SW-R-Shelterwood Removal, SEL-Selection Management
3/ SF - Spruce-fir, MC - Mixed conifer, PP - Ponderosa pine, A - Aspen
4/ T - Tractor, HFT - High Flotation, C - Cable Systems
5/ C - Construction, R - Reconstruction

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES 5/ R
81	TURKEY SPRINGS #2	PAGOSA	7E, 13L0, H21D0-801 7E, 15D1, S21D0-801 7E, 15D1, H21D0-803 6B, 15D1, S21D0-804 T36N, R2 1/2W, SEC.25-27,34-36 T35N, R2 1/2W, SEC. 1-3,10-15 T35N, R3W, SEC. 12,13,36	PP	3160						T	4.40	0.8	8.2
81	WILLOW DRAW #2	PAGOSA	4B, 07B0, S21D0-812 4B, 07B0, S21D0-823 T35N, R1E, SEC. 1, 2, 10-15	PP	1061						T	2.20	9.0	
81	FOURMILE	PAGOSA	7E, 07D2, M22FL-826 T37N, R2W, SEC. 26,27,34,35	SF				666			T	6.70	5.5	
81	SMALL SALES	PAGOSA	VARIOUS	MC			19				T	0.37		
81	UNCLE CHARLIE ASPEN	PINE	7E, 17F2, H21D0-606 7E, 13C0, H21D0-600 T35N, R5W, SEC. 8,9,16,17	A		106					T	A 0.89	1.0	1.9
81	FREEMAN CREEK	PINE	7E, 13C0, H21D0-600 7E, 13C0, S22D0-630 7E, 13C0, S23D0-600 7E, 13C0, H21D0-604 T35N, R5W, SEC.15,16,21,22,23, 25,26,27,28,34,35,36 T35N, R4W, SEC. 31 T34N, R4W, SEC. 6,7 T34N, R5W, SEC. 12	PP,MC	3807			200			T	MC 1.90 PP 3.50	3.7	17.5
81	LANGE CANYON	PINE	VARIOUS	PP	192						T	0.21		
81	TOTAL				11930	519	2653	866	50			42.48 (SF 22.35) (MC 2.27) (PP 13.81) (A 4.05)	40.2	49.8
82	SMALL SALES	ANIMAS	VARIOUS	SF			20				T	0.39		
82	AUGUST TM SALV.	DOLORES	7E, 47B2, H21G0-007 T39N, R12W, SEC. 17,18,19	SF	185						T	0.80		

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES 5/ C	R
82	SMALL SALES	DOLORES	VARIOUS	SF	500						T	1.50		
82	DUNTON	DOLORES	7E, 49D0, H21G0-004 7C, 49D0, H52G0-001 4B, 49D0, S21G0-001 T40N, R12W, SEC. 2,3,4,5 T41N, R11W, SEC. 30,31 T41N, R12W, SEC. 35,36	SF,A		66	250	1224	230		T	SF 6.60 A 1.70	4.9	11.2
82	GROUSE POINT	MANCOS	7E, 45B0, H21D0-201 T37N, R14W, SEC. 1-3, 10-12	PP	1528						T	2.20	6.1	0.8
82	SMALL SALES	MANCOS	VARIOUS	A		200					T	1.18		
82	MOSCA #2	PAGOSA	7E, 11A2, H21G0-800 7C, 13J2, H32G0-800 7E, 13J2, !22G0-801 7C, 13J2, H52G0-803 7E, 13F3, H22G0-802 7C, 13H2, H21G0-803 7E, 13H2, H31G0-800 T37N, R5W, SEC. 34,35 T38N, R4 1/2 W, SEC. 12,13 T38N,R4W,SEC.11,12,19,20,29-32	SF			1253				T	7.30	8.2	15.3
82	MULE MOUNTAIN	PINE	7E, 13B0, H21D0-601 7E, 13A2, H21F0-607 7E, 13A2, H21D0-602 7C, 13A2, H32F0-600 T35N, R4W, SEC. 33,34 T34N, R4W, SEC. 3,4	PP,MC	877			76			T T	PP 1.00 MC 1.04	1.2	4.9
82	SMALL SALES	PINE	VARIOUS	PP	51						T	0.16		
82	TOTAL				3141	266	1523	1300	230			23.87 (SF 16.59) (MC 1.04) (PP 3.36) (A 2.88)	20.4	32.2

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	5/ R
83	SMALL SALES	ANIMAS	7C, 33C0, H32F0-406 T37N, R8W, SEC. 10,11,15	SF			18				T	.36		
83	WILD TM SALVAGE	DOLORES	7E, 47F2, H21G0-008 T39N, R12W, SEC. 15	SF	110						T	0.65		
83	CINCO MILAS	DOLORES	6B, 47B1, H21F0-001 7E, 47B1, H21G0-001 T39N, R13W, SEC. 25,26,35,36 T39N, R12W, SEC. 19,20,29,30	SF,A			1100	740	300		T	SF 2.30 A 3.00		11.0
83	BRADFIELD	DOLORES	7E, 53B0, H21D0-009 7E, 53B0, S21D0-007 6B, 53B0, H21D0-003 6B, 53B0, S21D0-002 T40N, R16W, SEC. 5-8, 17,18 T40N, R17W, SEC. 1,2,11-14,24	PP	3500						T	4.70	1.5	9.5
83	SMALL SALES	DOLORES	VARIOUS	SF	800						T	2.05		
83	HAYCAMP	MANCOS	6B, 45B0, H21D0-201 6B, 45C0, H21D0-203 T37N,R14W,SEC. 1,2,12-14,23,26 T37N, R13W, SEC. 4-9, 16-19	PP	6200						T	6.90	2.5	10.5
83	SMALL SALES	MANCOS	VARIOUS	A		269					T	2.69		
83	CHRIS MOUNTAIN	PAGOSA	4B, 13A3, H22D0-800 6B, 13L0, H22D0-801 6B, 13L0, H22D0-805 6B, 13L0, S32D0-801 T35N, R3W, SEC. 15,21 22, 23, 27-29, 32, 33	MC,PP	1430						T	PP 2.60 MC 0.90	1.3	6.3
83	DUTTON	PAGOSA	7E, 07D1, S22D0-809 6B, 07D1, S21D0-807 T36N, R2W, SEC. 3	MC		5	155				T	0.60		.7
83	SMALL SALES	PAGOSA	VARIOUS	SF			100				T	0.62		
83	BULL CANYON	PINE	4B, 15B1, S22C0-606 4B, 15B1, S22D0-610 T34N-UTE, R5W, SEC. 5,9,16,19	PP	552						T	1.20	.5	4.3

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES 5/ R
83	SMALL SALES	PINE	VARIOUS	PP,SF	436						Y	PP .09 SF 1.10		
83	TOTAL				13028	274	1373	740	300			29.76 (SF 7.08) (MC 1.50 (PP 15.49) (A 5.69)	5.8	42.3
84	CAN BEAR IT II	ANIMAS	7E, 23B2, H22G0-412 7C, 33D0, H32F0-403 7E, 33D0, H21G0-414 7C, 33D0, H32G0-419 T37N, R7W, SEC. 6 T38N, R8W, SEC. 35,36 T38N, R7W, SEC. 30,31	SF	1461						T	2.10	0.5	9.1
84	SMALL SALES	ANIMAS	VARIOUS	SF	90						T	.90		
84	LITTLE FISH ASPEN	DOLORES	4B, 49C0, S22F0-000 4B, 49C0, H21F0-009 T41N, R12W, SEC. 30,31	A		350					T	4.50	2.7	
84	PONDEROSA JACK	DOLORES	7E, 51D0, H22D0-002 7E, 51D0, H21D0-003 7E, 51D0, H21D0-037 7E, 51C1, H21D0-034 6B, 51D0, H51D0-010 6B, 51C1, H21D0-033 T38N, R15W, SEC. 1,12 T38N, R14W, SEC. 5,6,7,8,17,18 T39N, R14W, SEC.15,16,21,28,32	PP	2000						T	3.00	2.7	5.0
84	MORRISON CREEK	DOLORES	7E, 49F0, H21G0-010 7E, 49F0, H21G0-011 7E, 49F0, H21G0-012 T41N, R11W, SEC. 34,35,36	SF		50	550				T	4.80	1.0	2.0

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES R 5/
84	SMALL SALES	DOLORES	VARIOUS	SF	800						T	2.50		
84	DRIVEWAY	MANCOS	7E, 45D0, H21G0-200 7E, 45D0, H21F0-201 T38N, R12W, SEC.16,17,18,19,20	A		398					T	3.00	5.1	.5
84	SMALL SALES	MANCOS	VARIOUS	A		250					T	2.50		
84	TRAIL RIDGE	PAGOSA	7E, 11C2, H22F0-803 7E, 11C2, H21D0-805 7E, 11C2, H21F0-804 7E, 11A1, H21F0-805 T37N, R3W, SEC. 5,7,8,17-20 T38N, R3W, SEC. 32	PP,MC,A	762	25		277		547	T	PP 1.53 MC 4.10 A .35	4.0	10.4
84	SMALL SALES	PAGOSA	VARIOUS	SF			50				T	0.30		
84	BEAVER SLOPES #2	PINE	7E, 17G2, H21G0-602 7E, 17G2, H22F0-601 7E, 17G2, S22F0-600 T36N, R5W, SEC. 30,31	SF			163				T	.52		
84	SMALL SALES	PINE	VARIOUS	A		35					T	.48		
84	TOTAL				5113	1108	763	277		547		30.48 (SF 11.02) (MC 4.10) (PP 4.53) (A 10.83)	16.0	27.0
85	EAST HERMOSA	ANIMAS	2A, 35H1, H52G0-401 T39N, R9W, SEC. 19-21, 28-30	SF,A		23	862				HFT	SF 2.20 A 0.23	1.9	1.2
85	SMALL SALES	ANIMAS	6B, 37B0, S33G0-400 T36N, R10W, SEC. 2,11	A,SF		178					T	A 1.40 SF .80		
85	DEER CREEK	DOLORES	7E, 49A2, H21F0-010 T40N, R12W, SEC. 19,20,21,30	A		300					T	3.00	1.0	3.0

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ TC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES 5/ R
85	CLEAR CREEK	DOLORES	4B, 49C0, S22F0-000 4B, 49D0, I32GR-000 4B, 49D0, S22F0-001 T41N, R12W, SEC. 18, 19	A,SF	225	60					T	A .60 SF .90	1.9	
85	SMALL SALES	DOLORES	VARIOUS	SF	800						T	3.80		
85	RUSH	MANCOS	6B, 41A0, S21F0-201 6B, 41A0, S21F0-202 6B, 41A0, S21E0-202 7E, 41A0, S21G0-201 T37N, R12W, SEC. 4, 7, 8, 9	A		100					T	1.30		0.6
85	SMALL SALES	MANCOS	VARIOUS	A		250					T	2.20		
85	BENSON CREEK	PAGOSA	6B, 05C0, M22D0-800 T33N, R1E, SEC. 4, 5 T34N, R1E, SEC. 28, 29, 31-34	PP	53		10	1512			T	4.50	3.5	1.0
85	SMALL SALES	PAGOSA	VARIOUS	SF	450		50				T	1.70		
85	WEST PRONG 1,2,3	PINE	7E, 13G1, H21G0-600 7C, 13G1, H31G0-603 7E, 13G1, H21G0-605 T36N, R5W, SEC. 5-8, 17, 18	SF	809					73	T	3.80	6.5	
85	SMALL SALES	PINE	VARIOUS	MC			140				T	0.40		
85	TOTAL				2337	911	1062	1512		73		26.83 (SF 13.20) (MC .40) (PP 4.50) (A 8.73)	14.8	5.8
86	TIN CAN	ANIMAS	1B, 35H2, H21G0-403 1B, 35H1, H21G0-405 1B, 29A1, H52G0-403 T39N, R9W, SEC. 11, 14, 23	SF	200						T	1.08	.3	1.04

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	5/ R
86	SMALL SALES	ANIMAS	7C, 35H2, H32G0-411 6B, 33A0, H32F0-407 T37N, R8W, SEC. 22 T39N, R9W, SEC. 15	SF,A	300	20					T	SF 2.10 A .20		
86	HEAD PRIEST	DOLORES	7E, 47F2, H21G0-008 2A, 47F2, H31G0-000 2A, 47C0, H32G0-001 2A, 47C0, H21G0-014 2A, 47C0, H21G0-015 7E, 47C0, H21G0-028 7E, 47C0, H21G0-006 T39N, R11W, SEC. 6, 7 T39N, R12W, SEC. 1, 2, 12	SF			1000			200	T,HFT	4.00	2.0	6.0
86	SMALL SALES	DOLORES	VARIOUS	SF	1000						T	3.80		
86	CAVINESS	MANCOS	7C, 39B0, H31F0-200 7C, 39B0, I32G0-200 T36N, R12W, SEC. 13, 22-24	A		200					T	2.40	2.0	3.0
86	SMALL SALES	MANCOS	VARIOUS	A		250					T	2.50		
86	ASPEN SPUR	PAGOSA	7C, 05I0, M32F0-808 7C, 05I0, M32F0-801 7C, 05I0, E72G0-825 T35N, R1E, SEC. 9, 10, 15, 16	SF,MC,A	358	32					T	SF 0.56 MC 0.24 A 1.20	8.3	0.9
86	SMALL SALES	PAGOSA	VARIOUS	SF	400	30					T	1.50		
86	MONUMENT PARK	PINE	7C, 13I1, H52G0-604 7C, 13I1, H52G0-603 7E, 13K, H22F0-803 7E, 13E0, H22F0-603 7C, 13E0, H32F0-603 7E, 13K1, H21F0-606 7C, 13K1, H52G0-608 T36N, R4W, SEC. 33, 34 T35N, R4W, SEC. 1-3, 9-12	SF,MC			1001			190	T, HFT(15%)	MC 2.30 SF .70	9.2	
86	SMALL SALES	PINE	VARIOUS	SF,MC,A	500	55					T	MC .60 SF 1.40 A .30		

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES R 5/
86 TOTAL					2758	557	2031			390		24.88 (SF 15.14) (MC 3.14) (PP) (A 6.60)	21.8	10.94
87 COAL CREEK		ANIMAS	T40N. R8W. SEC. 28,29,32,33	SF	80						T	.40		.1
87 SMALL SALES		ANIMAS	VARIOUS	SF	300		25				T	1.70		
87 ROARING RIDGE		DOLORES	2A, 47H1, H21GO-026 4B, 47G1, H52FO-018 4B, 47G1, H51GO-003 6B, 47G1, H21FO-013 6B, 47G1, H52FO-016 6B, 47G1, H21FO-014 7E, 47G1, H21GO-025 4B, 47G1, H51GO-002 T38N,R11W,SEC. 1-4,10-14,23,24	SF			800			500	T,HFT (30%)	4.40	2.5	7.5
87 SMALL SALES		DOLORES	VARIOUS	SF	1500						T	5.30		
87 ECHO-ECHO		MANCOS	7E, 41C0, S21GO-203 7C, 41C0, S32FO-201 T37N, R12W, SEC. 23, 24, 26	A		100					T	1.25		0.2
87 UPPER TURKEY		MANCOS	6B, 45C0, H21FO-203 6B, 45C0, S21FO-200 T37N, R12W, SEC. 31, 32	A		175					T	1.50		
87 SMALL SALES		MANCOS	VARIOUS	A		180					T	1.95		
87 MIDDLE SANDBENCH		PAGOSA	7E, 11A2, H21GO-813 T37N,R4W,SEC. 9,10,14,15,22,23	SF,MC			900				T	SF 1.60 MC 2.50	1.8	
87 POISON PARK #2		PAGOSA	7E, 13K2, H22FO-800 7E, 13K2, H22DO-803 T38N, R4W, SEC. 11, 12	SF,A		30	270			30	T	SF 1.50 A 0.10	1.7	

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES R 5/
88	SHEEP MOUNTAIN	DOLORES	9B, 43E0, S22G0-012 9B, 43E0, S22G0-013 9B, 43E0, S22G0-011 9B, 43F0, M22G0-000 9B, 43F0, S22G0-014 T41N, R9W, SEC. 19,30 T41N, R10W, SEC. 24,25,30	SF		433					T,HFT-30%	4.50	3.0	
88	SMALL SALES	DOLORES	VARIOUS	SF	800						T	6.20		
88	SILVER CREEK	MANCOS	4B, 41B0, H21F0-209 4B, 41B0, S22F0-201 T37N, R12W, SEC. 2,3,9,10,11	A		250					T	2.00	1.0	
88	SMALL SALES	MANCOS	VARIOUS	A,SF		200	600				T	A 2.40 SF .90		
88	TRAILRIDGE	PAGOSA	7E, 11C2, H21F0-804 7E, 11A1, H21F0-805 T37N, R3W, SEC. 5,7,8,17-20	MC,A		20	530		50		T	MC 3.80 A .20	3.2	
88	SMALL SALES	PAGOSA	VARIOUS	SF,MC	1500						T	SF 2.78 MC .40	3.2	
88	SNOW SPRINGS	PINE	7C, 13K1, H52G0-608 7E, 13K1, H22G0-604 7E, 13A2, S22D0-631 7E, 13A2, H22F0-605 7E, 13A2, H32G0-604 6B, 13K1, H21G0-604 T35N, R4W, SEC. 23,24,25 T35N, R3W, SEC. 18,19,30,31,32	PP,SF MC	250		508	917			T,HFT	MC 0.75 PP 1.82 SF 2.70	3.3	
88	SMALL SALES	PINE	VARIOUS	A		130					T	2.20		
88	TOTAL				2800	1706	2540	917	50			40.15 (SF 25.78) (MC 4.95) (PP 1.82) (A 7.60)	21.1	2.9

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES 5/ R
90	NOTCHES	PINE	7E, 13C0, H21D0-600 7E, 13C0, S22D0-630 7E, 13C0, H21D0-604 T34N, R5W, SEC. 1,2 T35N, R5W, SEC. 21-23, 26,27, 34-36	PP,MC	2600		145				T.	PP 2.10 MC .90		
90	ROCKY BASIN	PINE	6B, 19D1, H22D0-607 6B, 19D1, H22G0-619 6B, 19D2, H32D0-605 6B, 19D3, M22GL-600 6B, 19D3, H22G0-616 T36N, R6W, SEC. 1-2 T37N, R6W, SEC. 36 T37N, R5W, SEC. 21,22,27-30	SF	1090					117	T,HFT-20%	4.70	8.5	1.0
90	SMALL SALES	PINE	VARIOUS	A		130					T	1.40		
90	TOTAL				6700	2330	595	50	200			41.35 (SF 20.70) (MC 1.50) (PP 6.45) (A 12.70)	24.9	12.8
GRAND	TOTAL				56202	9939	15783	6612	930	2523		328.10 (SF 170.16) (MC 23.70) (PP 56.96) (A 77.28)	192.2	212.04

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	5/ R
87	DEVIL CREEK	PAGOSA	7E, 13L0, H22D0-804 7E, 13L0, H22F0-804 T35N, R3W, SEC. 3,4,9,10,16	PP				900			T	2.00		
87	SMALL SALES	PAGOSA	VARIOUS	SF	300		50				T	2.10	.8	
87	INDIAN CREEK	PINE	6B, 19E1, H22G0-612 6B, 19E1, H22G0-613 6B, 19E1, H32G0-609 7E, 19E2, H22G0-617 7E, 19E2, H22G0-614 T37N, R5W, SEC. 6, 7, 18 T37N, R6W, SEC. 1, 12, 13	SF	581						T,HFT (15%)	2.80	.6	1.6
87	SMALL SALES	PINE	VARIOUS	A		133					T	.70		
87	TOTAL				2761	618	2045	900		530		29.80 (SF 19.80) (MC 2.50) (PP 2.00) (A 5.50)	7.4	9.4
88	EAST HERMOSA	ANIMAS	2A, 35H1, H52G0-401 T39N, R9W, SEC. 19,20,21, 28,29,30	SF,A		23	862				HFT	SF 2.20 A .20	1.4	2.9
88	CAN BEAR IT III	ANIMAS	7C, 33C0, H32F0-406 7E, 33C0, H21G0-413 6B, 33C0, H22F0-404 T37N, R8W, SEC. 10, 11, 14, 15	A		150					T	.60	1.0	
88	SMALL SALES	ANIMAS	2A, 33B0, I23DX-400 6B, 33B0, H22D0-402 T38N, R9W, SEC. 24, 25, 36 T38N, R8W, SEC. 19, 30, 31	SF	250		40				T	2.00		
88	BARLOW CREEK	DOLORES	9B, 43D0, S22G0-016 9B, 43D0, H52G0-011 9B, 43D0, I32GX-011 T40N, R10W, SEC. 15,16,21-24	SF		500					T,HFT-30%	4.50	5.0	

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES 5/ R
89	DUTCH CREEK	ANIMAS	2A, 35C0, H22G0-409 T38N, R9W, SEC. 3, 4, 9, 10	SF						800	T	2.50	4.0	
89	SMALL SALES	ANIMAS	6B, 33A0, H21G0-415 6B, 33A0, H32F0-407 T37N, R8W, SEC. 15, 22	A	600	50					T	1.40		
89	LOWER HOUSE CREEK	DOLORES	7E, 51D0, H22D0-002 7E, 51D0, H21D0-037 4B, 51D0, S22D0-007 6B, 51D0, H21D0-010 T38N, R15W, SEC. 2,10,11,12 13,14,15,23	PP	1200						T	2.00	1.5	
89	STONER MESA	DOLORES	7E, 49A2, H21F0-010 7E, 49C0, H21F0-011 4B, 47C0, H21G0-005 T40N, R12W, SEC. 25-31,33	SF,A	1000	300					T	SF 2.50 A 1.50	6.0	2.0
89	WHITE KNUCKLES	DOLORES	6B, 47B1, H21F0-001 6B, 47A0, H21F0-002 T39N, R13W, SEC. 34, 35 T38N, R13W, SEC. 2, 3	A		400					T	1.60		.2
89	SMALL SALES	DOLORES	VARIOUS	SF	1500						T	6.10		
89	CAVINESS #2	MANCOS	7C, 39B0, H13F0-200 7C, 39B0, I32G0-200 T36N, R12W, SEC. 13, 22-24	A		200					T	2.00	3.2	
89	LUCY	MANCOS	6B, 41B0, S21F0-203 6B, 41B0, H21F0-208 T37N, R12W, SEC. 22, 27	A		200					T	.60		
89	POLE SPRING #2	MANCOS	7E, 45D0, H21G0-200 T38N, R12W, SEC. 21-23,26,27	SF			600				T	1.80		
89	SMALL SALES	MANCOS	VARIOUS	A		350					T	2.70		
89	LOWER MIDDLE MTN	PAGOSA	7E, 13K2, H22F0-800 7E, 13K2, H22D0-803 T35N, R3W, SEC.5-8,16-18,20,21	PP,MC A		20	350	50	100		T	PP 3.00 MC .80 A .20	4.8	
89	SMALL SALES	PAGOSA	VARIOUS	SF	1500						T	3.60	1.0	

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES R 5/
89	CLEAR RED	PINE	7E, 13G1, H21GO-600 6B, 13G1, H32GO-600 T36N, R5W, SEC. 8,9,16-18	MC			248			81	T	1.50	3.5	
89	SOUTH MONUMENT	PINE	7C, 13K1, H52GO-608 7E, 13K1, H22GO-604 6B, 13K1, H21GO-604 T35N, R4W, SEC. 11-14, 23, 24 T35N, R3W, SEC. 18	SF	834					102	T	2.00	1.3	
89	SMALL SALES	PINE	VARIOUS	A		130					T	2.70		
89	TOTAL				6634	1650	1198	50	100	983		38.50 (SF 18.50) (MC 2.30) (PP 5.00) (A 12.70)	19.8	2.2
90	GRASSHOPPER	ANIMAS	7C, 33D0, I52GX-400 7E, 33D0, I22GO-401 7E, 33D0, H22GO-415 T38N, R8W, SEC. 2, 3, 10, 11	SF	500						T	2.20	5.0	4.8
90	SMALL SALES	ANIMAS	VARIOUS	SF	110						T	1.30		
90	BEAR CREEK	DOLORES	7E, 47D1, H21GO-019 7E, 47D1, H21GO-024 7E, 47E1, H21GO-020 7E, 47E1, H21GO-023 7E, 47G1, H21GO-021 7C, 47G1, H31GX-000 7C, 47G1, H31GX-001 7E, 47G1, H21GO-002 7E, 47D1, H21HO-000 T38N, R11W, SEC. 20,21,27,28 29,34,35	SF	230						T	2.00		3.0

TEN-YEAR TIMBER SALE SUMMARY (CONTINUED)

FISCAL YEAR	SALE NAME	RANGER DISTRICT	AREA LOCATION -MANAGEMENT, GEOGRAPHIC, AND CAPABILITY AREAS 1/ -TWP., RGE., SEC.	TIMBER TYPE 3/	NET ACRES CUT BY HARVEST SYSTEM 2/ IC	CC	SW-P	SW-S	SW-R	SEL	LOGGING METHOD 4/	VOLUME MMBF BY TYPE	ROAD MILES C	ROAD MILES 5/ R
90	GROUNDHOG ASPEN	DOLORES	6B, 49C0, S21F0-000 6B, 49C0, H21F0-007 6B, 49C0, S21D0-013 6B, 49C0, S22E0-001 6B, 49C0, S22D0-018 6B, 49C0, S22D0-019 T39N, R13W, SEC. 4 T40N, R13W, SEC. 3,10,15,22, 27,33,34	A		850					T	3.30	2.5	
90	ITALIAN CANYON	DOLORES	7E, 45A0, H21D0-038 T37N, R15W, SEC. 1 T37N, R14W, SEC. 5,6	PP	700						T	1.25		2.0
90	RIO LADO	DOLORES	7E, 47G1, H21F0-015 7C, 57G1, H31G0-004 T38N, R11W, SEC. 6,8,16	A		350					T,HFT-20%	2.00	3.0	2.0
90	SMALL SALES	DOLORES	VARIOUS	SF	1000						T	5.50		
90	MORGAN	MANCOS	7E, 45D0, H21F0-201 6B, 45D0, H21F0-200 T38N, R13W, SEC. 13-15,22-24	A		550					T	2.00		
90	SMALL SALES	MANCOS	VARIOUS	A		200					T	2.50		
90	BIG BRANCH	PAGOSA	7C, 05C0, M32D0-800 4B, 05C0, M32D0-801 T34N,R1E,SEC.15,16,20-22,28,29	PP			250	50	200		T	2.60	2.5	
90	QUIEN SABE	PAGOSA	7E, 07D2, S22F0-805 7E, 07D2, M22FL-826 6B, 07D2, E22F0-802 6B, 07D2, M22FL-828 T36N, R2W, SEC. 2-3 T37N, R2W, SEC. 35-36	SF,A	245	250				55	T,HFT	SF 3.00 A 1.50	3.4	
90	SMALL SALES	PAGOSA	VARIOUS	PP,SF, MC	225		200				T	SF 2.00 MC .60 PP .50		

SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

AUGUST 1987
Amendment No.4

Page Code	Superseded	New
Forest Plan Map	N/A	-

Description and Reason for Amendment

This amendment is necessitated by the Record of Decision (ROD) for the East Fork Ski Area Proposal, issued August 14, 1987. The ROD approved the proposal for development along with the associated reconstruction of the access road (FDR 667). Originally the road provided for motorized travel through a semi-primitive, non-motorized management area (Prescription 3A). Due to the intended upgrading of this road, to include paving of two lanes plus shoulders, the potential use in the corridor will change to a "roaded natural" character (Prescription 2B).

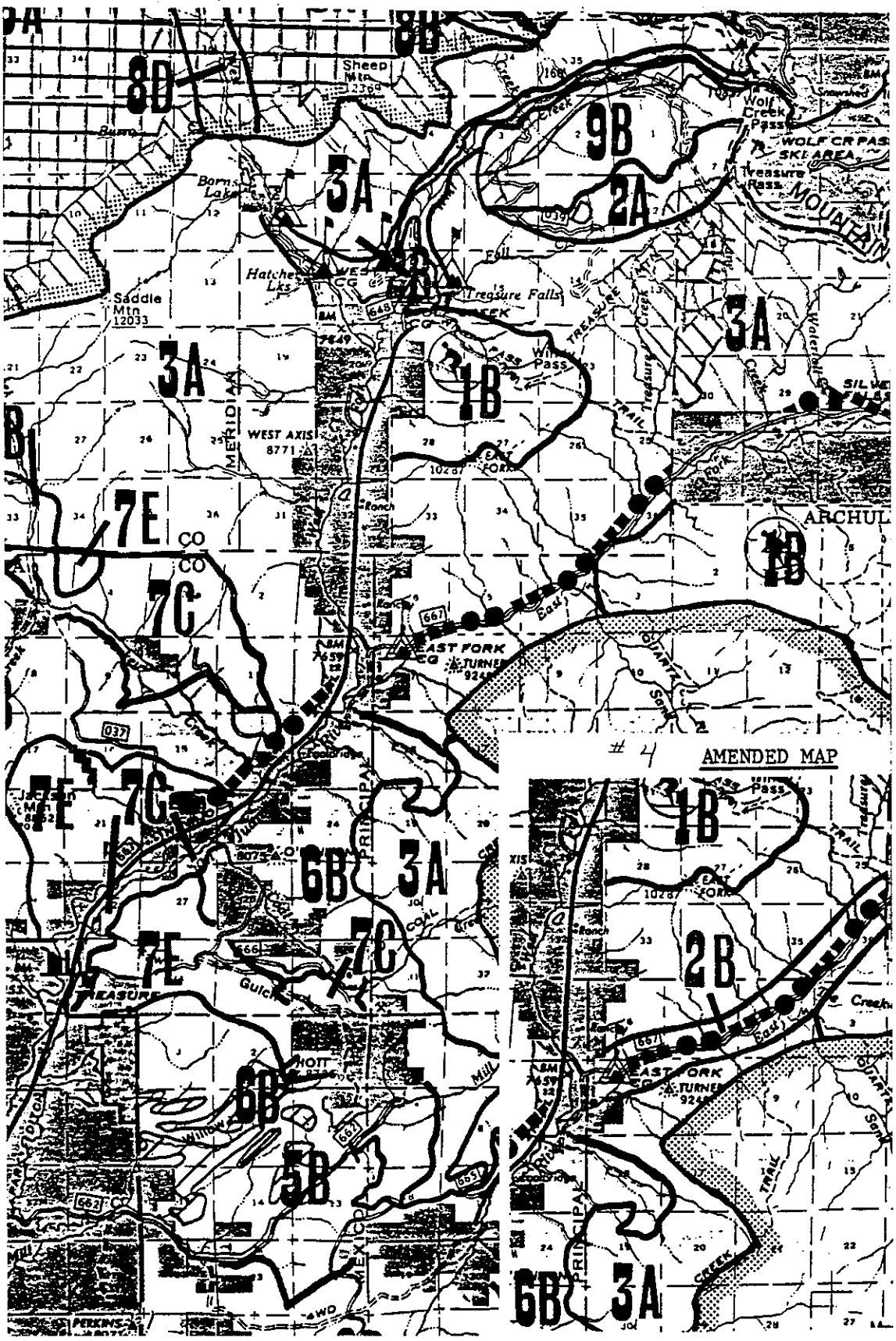
The increase in traffic will increase activities such as driving for pleasure, viewing scenery, picnicking, and fishing. Most users will remain in their cars or close to the road. Environmental consequences associated with the road reconstruction are described in the Environmental Impact Statement for the East Fork Ski Area.

In accordance with the National Environmental Policy Act and Forest Service Manual 1952.2, I have determined that this amendment will have no significant effect on the human environment and is therefore excluded from documentation in an environmental assessment or environmental impact statement. In addition, I have determined that this is not a significant amendment of the Forest Plan.

JOHN R. KIRKPATRICK
Forest Supervisor

Date

ORIGINAL MAP



SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

AUGUST 1987
Amendment No.5

Page Code	Superseded	New
Forest Plan Map	N/A	-

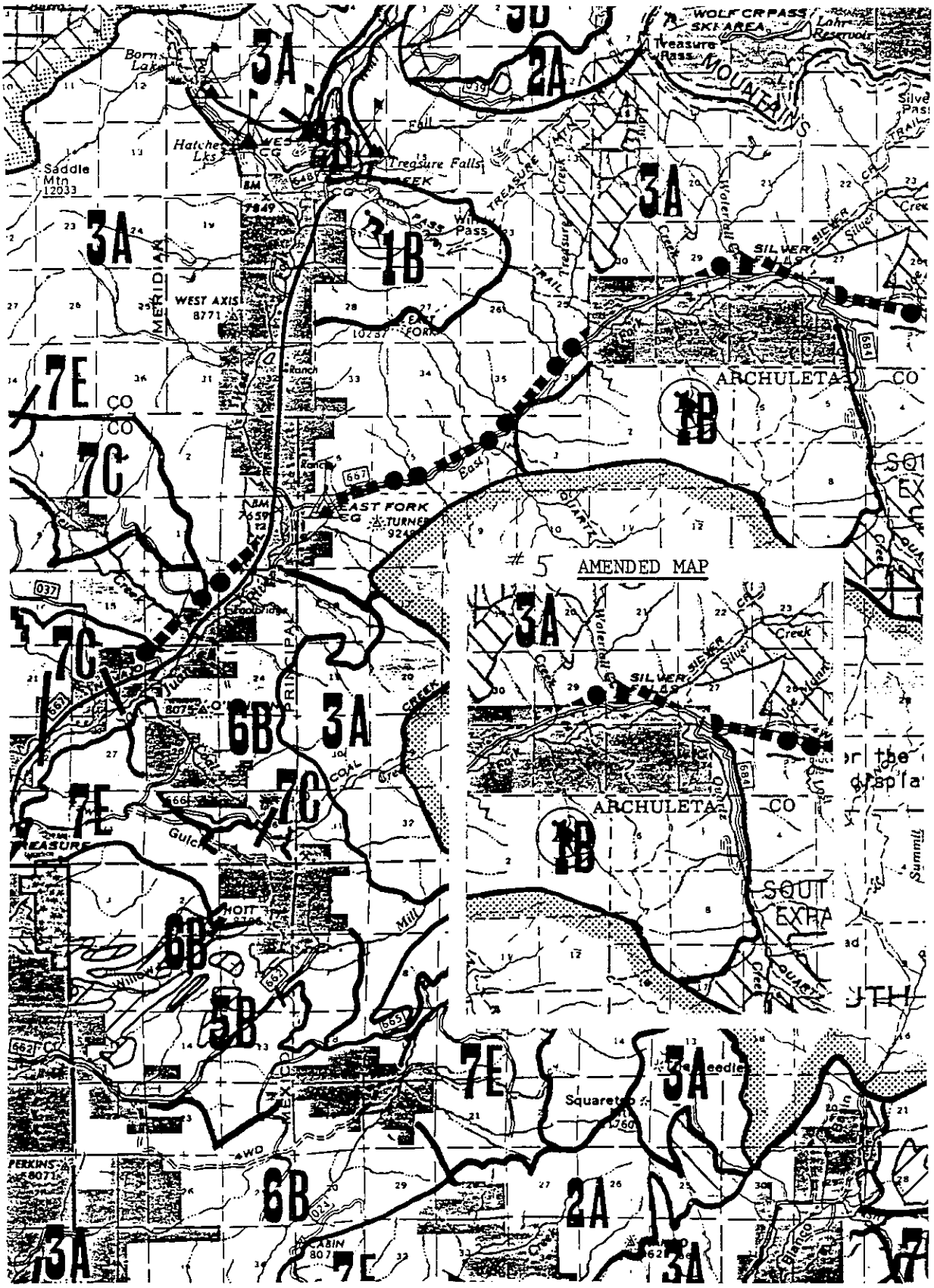
Description and Reason for Amendment

This amendment is necessitated by the Record of Decision (ROD) for the East Fork Ski Area Proposal, issued August 14, 1987. The ROD approved the proposal which necessarily includes those lands required for lift development and roads to access lift terminals for installation, maintenance and repairs. Most of the road accessing Quartz Meadows (FDR 684) is within a semi-primitive, non-motorized management area (Prescription 3A). Due to the intended use of this road to manage ski area facilities originating in Quartz Meadows, it is appropriate to change the boundary of the skiing management area (Prescription 1B) to include the access road from where it leaves the private land in the East Fork valley to its terminus in Quartz Meadows. This will result in the semi-primitive, non-motorized recreation management area (Prescription 3A) remaining east of, but not including, FDR 684.

In accordance with the National Environmental Policy Act and Forest Service Manual 1952.2, I have determined that this amendment will have no significant effect on the human environment and is therefore excluded from documentation in an environmental assessment or environmental impact statement. In addition, I have determined that this is not a significant amendment of the Forest Plan.

JOHN R. KIRKPATRICK
Forest Supervisor

Date



#5 AMENDED MAP
3A
2A
1B
7E
7C
6B
5B
ARCHULETA
CO
WOLF CR PASS SKI AREA
Treasure Pass
MOUNTAINS
Saddle Mtn 12033
Hatchet Lks
Treasure Falls
WEST AXIS 8771
EAST FORK
SILVER FALLS
Squaretop
PERKINS 8071

SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

JANUARY 1989
Amendment No. 6

Page Code	Superseded	New
Forest Plan Map	N/A	

Description and Reason for Amendment

This amendment adjusts management area boundaries in the Cumberland Basin area of La Plata Canyon. The amendment is needed to correct the Forest Plan map and make management of the upper La Plata Canyon Road and roadside zone consistent with Forest Plan direction. The entire road corridor up La Plata Canyon is management area 2B, which emphasizes rural and roaded natural recreation opportunities, except for the last one half mile of road. A trailhead facility, toilet, and interpretive sign are located at the roadside one half mile below "the Notch". The notch is the terminus of the road, and is located at the pass between Snowstorm Peak and Cumberland Mountain.

The current Forest Plan management area changes from roaded natural (2B) to a semi-primitive, non-motorized recreation management area (3A) just before reaching the trailhead and toilet. Yet the rural and roaded natural recreation opportunities continue on this road all the way to "the Notch". This amendment changes approximately 75 acres from a 3B to a 2B management area designation, so that the roadside corridor will be managed for roaded natural recreation opportunities all the way to "the Notch".

A noticeable increase in traffic to the trailhead parking area has been evident recently due to increases in hiking, viewing scenery, biking, picnicing, and driving for pleasure. Since the current and future use of this area is of a roaded natural character, and current use levels already exceed the capacities for management area 3A, this change to management area 2B is needed. However, conventional use of highway-type vehicles is not recommended for the last two miles of the La Plata Canyon Road which accesses the trailhead due to its rough condition.

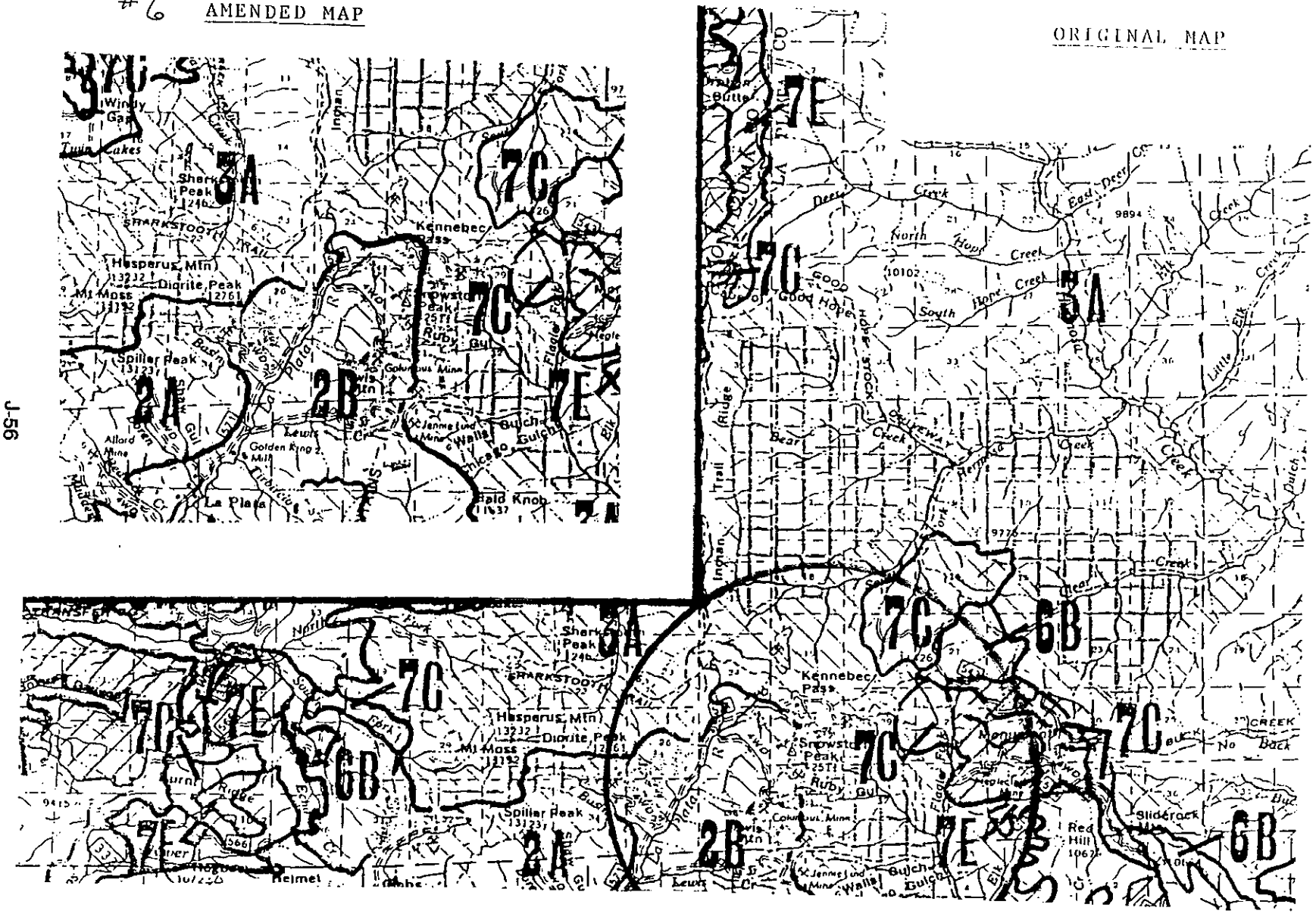
In accordance with the National Environmental Policy Act and Forest Service Manual 1952.2, I have determined that this amendment will have no significant effect on the human environment and is therefore excluded from documentation in an environmental assessment or environmental impact statement. In addition, I have determined that this is not a significant amendment of the Forest Plan. This action is subject to administrative review under 36 CFR 211.18.

William T. Sexton
WILLIAM T. SEXTON
Forest Supervisor

1/6/89
Date

#6 AMENDED MAP

ORIGINAL MAP



SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

JANUARY 1989
Amendment No. 7

Page Code	Superseded	New
Forest Plan Appendix K	N/A	18

Description and Reason for Amendment

This amendment adds Appendix K to the Forest Plan. This amendment is incorporated in its entirety from the San Juan/San Miguel Resource Management Plan (Appendix One) prepared by the Bureau of Land Management (BLM) in September 1985. This appendix summarizes the effects of a jurisdictional transfer between the Forest Service and BLM effective on October 31, 1983. This information was not included in the Forest Plan because it was issued September 29, 1983, one month prior to the jurisdictional transfer.

It is now being incorporated by reference so that holders of the Forest Plan do not have to rely on BLM documents for information pertinent to the San Juan National Forest.

I have determined that this is not a significant amendment of the Forest Plan. The BLM's San Juan/San Miguel Resource Management Plan was accompanied by a Final EIS, which satisfied National Environmental Policy Act requirements for this action.

William T. Sexton
WILLIAM T. SEXTON
Forest Supervisor

1/6/89
Date

Introduction

The BLM/USFS jurisdictional transfer between the San Juan Resource Area and the San Juan National Forest (effective October 31, 1983) involves parcels of land in six counties of southwestern Colorado. These exchange lands are shown on maps 1 through 4. Table I-1 depicts the jurisdictional transfer by area and county and acres presently administered by either the BLM/USFS.

Historic Background

On March 2, 1907, the San Juan National Forest was established by Presidential Proclamation. Initially, management direction emphasized sustained yield management of timber resources, but subsequently evolved into multiple use resource management principles.

Preceding the Taylor Grazing Act of 1934, management of public land was primarily a custodial activity. Established by this act, the Grazing Service organized grazing districts and permitted allotments to specific operators. In 1946 this service was united with the General Land Office to form the BLM. Although the BLM began as a multiple use oriented agency, it did not receive its Congressional mandate until 1976 with the passage of FLPMA.

Original National Forest boundaries were hastily developed using unsatisfactory survey plots, resulting in awkward boundaries which became even more incongruous as development took place. As time went on, both the BLM and the USFS recognized that by consolidating intermingled and adjacent lands, a more efficient type of management could be attained.

1972-1975: Management Framework Plans (MFPs)

Between 1972 and 1975, the BLM completed MFPs for public land in the San Juan Resource Area. A Lands Activity Plan was developed to implement the MFPs. An important element of this Activity Plan was a proposal for jurisdictional transfer of lands between the USFS and the BLM.

Evaluation of these transfers was conducted jointly by the two agencies. Lands in nine geographic areas were identified for potential transfer and, in October 1975, the San Juan National Forest was selected for a pilot study.

1975-1976: Land and Mineral Reports

A land report, completed in August 1976, resulted in recommendations for the transfer of 31,607 acres from the USFS to BLM and 24,763 acres from BLM to the USFS. These recommendations were reviewed, amended, and approved in December 1976. Mineral reports were also completed in August 1976.

Table 1-1. Public Land Transferred Through Public Law 98-141.

Area and county	Acres transferred to BLM	Acres transferred to FS
Dolores River Canyon below Bradfield Ranch (Dolores and San Miguel counties)	22,717.30	
Dolores River above Bradfield Ranch (Montezuma County)		4,124.85
Mancos Hill (Montezuma County)	562.98	
Little Bauer Reservoir (Montezuma County)		39.57
Animas Leg (La Plata and San Juan counties)		13,109.00
Animas River Tributaries (San Juan County)	8,327.00	
Lemon-Vallecito Lakes (La Plata County)		5,898.80
Haystack Mountain (Archuleta County)		680.13
Pagosa Springs (Archuleta County)		516.32
Chromo-Navajo River (Archuleta County)		394.16
Total	31,607.28	24,762.83

Source: BLM Data 1984.

During preparation of the land and mineral reports, public participation activities were conducted to facilitate public awareness of the recommendations. Special presentations were made to Federal, State, county, and local officials and to the news media.

1976-1977: Environmental Analysis Report (EAR)

The BLM and the USFS jointly prepared an EAR to analyze the impacts of the proposed transfers. Analysis criteria focused on location, public benefits, similarities in physical character of the lands, and opportunities for more efficient resource management. Upon completion of the report, favorable recommendations were approved and forwarded to Washington, D.C., in January 1977.

1978: Memorandum of Understanding (MOU)

Interim management procedures for proposed transfer lands were mutually agreed upon and coordinated between BLM and the USFS.

A MOU was approved in January 1978 to remain in effect until Congress passed legislation enabling jurisdictional transfers between the departments of Agriculture and Interior.

1978-1983: Legislation

In January 1978, Washington officials of BLM and the USFS prepared draft legislation for jurisdictional transfers between the San Juan National Forest and BLM's San Juan Resource Area. Pending for more than five years, this legislation was acted upon with the passage of Public Law 98-141, The Public Lands and National Parks Act of 1983, signed by President Reagan on October 31, 1983. (Sec. 12, 97 Stat. (a-h) 909 of this Act covers land transfers discussed in this document.)

Management Guidelines

Management actions on the recently exchanged BLM/USFS land will remain generally the same. All existing mining claims, grazing rights, and permits will be honored by the new managing agencies. However, permits must follow regulations governing each jurisdiction.

Each agency has management prescriptions (USFS) or emphasis areas (BLM) related to specific areas (see Table 1-2). Although all parcels of land exchanged will continue to be managed much the same, the two agencies will apply their respective guidelines to the areas involved.

Forest Service lands are managed under Forest Direction and Management Area Direction detailed in the Land and Resource Management Plan for the San Juan National Forest (Issued September 29, 1983, USDA-Forest Service).

Forest Direction consists of goals, objectives, and management requirements (see Chapter III, p. III-11 - III-84, Forest Plan). The goals and objectives provide broad overall direction regarding the type and amount of goods and services that the Forest will provide. The management requirements contained in the Forest Direction section set the minimum conditions that must be maintained while achieving the goals and objectives.

Management Area Direction consists of management area prescriptions applicable to specific management areas shown on the Forest Plan and alternative maps and on the maps showing lands transferred to the USFS (found in this Appendix). The management area prescriptions contain management requirements specifying which activities will be implemented to achieve the goals and objectives. Management requirements contained in individual management area prescriptions are applied to the specific areas shown on the alternative maps and on the Forest Plan map, as well as on the maps found in Appendix One (see Chapter III, San Juan National Forest Plan, p. III-88 - III-291). Alternative maps are found in the final EIS for the Forest Plan; the Forest Plan map is found in the Forest Plan. Table 1-2 compares the BLM emphasis areas and corresponding USFS prescriptions.

Table 1-2. Comparison Between USFS and BLM Management Prescriptions/Emphasis Areas.

BLM - Emphasis area(s)[1/]	USFS - Management prescription[2/]
A - Management direction emphasizes increasing livestock production on a sustained yield basis. Livestock improvements will be multiple use oriented. Compatible resource uses are possible.	6B - Emphasis is on livestock management. A variety of forage improvement practices are available for implementation. Compatible resource uses are possible.
B - Management direction emphasizes achieving and maintaining optimum habitat conditions for wildlife. Wildlife improvements are utilized to improve watershed conditions and provide vegetation diversity to maximize habitat capability. Compatible resource uses are possible but favor wildlife.	4B - Emphasis is on habitat needs for management indictor species. A variety of tree harvesting and rangeland vegetation treatments is possible for maximization of habitat capability. Human activities are regulated to favor the designated species.
	5B - Emphasis is on big game winter range (forage and cover) in forested areas. A full range of treatments for tree stands, browse, and rangeland plants is available for implementation in an effort to increase forage or to create/maintain cover. Compatible resource uses may occur. Motorized recreation use is managed to prevent conflicts during critical use periods.
C - Management provides for a variety of recreation opportunities and settings. Investments will be made in management activities which enhance recreation.	2A - Emphasis is on semiprimitive motorized recreation opportunities. Management activities are visually subordinate. Some forested lands are suitable for timber production and mineral resource activities are generally compatible.
	2B - Emphasis is for rural and roaded-natural recreation opportunities. Both motorized and nonmotorized activities are possible. Management activities maintain/improve the visual aspect of recreation opportunities. Harvest method is determined by forest cover type.

Table 1-2. (Continued)

BLM - Emphasis area(s)[1/]	USFS - Management prescription[2/]
	3A - Emphasis is for rural and roaded-natural recreation opportunities. Both motorized and nonmotorized activities are possible. Management activities maintain/improve the visual aspect of recreation opportunities. Harvest method is determined by forest cover type.
	10D - Emphasis is on river segments recommended for inclusion in the National Wild and Scenic River System.
D - Management direction allows for wilderness management to provide natural environments with the characteristic components of a wilderness setting. Natural processes proceed unrestricted by management activities or human use. High levels of solitude are emphasized. Travel is cross country or by trail system.	8A - Emphasis is for pristine biophysical conditions and a high degree of solitude.
	8B - Emphasis is for primitive biophysical conditions. Travel is cross country or by trail.
	8D - Emphasis is for wilderness management in high-density use areas, particularly along travel corridors.
J - Management direction is to increase production and utilization of wood products. Investments may be made for timber management activities. Compatible resource uses are possible but may be restricted/disrupted due to timber objectives.	7C - Emphasis is to develop and maintain healthy tree cover on steep slopes. Management activities blend with the natural setting. Roaded-natural, semiprimitive motorized, and semiprimitive nonmotorized recreation activities are provided.
	7E - Emphasis is on wood fiber and sawtimber production. Management activities will create a mosaic of stands that follow natural patterns and harmonize with the setting. Roaded-natural, semiprimitive motorized recreation patterns and harmonize with the activities are possible.

Table 1-2. (Continued)

BLM - Emphasis area(s)[1/]	USFS - Management prescription[2/]
	9A - Emphasis is on protection and maintenance of riparian areas. Vegetation treatment will enhance plant and animal diversity. Forested lands are not suitable for timber production. Semiprimitive motorized, roaded natural and rural recreation opportunities can be provided. This prescription will be applied to all riparian areas located anywhere on the Forest except those in wilderness, research natural areas, and special interest areas.

1/See corresponding BLM alternative maps.
2/See Forest Service Plan maps.
Source: BLM Data 1984.

Lemon-Vallecito Lakes

These parcels total approximately 5,900 acres of land in the Lemon-Vallecito Lakes area (see Map 4). Four alternatives were considered for the area. Each alternative was different, involving one or more of the following emphases: J-Forestry and C-Recreation.

A. Current Management

1. San Juan/San Miguel (SJ/SM) RMP

Approximately 3,200 acres of the area will be managed under a general natural resource management emphasis which does not have a preferred resource value. All other land (2,600 acres) is under acommercial forestry emphasis (Emphasis J).

2. San Juan National Forest (SJNF) Land and Resource Management Plan (Alternative F)

This area would be managed under prescriptions 7C and 7E, depending on slope. Emphasis would be on wood fiber production. Management activities are harmonized with the natural setting. Dispersed recreational opportunities are available.

B. Resource Conservation

1. SJ/SM RMP

This alternative manages all land under a general natural resource management emphasis.

2. SJNF Land and Resource Management Plan (Alternative A)

Emphasis would be on semiprimitive nonmotorized recreation under prescription 3A. Wood products are available if harvest is compatible with recreation uses.

C. Resource Utilization

1. SJ/SM RMP

The Resource Utilization Alternative recommends the majority of Lemon-Vallecito Lakes area for commercial forestry emphasis (Emphasis J).

2. SJNF Land and Resource Management Plan (Alternative B)

Emphasis would be on semiprimitive nonmotorized recreation under prescription 3A. Wood products are available if harvest is compatible with recreation uses.

D. Preferred Alternative

1. SJ/SM RMP

Lemon-Vallecito Lakes is an important area for recreation. Special guidelines were developed to manage this resource value. Management actions must maintain Class II visual standards while allowing a variety of nonmotorized recreational opportunities. ORV use would not be allowed.

2. SJNF Land and Resource Management Plan (Alternative H)

The overall area would be managed with emphasis on recreation and livestock grazing. Approximately 2,600 acres would be managed under prescription 6B (livestock grazing emphasis); 1,900 acres under 2A (semiprimitive motorized recreation); and 1,400 acres under 3A (semiprimitive nonmotorized recreation; see Map 4).

Animas Leg

This parcel consists of more than 13,000 acres south of Silverton and along the Animas River. Although four possible management alternatives were considered, BLM emphasis remains the same throughout. Each alternative names wilderness as the resource value which will be emphasized.

Most of this area will be managed by the SJNF to retain the characteristics that make it suitable for inclusion in the NWPS until Congress acts. Approximately 10,500 acres will be managed under prescription 8A for a pristine wilderness recreation setting. Another approximately 350 acres would come under prescription 8C, emphasizing wilderness character in a semiprimitive setting. In addition, approximately 800 acres would be managed under prescription 8D for high-density wilderness use, particularly along travel corridors. The remaining approximately 1,160 acres within this area, comprising the Durango-Silverton Narrow Gauge Railroad corridor, will be managed under prescription 2B with an emphasis on maintaining scenic quality. Another approximately 160 acres in the southwest corner of the area would be managed under prescription 3A, semiprimitive nonmotorized recreation (see Map 3).

Haystack Mountain

The Haystack Mountain exchange land amounts to almost 700 acres. Each of four SJ/SM RMP alternatives designates emphasis B (deer and elk winter range) as the dominant resource value.

The SJNF prescription 5B (emphasizing forage and cover on wildlife winter range) will be applied to this area under all alternatives (see Map 4).

Pagosa Springs

Located approximately 3 miles north and east of Pagosa Springs, this parcel totals over 500 acres. Within the four BLM alternatives, there are two different resource emphases considered: B (deer and elk winter range) and J (commercial forestry).

A. Current Management

1. SJ/SM RMP
   It would be managed as deer and elk winter range (Emphasis B).

2. SJNF Land and Resource Management Plan (Alternative F)

   Management under prescription 2B would emphasize rural and roaded natural recreation opportunities such as driving for pleasure, viewing scenery, and picnicking along sensitive travel routes while enhancing or maintaining scenic qualities inherent in a forest environment. Forested land is suitable for timber production.

B. Resource Conservation

1. SJ/SM RMP

   It would be managed as deer and elk winter range (Emphasis B).

2. SJNF Land and Resource Management Plan (Alternative A)

Management under prescription 2B would emphasize rural and roaded natural recreation opportunities such as driving for pleasure, viewing scenery, and picnicking along sensitive travel routes while enhancing or maintaining scenic qualities inherent in a forest environment. Forested land is suitable for timber production.

C. Resource Utilization

1. SJ/SM RMP

It would be managed under a commercial forestry emphasis (Emphasis J).

2. SJNF Land and Resource Management Plan (Alternative B)

This area would be managed under prescription 5B, emphasizing forage and cover on wildlife winter ranges. Livestock grazing is compatible but is managed to favor wildlife habitat. Forested land is suitable for timber production.

D. Preferred Alternative

1. SJ/SM RMP

It would be managed to emphasize deer and elk winter range.

2. SJNF Land and Resource Management Plan (Alternative H)

This area would be managed under prescription 5B, emphasizing forage and cover on wildlife winter ranges. Livestock grazing is compatible but is managed to favor wildlife habitat. Forested land is suitable for timber production (see Map 4).

Chromo-Navajo River

The exchange land along the Navajo River consists of approximately 400 acres. It is managed under emphasis J (commercial forestry), with Livestock Management Emphasis A as the dominant resource value.

A. Current Management

1. SJ/SM RMP

Entire parcel would be managed under a commercial forestry emphasis (Emphasis J).

2. SJNF Land and Resource Management Plan (Alternative F)

This area would be managed under prescription 6B, emphasizing production of livestock forage.

B. Resource Conservation

1. SJ/SM RMP

Entire parcel would be managed under a commercial forestry emphasis (Emphasis J).

2. SJNF Land and Resource Management Plan (Alternative A)

This area would be managed under prescription 2A, emphasizing semiprimitive motorized recreation.

C. Resource Utilization

1. SJ/SM RMP

Entire parcel would be managed under a commercial forestry emphasis (Emphasis J).

2. SJNF Land and Resource Management Plan (Alternative B)

This area would be managed under prescription 6B, emphasizing producing livestock forage.

D. Preferred Alternative

1. SJ/SM RMP

It would be managed under a livestock management emphasis (Emphasis A).

2. SJNF Land and Resource Management Plan (Alternative H)

This area would be managed under prescription 6B, emphasizing producing livestock forage (see Map 4).

Dolores River above Bradfield Ranch

The BLM has exchanged more than 4,000 acres of land around McPhee Reservoir and along the Dolores River below the dam. All alternatives recommend Recreation Emphasis Area C as the dominant resource value. In addition, Emphasis Area J (commercial forestry) is also used in one alternative. Two small parcels near Dolores will be managed under general natural resource management guidelines in each of the four alternatives.

All alternatives have special guidelines for implementation of management activities regarding recreation. Management provides a variety of recreation opportunities and investments are made in activities which enhance this resource. Important cultural values will be protected. Suitable cultural resources will be developed for public use. Development activities include interpretive signing, stabilization, and access trails. Class II visual standards will be maintained for the entire area.

A. Current Management

1. SJ/SM RMP

All lands around McPhee Reservoir would be managed primarily for its recreation values (Emphasis C). Small parcels near Dolores would be managed under a general natural resource management emphasis .

2. SJNF Land and Resource Management Plan (Alternative F)

Management would be under prescription 3A, semiprimitive nonmotorized recreation; 5B, big game winter range; 9A, riparian areas; and 10D, maintaining potential for Wild and Scenic River designation below the McPhee Dam.

B. Resource Conservation

1. SJ/SM RMP

All land around McPhee Reservoir would be managed primarily for its recreation values (Emphasis C). Small parcels near Dolores would be managed under a general natural resource management emphasis.

2. SJNF Land and Resource Management Plan (Alternative A)

Management would be under prescription 2A, semiprimitive motorized recreation; 3A, semiprimitive nonmotorized recreation; 5B, wildlife winter range; 9A, riparian areas; and 10D, potential Wild and Scenic River corridor below McPhee Dam.

C. Resource Utilization

1. SJ/SM RMP

All land around McPhee Reservoir would be managed primarily for its recreation values (Emphasis C). Small parcels near Dolores would be managed under a general natural resource management emphasis. Approximately 100 acres near McPhee would be managed for commercial forestry (Emphasis J).

2. SJNF Land and Resource Management Plan (Alternative B)

Emphasis would be on recreation under prescription 3A; wildlife winter range under 5B; and riparian areas under 9A.

D. Preferred Alternative

1. SJ/SM RMP

All land around McPhee Reservoir would be managed primarily for its recreation values (Emphasis C). Small parcels near Dolores would be managed under a general natural resource management emphasis.

2. SJNF Land and Resource Management Plan (Alternative H)

The primary emphasis for these lands will be provision of forage and cover on winter range for wildlife, under prescription 5B, covering approximately 3,700 acres. The remaining 425 acres will be managed under 9A, riparian areas; and 10D, potential Wild and Scenic River corridor below McPhee Dam (see Map 2).

Little Bauer Reservoir

The 40-acre parcel of land around Little Bauer Reservoir carries the same resource emphasis (B--winter eagle concentration area) throughout each of the four BLM alternatives. This area will be managed under SJNF prescription 7E, wood fiber production on gentle slopes under all alternatives. This prescription provides explicit direction to avoid disruptive activities near occupied raptor nests (see Map 2).

Dolores River Canyon below Bradfield Ranch

Encompassing almost 23,000 acres of land, this large parcel is located near Dove Creek and it includes twelve miles of the Dolores River and its associated canyon topography.

A. SJNF Proposed Action (Prescriptions 3A, 4B, 5B, 10D)

The Final Plan for the San Juan National Forest describes approximately 10,000 acres of the area to be managed under two wildlife prescriptions. Southeast of Mountain Sheep Point, the area will be managed for a specified indicator species. A variety of vegetation treatments are available for maximization of habitat capability. Human activities are regulated to favor the chosen species. The area northwest of Mountain Sheep Point is proposed for a big game winter range area. A full range of treatments to be used in forested areas is possible for implementation to create and maintain cover or increase available forage. Motorized recreation use may be limited during critical use periods. The remaining land is managed to provide semiprimitive nonmotorized recreation opportunities. Within this sector, there are stipulations for protecting the Dolores River Canyon.

B. BLM Coordinating Management

The SJ/SM RMP proposes to implement the following emphasis areas and management guidelines to the appropriate areas (see Map 1).

Emphasis	Management guidelines
C	Recreation - Maintain Class II visual standards - Manage for a variety of recreation opportunities

Emphasis	Management guidelines
C	Recreation (Continued) - Restrict ORV use to existing roads and trails - Provide for no-surface occupancy for oil and gas leasing to Dolores River Canyon - Protect and manage important cultural resources through interpretive signing
A	Livestock Management - Manage for increased, sustained livestock production and invest in range improvements if necessary - Manage woodland areas to enhance range resource - Allow motorized ORV use on existing roads and trails
J	Forestry - Invest necessary funds to provide for intensive management of the forest resource and lands suitable for timber production - Allow livestock grazing if compatible with timber management activities - Provide investments where uneven-aged timber management practices may also benefit wildlife

Mancos Hill

This small parcel of land (approx. 560 acres) is four miles east of Mancos along U.S. Highway 160.

A. SJNF Proposed Action (Prescriptions 5B and 6B)

In the Final Plan for the SJNF, the Mancos Hill area is under two management prescriptions which are almost equal in size. The livestock management emphasis allows a variety of forage improvement practices to increase production. Resource uses compatible with livestock are possible. Forested areas of the parcel are managed as big game winter range. Many treatments are available for use in enhancing forage and cover for big game. Motorized recreation may be limited during critical periods to favor wildlife.

B. BLM Coordinating Management

The SJ/SM RMP will implement a general natural resource management emphasis to the Mancos Hill area. Since no dominant resource value exists, management direction will consist of multiple use guidelines as prescribed in FLPMA and other existing laws, policies, and manuals concerning specific resource programs (see Map 2).

Animas River Tributaries

Animas River Tributaries is a high altitude land area consisting of 8,300 acres, approximately 5 miles east of Silverton.

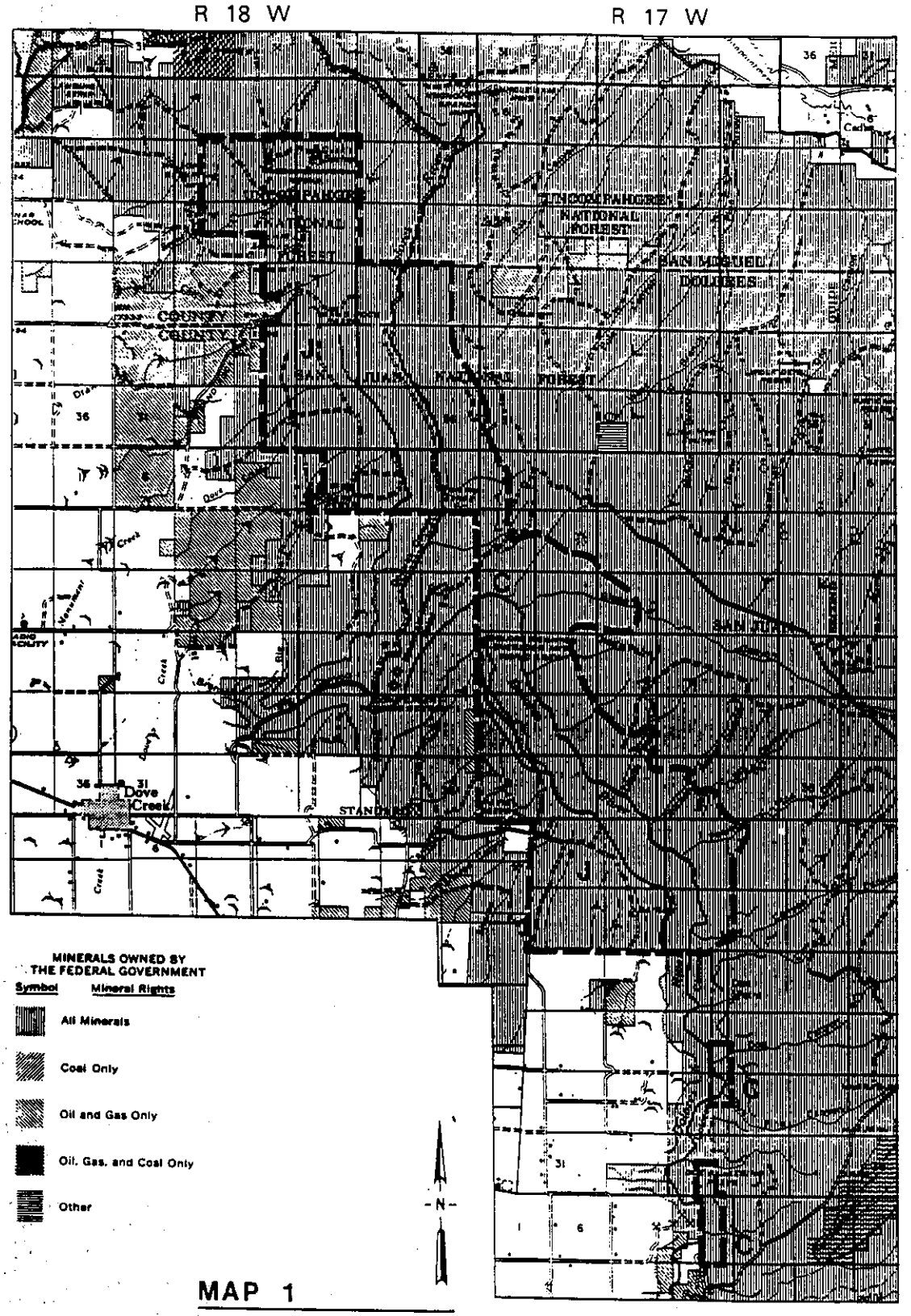
A. SJNF Proposed Action (Prescriptions 2A and 3A)

Approximately one-half of this parcel will be managed for semiprimitive motorized recreational opportunities under the Final Plan for the SJNF. Some forested lands are suitable for timber production and mineral resource activities are generally compatible. The remaining land will emphasize semi-primitive, nonmotorized recreation activities.

B. BLM Coordinating Management

In the Animas River tributaries area, the following emphasis areas and management guidelines will be implemented to meet SJNF prescriptions. (Refer to Map 2.)

Emphasis	Management guidelines
A	Livestock Management - Continue intensive management on existing grazing allotments
C	Recreation - Manage in conjunction with Silverton SRMA to provide for wide variety of recreational opportunities - Maintain Class II visual standards - Allow ORV use but may be limited or closed in some areas to protect and maintain other resources



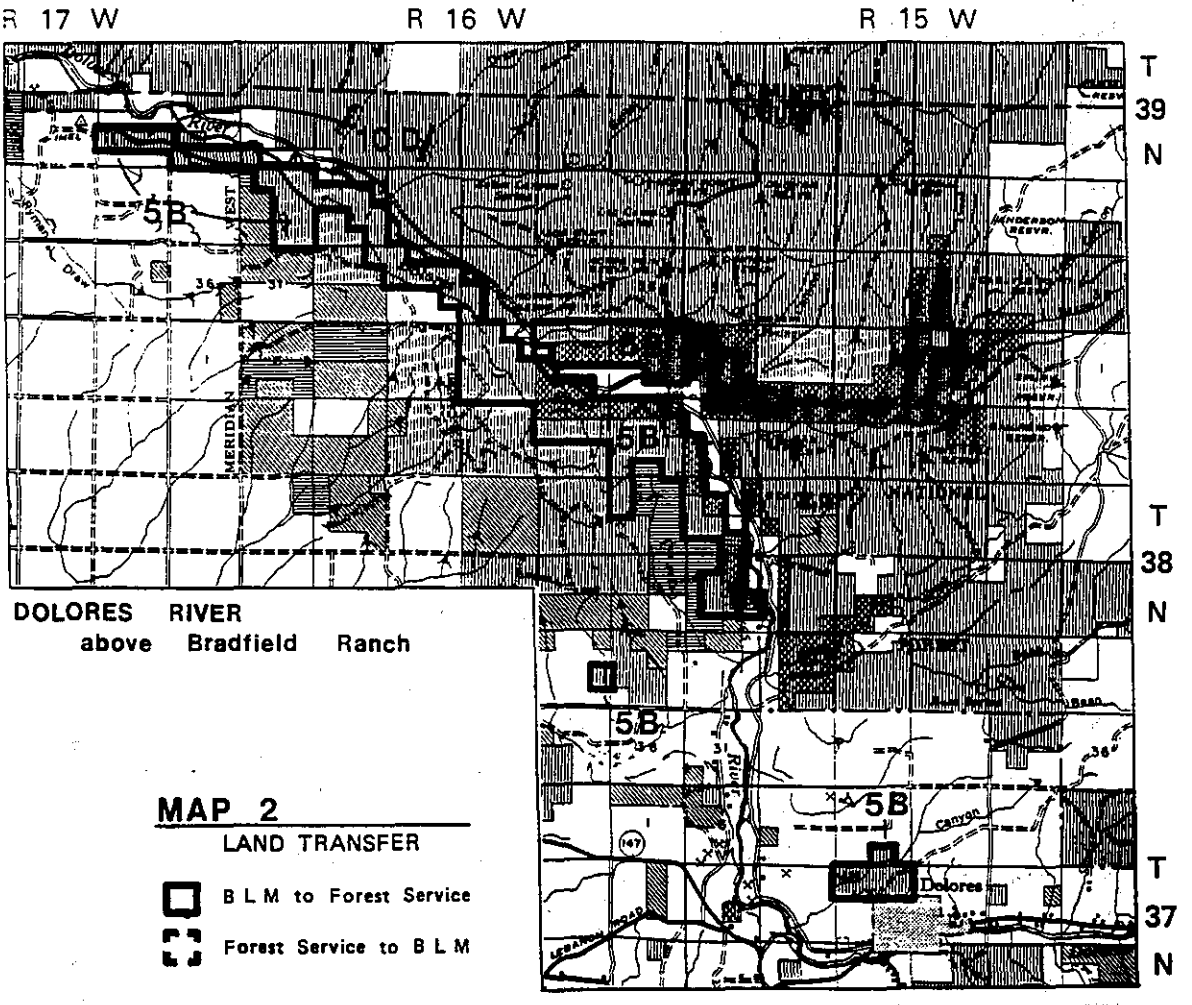
MAP 1

LAND TRANSFER

B L M to Forest Service

Forest Service to B L M

DOLORES RIVER CANYON below Bradfield Ranch



MAP 2

LAND TRANSFER

- B L M to Forest Service
- Forest Service to B L M

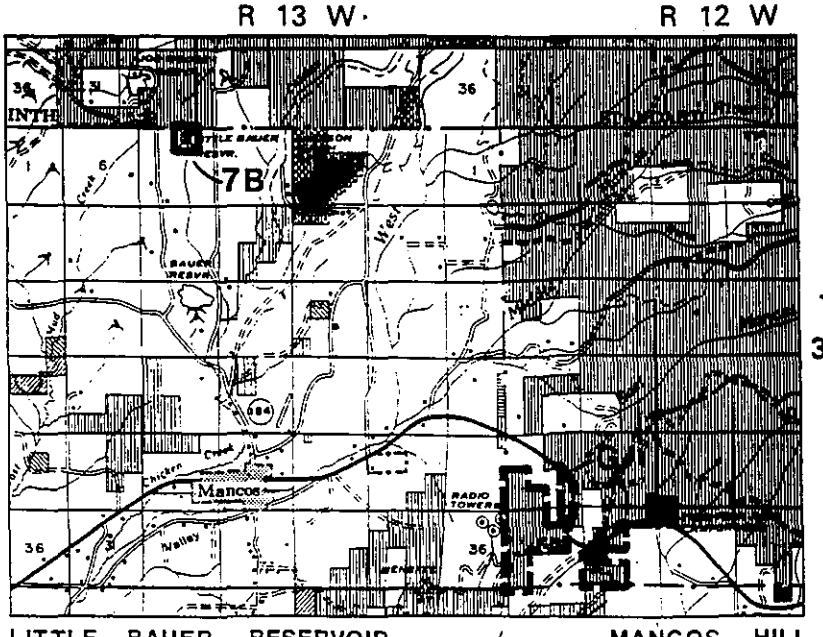
0 1 2 3 4 5 6

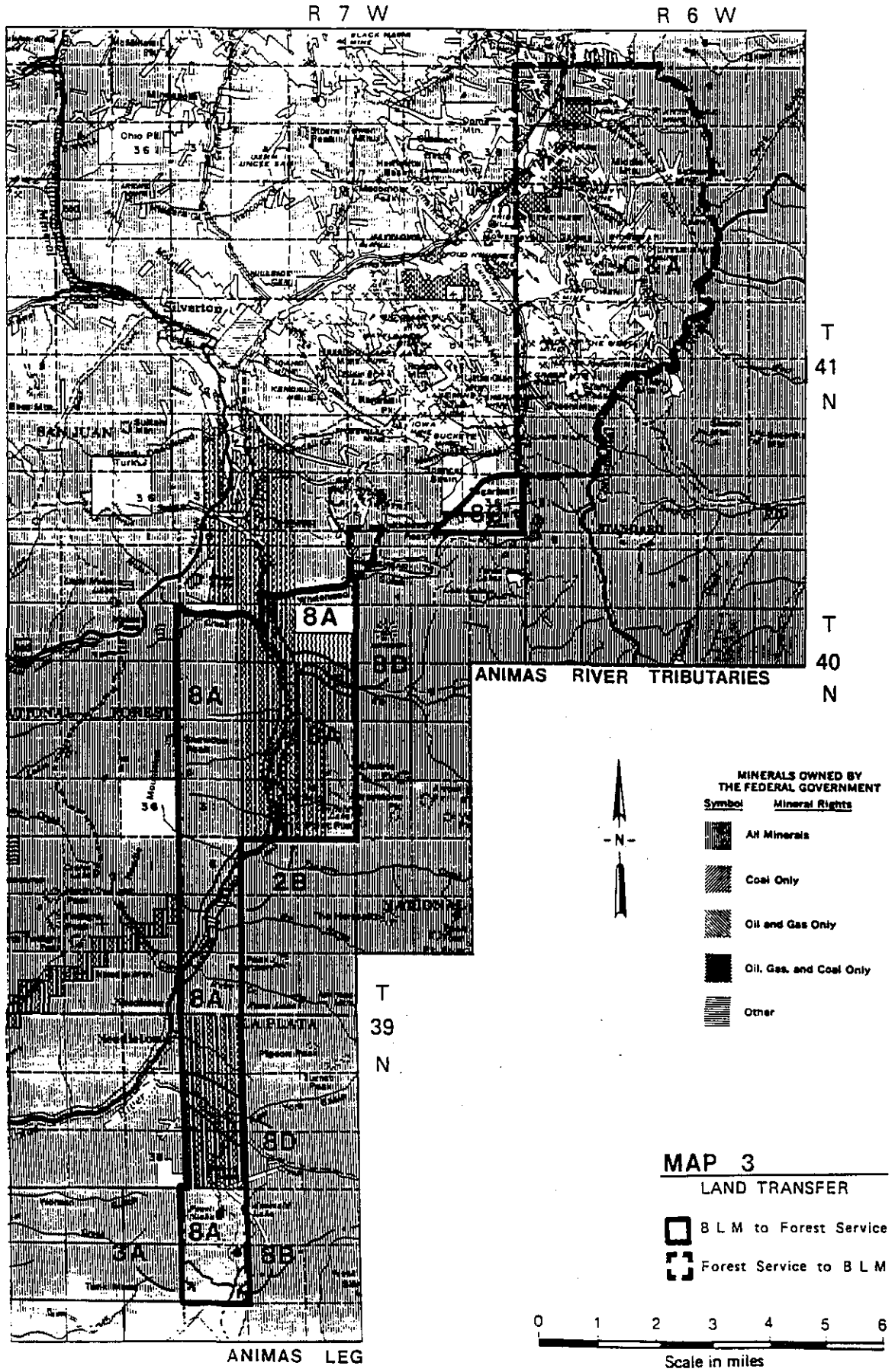
Scale in miles

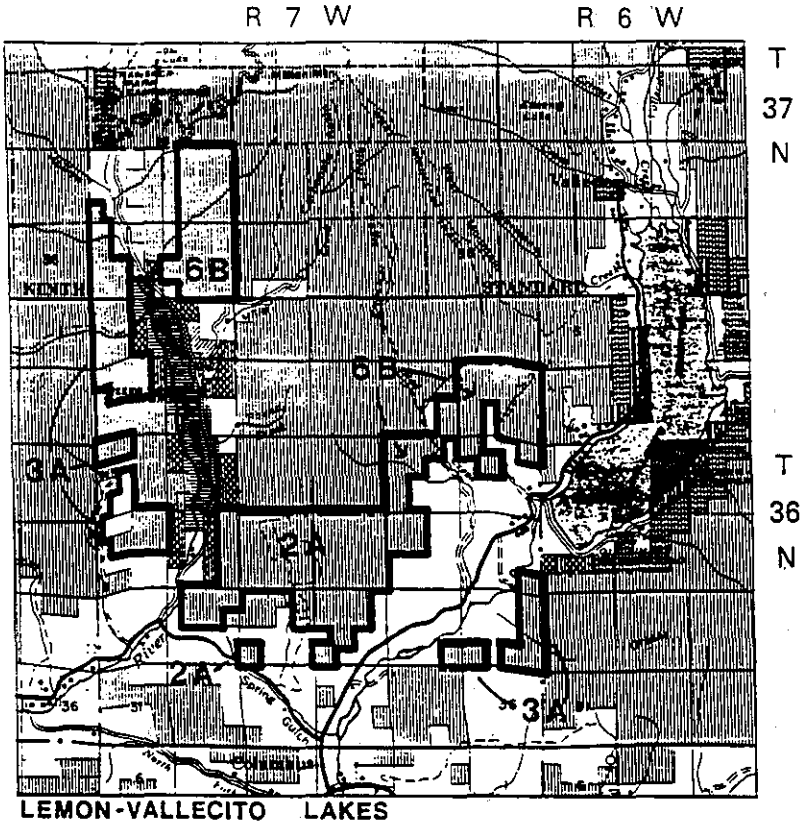
-N-

MINERALS OWNED BY THE FEDERAL GOVERNMENT

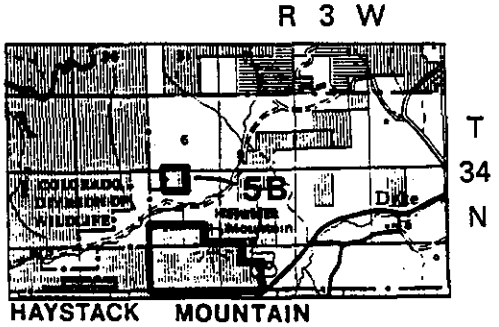
Symbol	Mineral Rights
	All Minerals
	Coal Only
	Oil and Gas Only
	Oil, Gas, and Coal Only
	Other



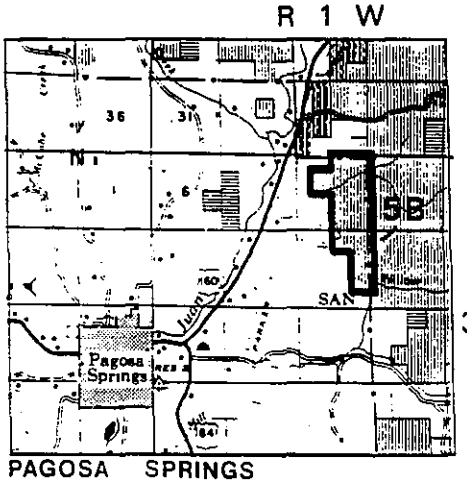

R 7 W
R 6 W
T 41 N
T 40 N
T 39 N
Silverton
SAN JUAN
8A
8B
2B
3A
ANIMAS RIVER TRIBUTARIES
ANIMAS LEG
N
MINERALS OWNED BY THE FEDERAL GOVERNMENT
Symbol
Mineral Rights
All Minerals
Coal Only
Oil and Gas Only
Oil, Gas, and Coal Only
Other
MAP 3
LAND TRANSFER
B L M to Forest Service
Forest Service to B L M
0 1 2 3 4 5 6
Scale in miles



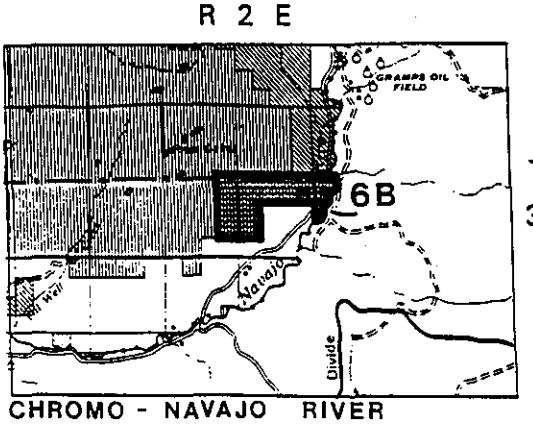
LEMON-VALLECITO LAKES



HAYSTACK MOUNTAIN



PAGOSA SPRINGS



CHROMO - NAVAJO RIVER

MINERALS OWNED BY THE FEDERAL GOVERNMENT

Symbol	Mineral Rights
	All Minerals
	Coal Only
	Oil and Gas Only
	Oil, Gas, and Coal Only
	Other

MAP 4

LAND TRANSFER

- B L M to Forest Service
- Forest Service to B L M

0 1 2 3 4 5 6

Scale in miles

-N-

United States Department of Agriculture | Forest Service | San Juan National Forest | 701 Camino Del Rio, #301 Durango, CO 81301 303-247-4874

Reply to: 1920 Date: September 7,1990

Animas

Subject: DECISION MEMO - Amendment Number 08 of the Forest Land and Resource Management Plan

Location: San Juan National Forest, Colorado.

This amendment adjusts management area boundaries in the Forest Land and Resource Management Plan (Forest Plan) on the Animas District of the San Juan National Forest. According to the regulations, "The Forest Supervisor may amend the Forest Plan (36 CFR 219.10(f))."

The attached maps (1/2" scale) depict the location and areas affected by seventeen (17) Management area adjustments on the Animas Ranger District.

Management Area Definitions (primary management emphasis):

1B -- maintenance, development or expansion of downhill ski areas.
2A -- semi-primitive motorized recreation opportunities.
2B -- rural/roaded natural recreation opportunities.
3A -- semi-primitive non-motorized recreation opportunities.
4B -- wildlife habitat management.
6B -- livestock grazing.
7E -- commercial timber management.

The management area adjustments are as follows:

1) Purgatory Ski Area: Amendment changes portions of areas currently depicted as 1B, 2A, and 6B to 2B emphasis, and portion of 7E emphasis to 1B emphasis. This better reflects actual ski area boundaries and future expansion potential while consolidating the adjacent areas to emphasize rural and roaded natural recreation opportunity.

2) Junction Creek Road: Change 6B to 2A. from Rand's Point northward. The topography of much of the area reduces potential for grazing emphasis. Junction Cr. road is a very popular road for pleasure driving.

3) Falls Cr.: Change 6B to 5B. These isolated oakbrush hillsides are of higher value for wildlife than for grazing.

4) Stony Cr.: Change 6B to 2B. Small isolated area of 6B is within US 550 corridor.

5) Chris Park: Change 6B to 2A. De-emphasizes investments in livestock grazing and places more emphasis on recreation expenditure in a high recreation use area.

6) Electra Lake: Change 6B to 3A. Rugged, timbered terrain and limited access due to adjacent private property make emphasis on grazing expenditure impractical in this area.

7) Purgatory Flats: Change 6B to 3A. Reflects emphasis to reduce grazing from this high recreation use riparian area.

8) Cascade Summer Homes: Change 6B to 2B. Reflects higher recreation/travel emphasis is this area.

9) Cascade Cr.: change 6B to 3A. Reflects increased recreation and riparian protection emphasis for area.

10) Cascade Divide: Changes 6B to 7E and 3A. The gentler timbered and harvested slopes contain areas of past timbering operations with certified plantations that offer little future grazing. The steeper upper slopes are heavily timbered and offer little pay back for grazing expenditures. This area has been identified as unsuitable for grazing because of poor access, topography, low forage production, and predator losses.

11) Little Molas: Adds Little Molas Campground to map as a designated recreation site.

12) South Mineral: These adjustments are to correct mapping discrepancies along South Mineral Cr.

13) Porcupine Cr.: Change 6b to 3A. This steep, timbered, north-facing slope provides low grazing potential and greater emphasis on expenditures should be directed towards non-motorized recreation opportunities.

14) Clear Lake: Adjusts management area boundary. Change portions of 2A to 2B. Due to upgrading of existing road to Clear Lake and increased traffic, the 2B prescription is extended into this area.

15) BLM Exchange Lands: corrects mapping omissions

16) Missionary Ridge: Exchange portions of 6B and 7E. Adjusts mapping to better reflect on-the-ground conditions (places timbered areas into 7E and meadows into 6B.)

17) Coon Cr.: Change portion of 2A to 6B. This area interspersed with meadows has no roads or trails with 2A potential.

Scoping is an integral part of the environmental analysis process for determining the issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR 1501.7). The purpose of scoping is to determine what environmental conditions and what benefits in the form of goods, services, and uses that people want from the Forest. Scoping for this amendment consisted of notifying the public according to 40 CFR 1505.3(d), using the Forest Plan Amendment Mailing list. Contacts were also made with potentially affected parties.

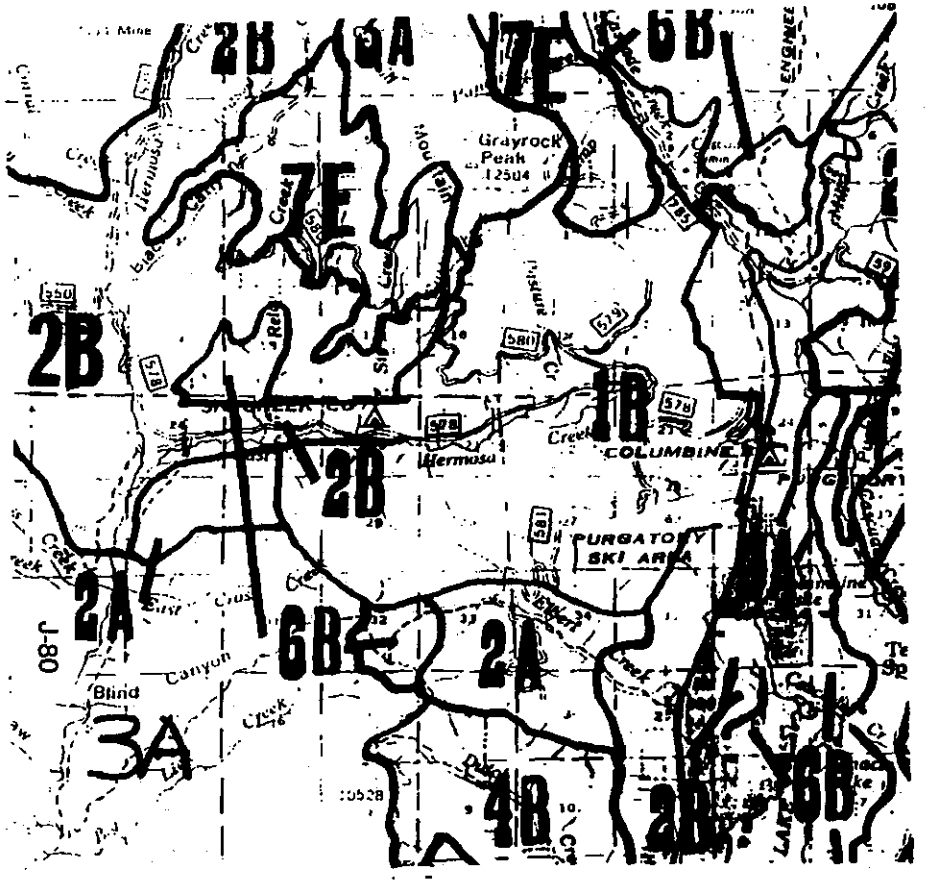
Regulations permit amendments that may result in either significant or nonsignificant changes to the Forest Land and Resource Management Plan (36 CFR 219.10(f)). I have determined that the proposed changes are not significant according to 40 CFR 1508.27 in "context" or "intensity," and as stated in FSM 1922.51: "2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management."

This decision is subject to appeal pursuant to 36 CFR Part 217 (Federal Register, Vol. 54, No. 13, January 23,1989,pages 3357 to 3362). To initiate an appeal, a written notice must be submitted to Gary Cargill, Regional Forester (R-2), 11177 W. 8th Ave., Lakewood, CO. (303-236-9431), within 45 days of the day after publication of notice in the Durango Herald, with a concurrent copy to the Deciding Officer: William T. Sexton, Forest Supervisor, San Juan National Forest, 701 Camino del Rio, Durango, CO. (303-247-4874).

This amendment will be effective the date of notification of my decision in the Durango Herald.

William T. Sexton
WILLIAM T. SEXTON
Forest Supervisor

9/7/90
Date



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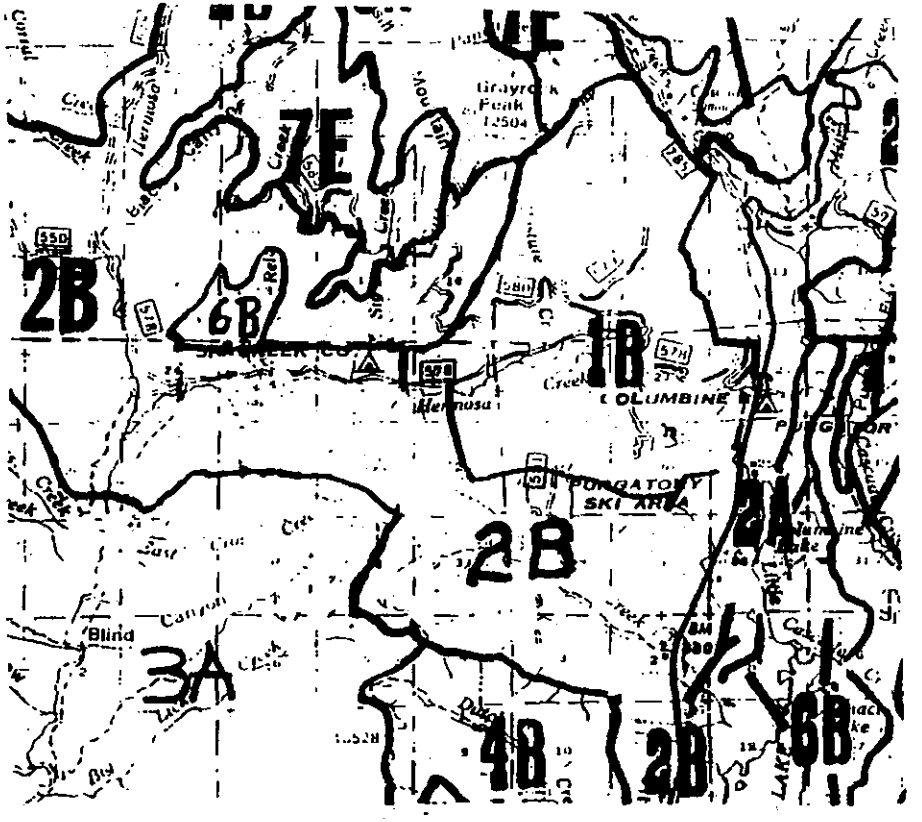
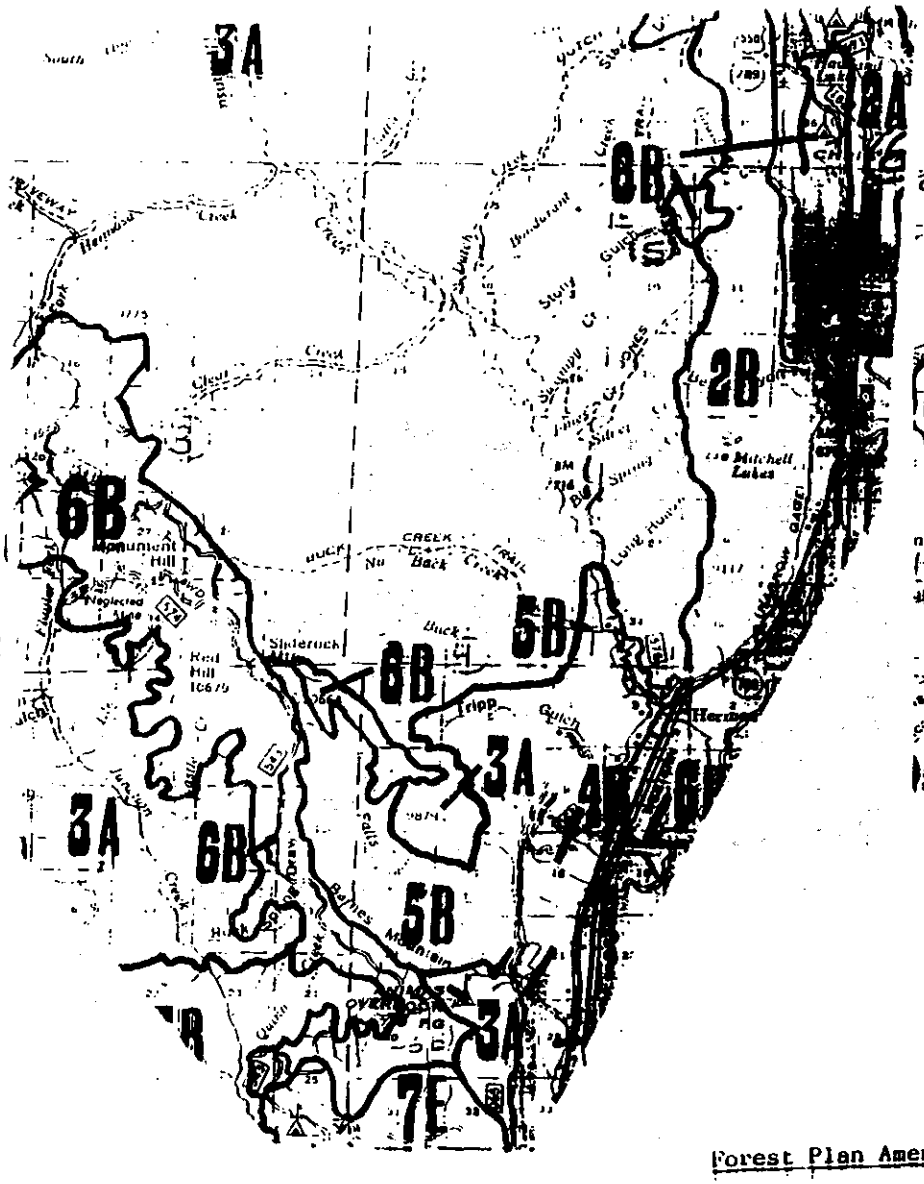
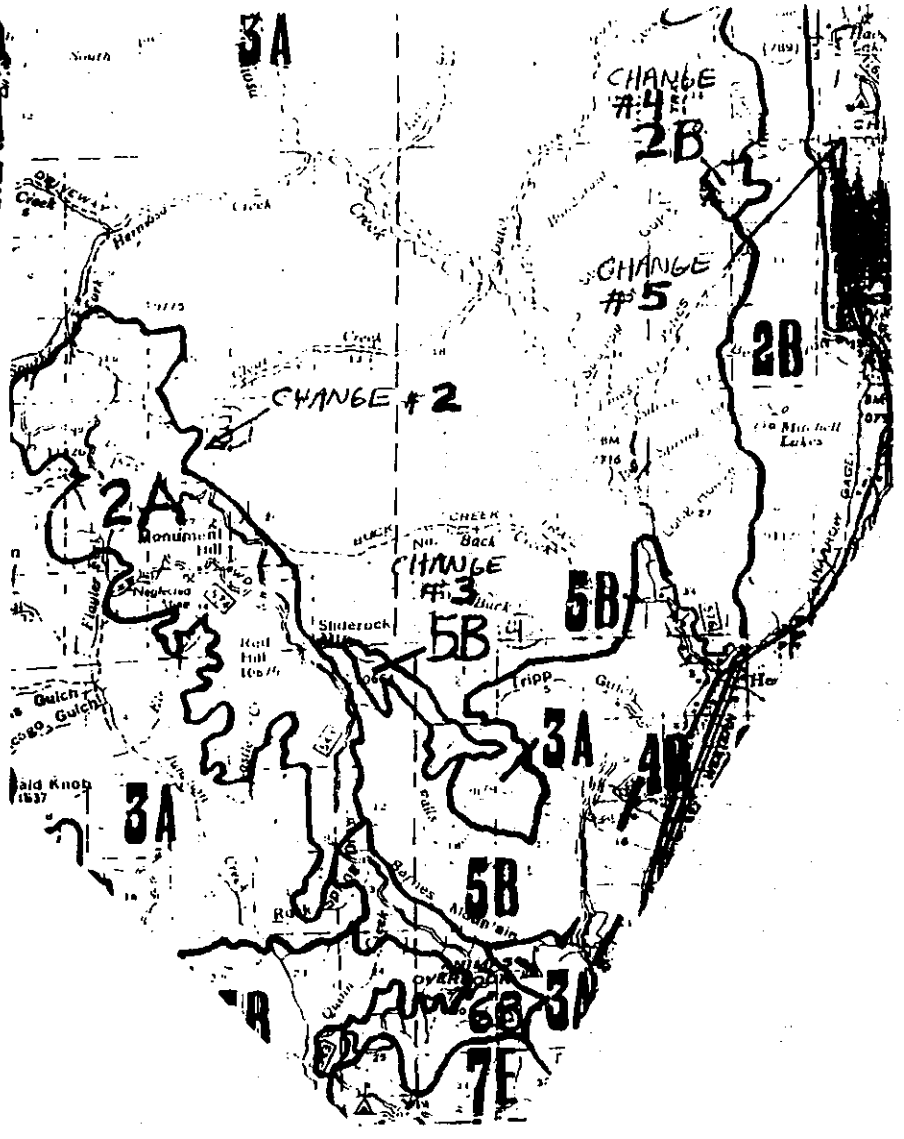


AMENDED

MANAGEMENT AREA BOUNDRY CHANGES #1

Forest Plan Amendment No. 8



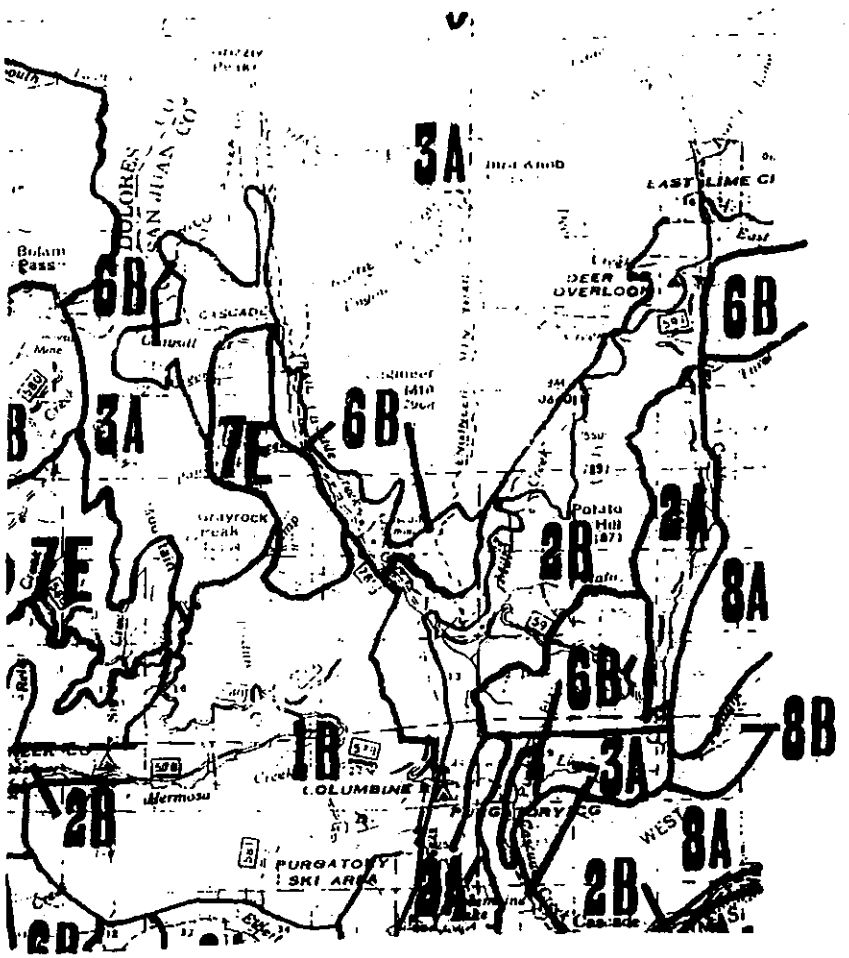


Forest Plan Amendment No. 8

PREVIOUS

AMENDED

MANAGEMENT AREA CHANGES #2, #3, #4, #5



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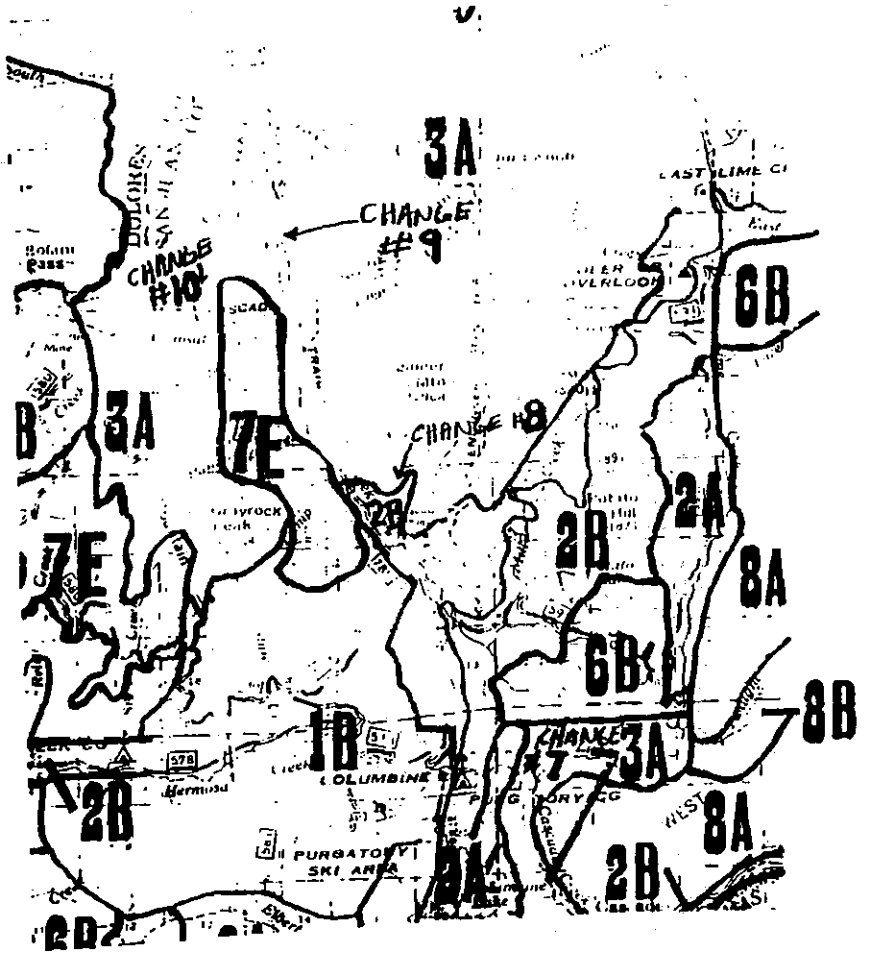
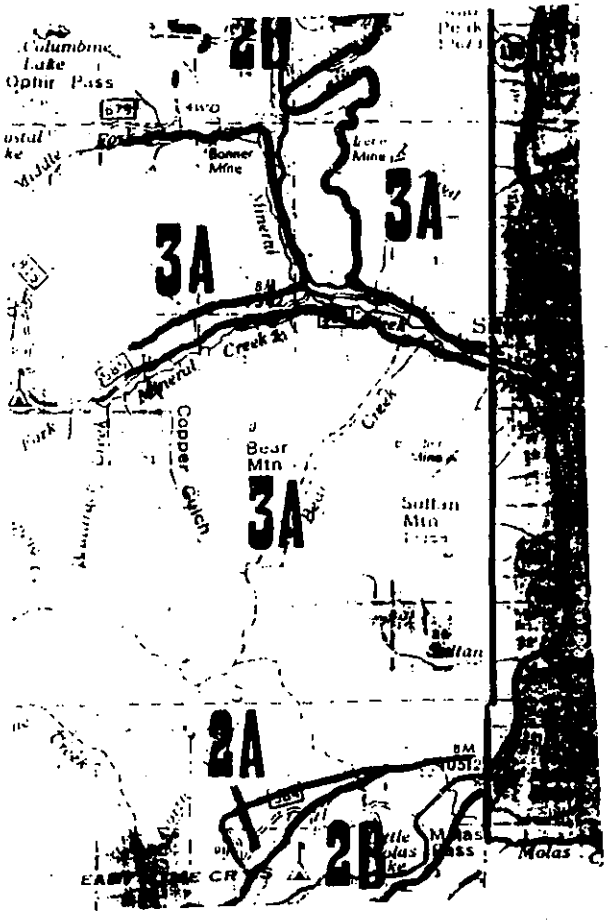


AMENDED

MANAGEMENT AREA CHANGES #7, #8, #9, and #10

Forest Plan Amendment No. 8



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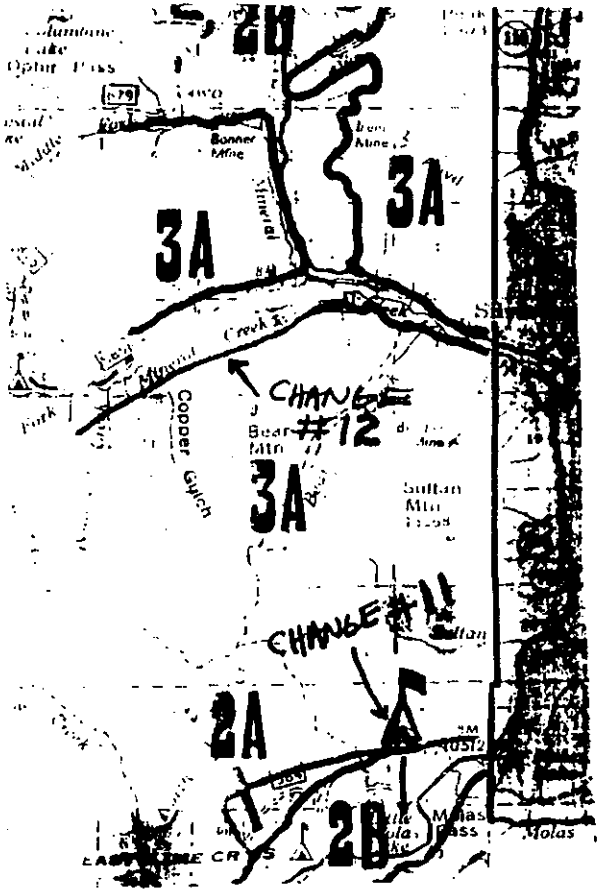
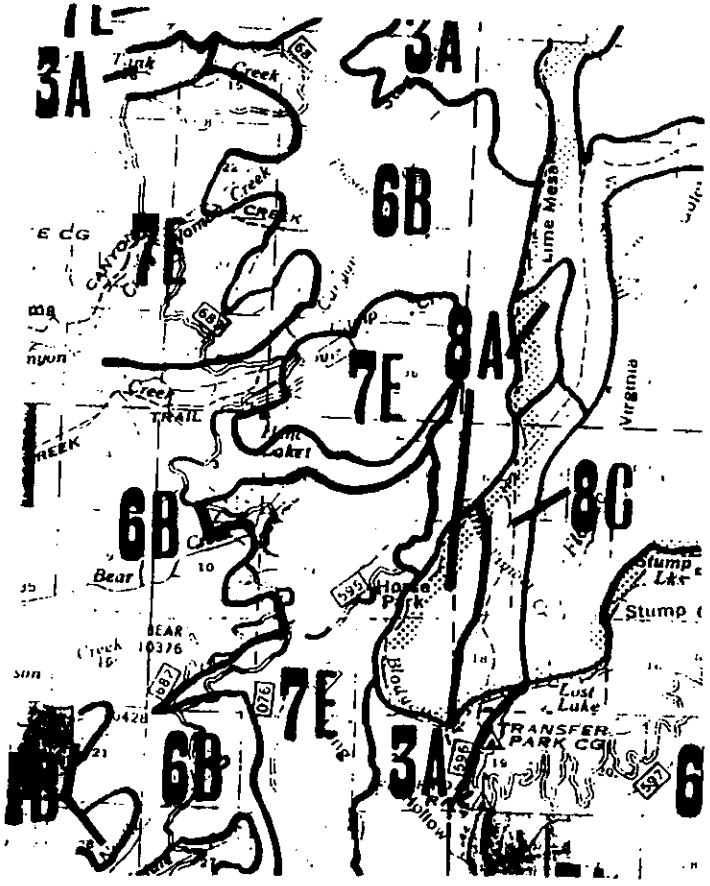


AMENDED

MANAGEMENT AREA CHANGES #11, #12

Forest Plan Amendment No. 8



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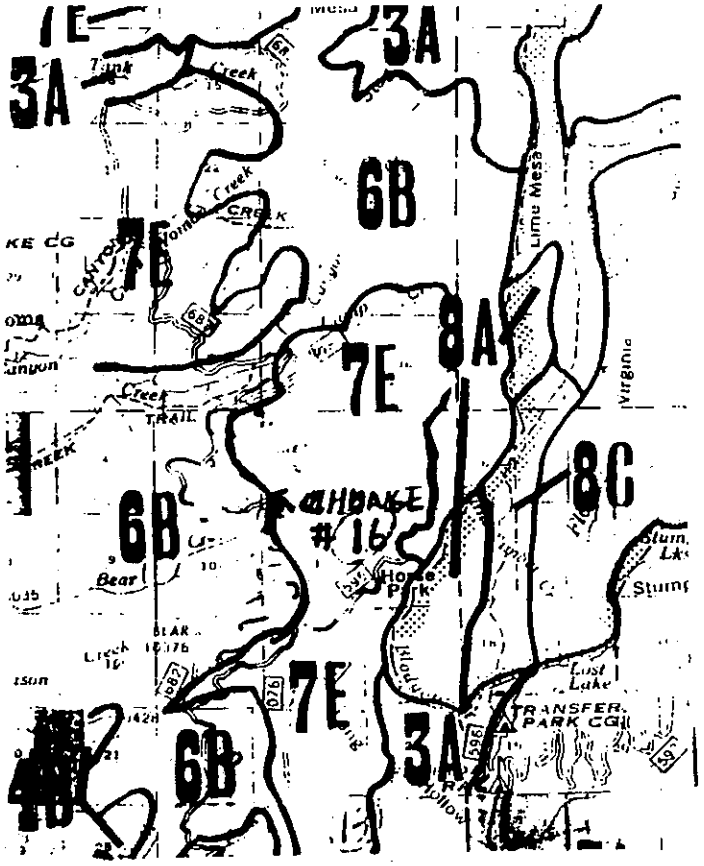
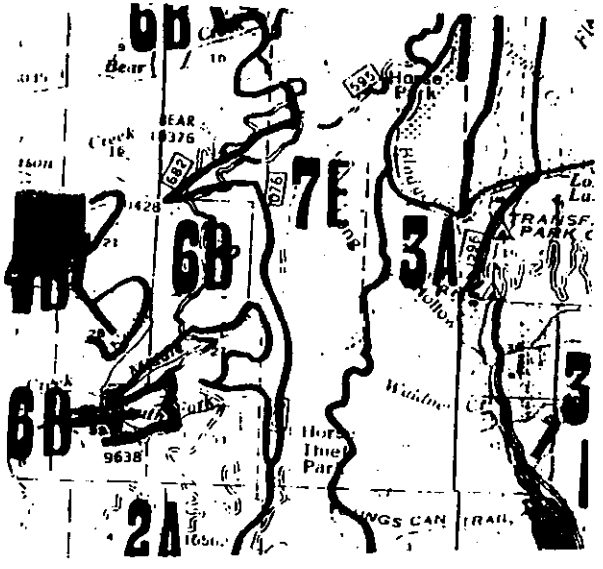


AMENDED

MANAGEMENT AREA CHANGE # 16

Forest Plan Amendment No. 8



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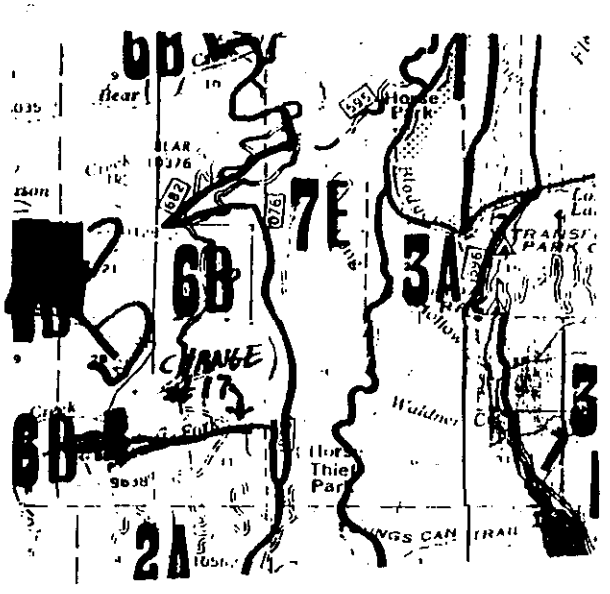


AMENDED

MANAGEMENT AREA CHANGE # 17

Forest Plan Amendment No. 8

United States Department of Agriculture | Forest Service | San Juan National Forest | 701 Camino Del Rio, #301 Durango, CO 81301 303-247-4874

Reply to: 1920 Date: September 7, 1990

Pine

Subject: DECISION MEMO - Amendment number 09 of the Forest Land and Resource Management Plan

Location: San Juan National Forest, Colorado.

This amendment adjusts management area boundaries in the Forest Land and Resource Management Plan (Forest Plan) on the Pine District of the San Juan National Forest. According to the regulations, "The Forest Supervisor may amend the Forest Plan (36 CFR 219.10(f))."

Attached are maps (1/2" scale) depicting four (4) management area adjustments on the Pine District. The adjustments are as follows:

1) Severn Peak area; T35N, R6W. Changes primary management emphasis from 3A to 5B (emphasis on big game winter range). This is a south facing slope that provides winter habitat for deer and elk. Due to topography, accessibility for dispersed recreation is limited.

2) Trail Canyon, Long Canyon areas; T34N, R6W. Changes management area emphasis from 5B to 4B (emphasis on wildlife habitat management). This area has high value for wildlife, but has limited value as winter range due to higher elevations and greater snow accumulations.

3) Ritter Canyon, Reservoir Canyon, Green Canyon areas; T34N, R6W. Changes management area emphasis from 4B to 5B. This low elevation area has a high value for wildlife winter range.

4) Zabel Canyon, Spring Creek areas; T34N, R6W. Changes management area emphasis from 2A to 3A. In this area, a semi-primitive motorized recreation emphasis is not compatible with the rough terrain and difficult access. Change in emphasis provides a manageable unit and is consistent with adjacent management emphases.

Scoping is an integral part of the environmental analysis process for determining the issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR 1501.7). The purpose of scoping is to determine what environmental conditions and what benefits in the form of goods, services, and uses that people want from the Forest. Scoping for this amendment consisted of notifying the public according to 40 CFR 1505.3(d), using the Forest Plan Amendment Mailing list. Contacts were also made with potentially affected parties.

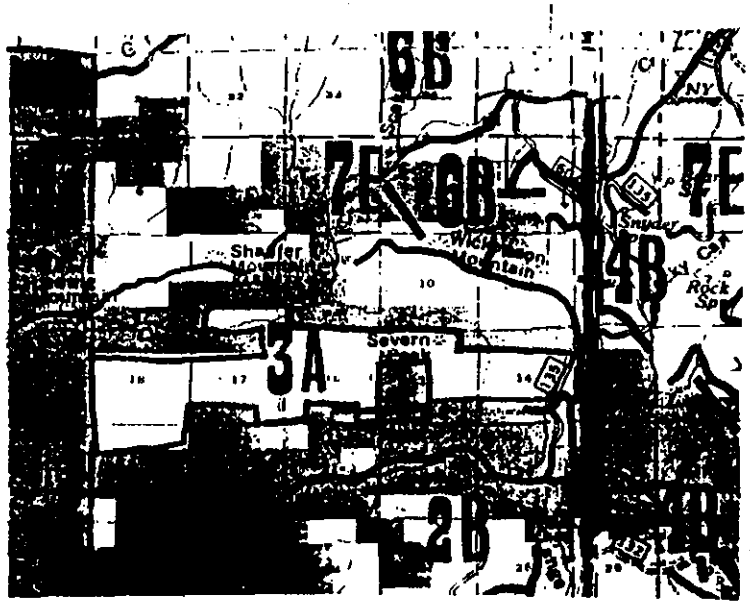
according to 40 CFR 1508.27 in "context" or "intensity," and as stated in FSM 1922.51: "2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management."

This decision is subject to appeal pursuant to 36 CFR Part 217 (Federal Register, Vol. 54, No. 13, January 23,1989,pages 3357 to 3362). To initiate an appeal, a written notice must be submitted to Gary Cargill, Regional Forester (R-2), 11177 W. 8th Ave., Lakewood, CO. (303-236-9431), within 45 days of **the day after publication** of notice in the Durango Herald, with a concurrent copy to the Deciding Officer: William T. Sexton, Forest Supervisor, San Juan National Forest, 701 Camino del Rio, Durango, CO. (303-247-4874).

This amendment will be effective the date of notification of my decision in the Durango Herald.

William T Sexton
WILLIAM T. SEXTON
Forest Supervisor

9/7/90
Date



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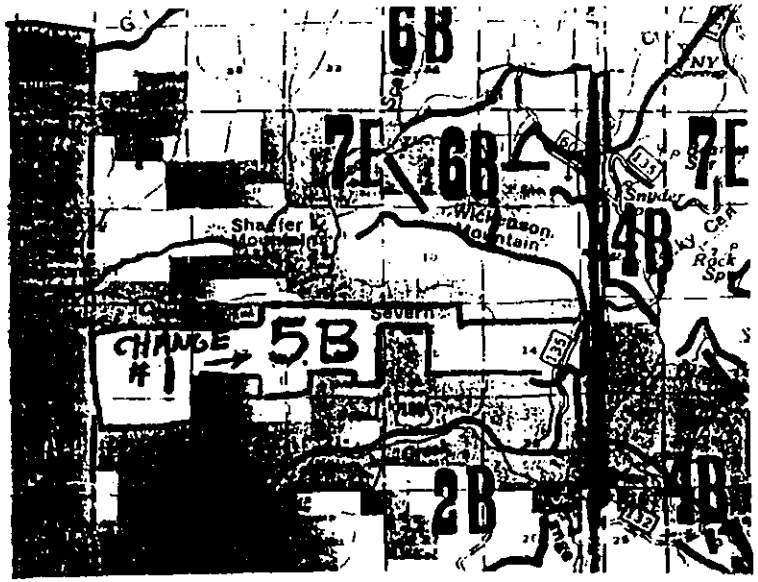
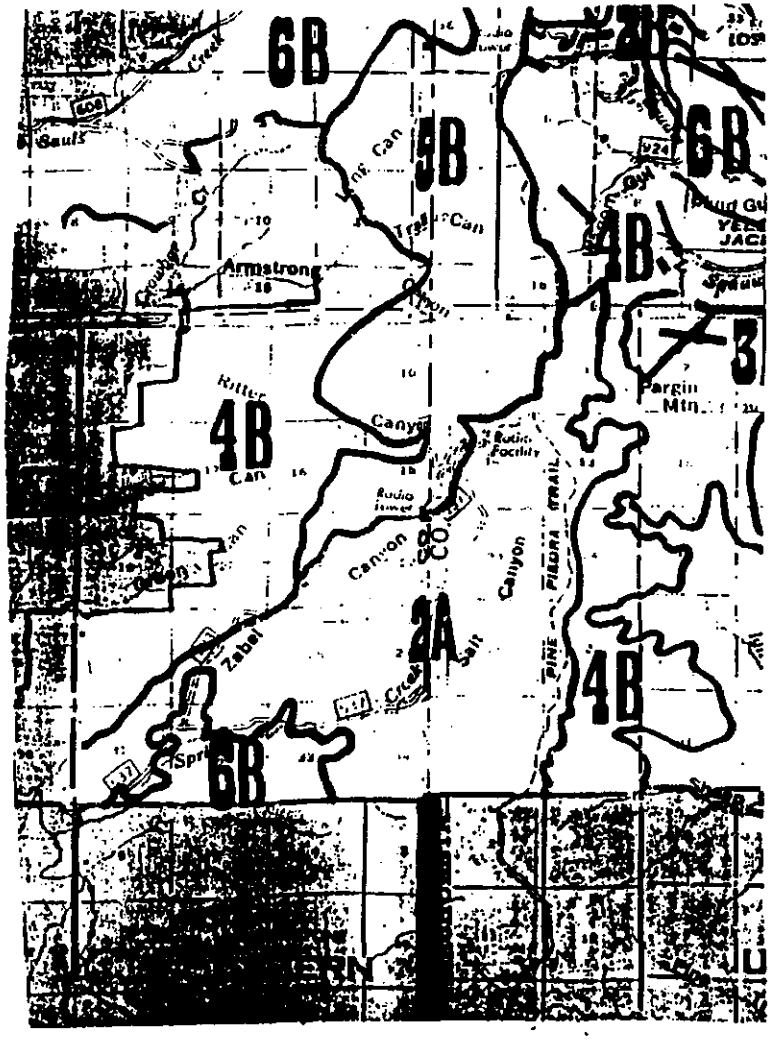


AMENDED

PINE DISTRICT

MANAGEMENT AREA CHANGE # 1

Forest Plan Amendment No. 9



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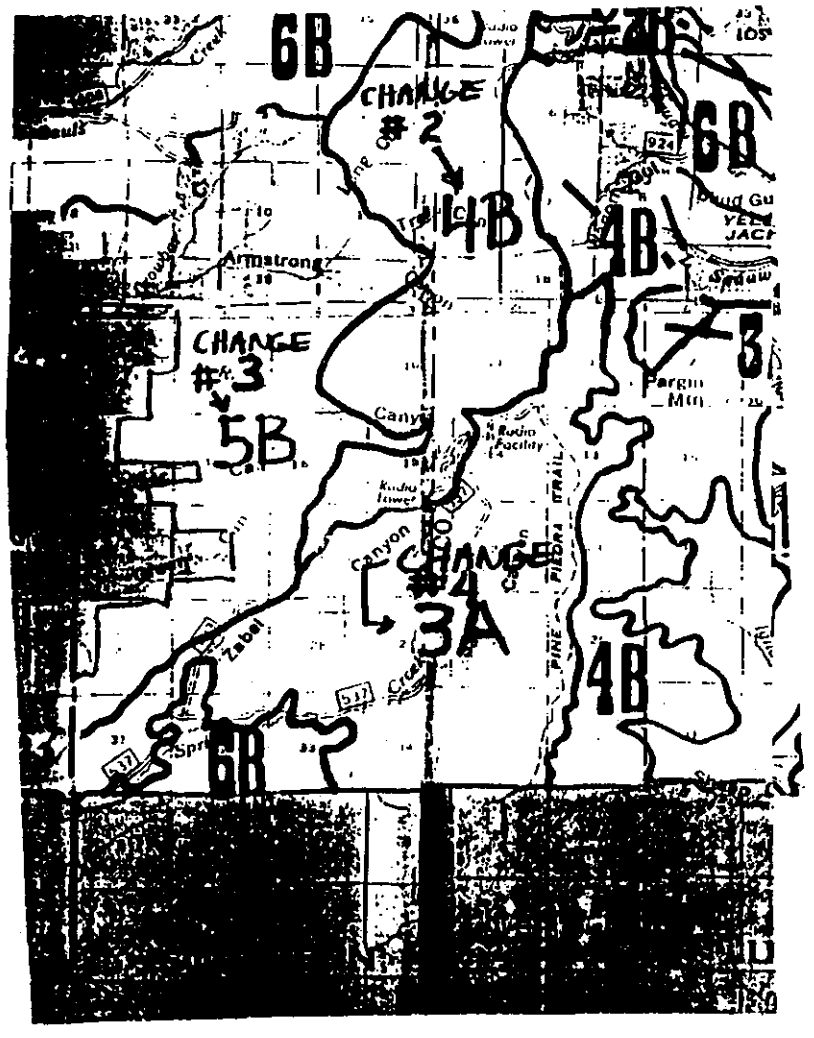


AMENDED

PINE DISTRICT

MANAGEMENT AREA CHANGES #2, #3, #4

Forest Plan Amendment No. 9

United States Department of Agriculture | Forest Service | San Juan National Forest | 701 Camino Del Rio, #301 Durango, CO 81301 303-247-4874

Reply to: 1920 Date: September 7, 1990

Mancos

Subject: DECISION MEMO - Amendment Number 10 of the Forest Land and Resource Management Plan

Location: San Juan National Forest, Colorado.

This amendment adjusts management area boundaries in the Forest Land and Resource Management Plan (Forest Plan) on the Mancos District of the San Juan National Forest. According to the regulations, "The Forest Supervisor may amend the Forest Plan (36 CFR 219.10(f))."

The attached map (1/2" scale) depicts nine (9) management area adjustments on the Mancos Ranger District. The adjustments are as follows:

1) Lost Canyon. Presently 2A (semi-primitive motorized) management emphasis.
   (A) Changes lower portion of canyon to 5B (emphasis on big game winter range). The lower canyon is important wildlife habitat. The change in primary management emphasis allows for greater flexibility in managing motorized and non-motorized recreation and provides emphasis on wildlife habitat improvement projects within the big game winter range.
   (B) Changes upper portion of canyon to 4B (management emphasis for wildlife habitat management). This management area adjustment reflects long established emphasis and desired primary management emphasis for the upper Canyon reaches.

2) Chicken Creek. Presently 2A (semi-primitive motorized) management emphasis. Amendment changes lower portion of management area to 5B emphasis (emphasis on big game winter range). Changes upper portion of management area to 3A (emphasis on semi-primitive non-motorized recreation). The management area would be difficult to manage for motorized recreation because of terrain and associated high investment and maintenance costs for currently non-existent access routes. Management area change is consistent with current and desired recreation use within the management area.

3) West Mancos Road Corridor. Presently designated 5B (emphasis on big game winter range) on the mesa top in this road corridor. Amendment changes the mesa top to a 2B management emphasis to Transfer Park Campground. This is a main vehicle travel corridor, which is not a key winter wildlife area. Emphasized use of the area is for motorized and non-motorized recreation; capital investment and administrative expenditures reflect this emphasis.

4) West Mancos Canyon. Amendment changes the 2A management emphasis (semi-primitive motorized recreation) to 3A (semi-primitive nonmotorized recreation). This adjustment extends the 3A emphasis from the upper portion of the West Mancos Canyon and adds consistent mangement emphasis to the trail network being developed in the Canyon. The Forest Service does not hold right-of-way to the one road accessing the Canyon. Motorized access is therefore controlled by the private land owner and it is not open to the public. Alternative access routes to the Canyon to accomodate motorized vehicles cannot be developed because of steep terrain.

5) Lightner Creek Area. Amendment changes emphasis of that portion of Lightner Creek designated 2B (emphasis on roaded natural recreation opportunities) to 3A (emphasis on semi-primitive non-motorized recreation opportunities). The area affected by this adjustment is currently unroaded, very steep and rugged. Constructing trail or road suitable for motorized recreational use would be extremely expensive. Traditional recreational use is non-motorized.

6) La Plata Canyon. Amendment narrows the corridor managed for 2B (rural/roaded natural recreation emphasis). Remaining area is managed for 2A emphasis (semi-primitive motorized recreation). Existing jeep roads off of the main road are suitable for 4 wheel drives, ATV's and motorcycle use. Upgrading these roads would be expensive and would change current recreational use patterns which the Forest Service would prefer to maintain.

7) West rim of the La Plata Mountains and upper end of the East Mancos River Canyon. Amendment changes management emphasis from 2A to 3A (motorized recreation to nonmotorized recreation). This area is currently unroaded and recreational use is nonmotorized. Motorized access would be extremely expensive to construct and maintain. Preference is to maintain unroaded character of the area.

8) Lower end of the East Mancos River Canyon. Amendment changes management emphasis from 2A to 4B (emphasis on wildlife habitat management). This area is unroaded and it is impractical, and expensive to construct roads or trails for motorized recreation use. Management activities and expenditure of funds within the area primarily emphasize wildlife and fisheries objectives.

9) Colorado Trail to Lightner Creek. Amendment changes emphasis from 2A to 3A. Trail will be managed for nonmotorized recreational pursuits. Private land owners restrict vehicle access into this area and the Forest Service does not have a right-of-way across the private land. The long term intent is to maintain the primitive and semiprimitive non motorized recreation opportunities in the area.

Scoping is an integral part of the environmental analysis process for determining the issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR 1501.7). The purpose of scoping is to determine what environmental conditions and what benefits in the form of

goods, services, and uses that people want from the Forest. Scoping for this amendment consisted of notifying the public according to 40 CFR 1505.3(d), using the Forest Plan Amendment Mailing list. Contacts were also made with potentially affected parties.

Regulations permit amendments that may result in either significant or nonsignificant changes to the Forest Land and Resource Management Plan (36 CFR 219.10(f)). I have determined that the proposed changes are not significant according to 40 CFR 1508.27 in "context" or "intensity," and as stated in FSM 1922.51: "2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management."

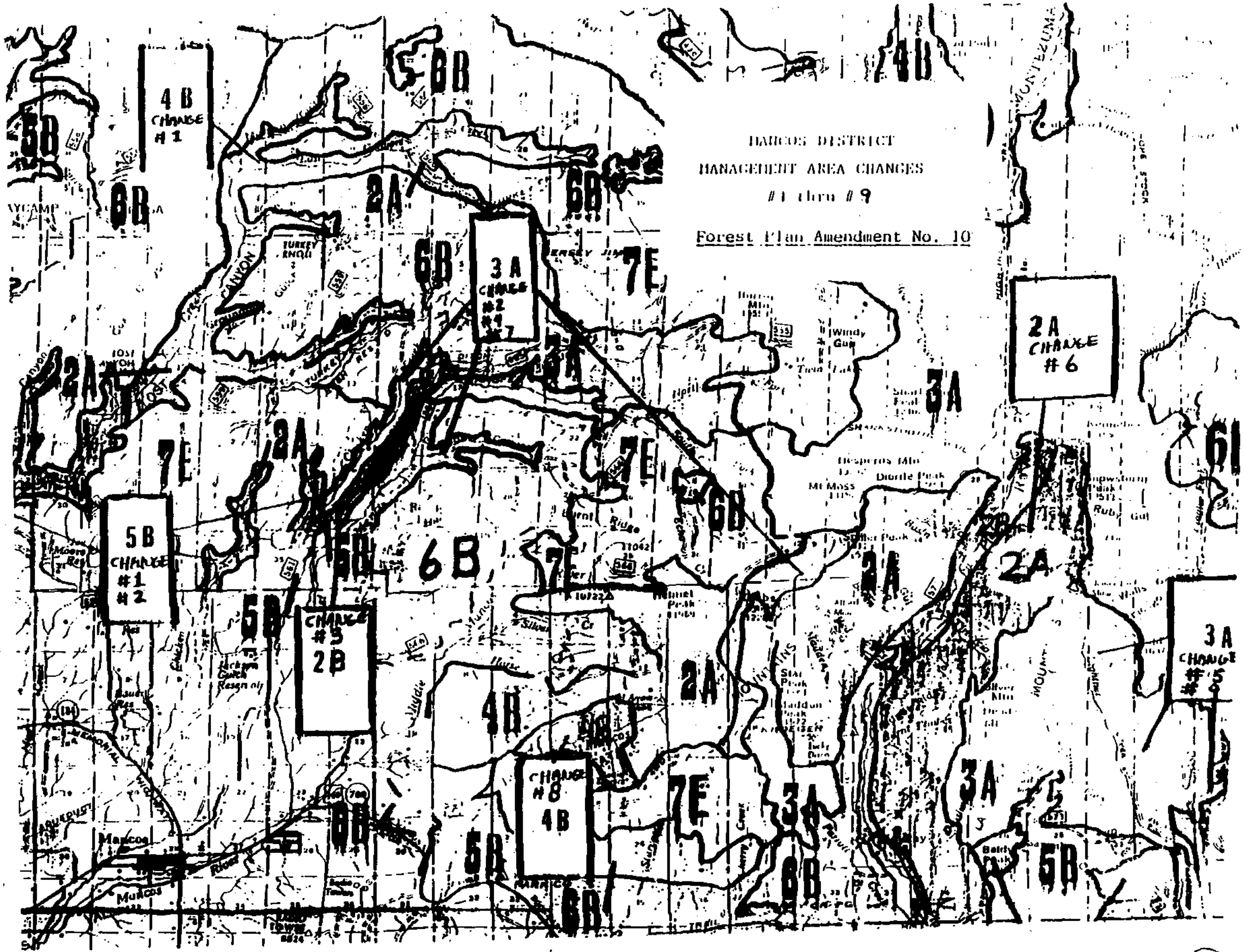
This decision is subject to appeal pursuant to 36 CFR Part 217 (Federal Register, Vol. 54, No. 13, January 23,1989,pages 3357 to 3362). To initiate an appeal, a written notice must be submitted to Gary Cargill, Regional Forester (R-2), 11177 W. 8th Ave., Lakewood, CO. (303-236-9431), within 45 days of the day after publication of notice in the Durango Herald, with a concurrent copy to the Deciding Officer: William T. Sexton, Forest Supervisor, San Juan National Forest, 701 Camino del Rio, Durango, CO. (303-247-4874).

This amendment will be effective the date of notification of my decision in the Durango Herald.

William T Sexton

WILLIAM T. SEXTON
Forest Supervisor

9/7/90
Date


MANCOS DISTRICT
MANAGEMENT AREA CHANGES
#1 thru #9
Forest Plan Amendment No. 10
4 B CHANGE #1
3 A CHANGE #2 #4 #7
2A CHANGE #6
5 B CHANGE #1 #2
CHANGE #3 2B
CHANGE #8 4B
3 A CHANGE #5
MONTEZUMA
Mancos

United States Department of Agriculture | Forest Service | San Juan National Forest | 701 Camino Del Rio, #301 Durango, CO 81301 303-247-4874

Reply to: 1920 Date: September 7, 1990

Dolores

Subject: DECISION MEMO - Amendment Number 11 of the Forest Land and Resource Management Plan

Location: San Juan National Forest, Colorado.

This amendment adjusts management area boundaries in the Forest Land and Resource Management Plan (Forest Plan) on the Dolores District of the San Juan National Forest. According to the regulations, "The Forest Supervisor may amend the Forest Plan (36 CFR 219.10(f))."

Management Area Definitions (primary management emphasis):

1A -- developed recreation opportunites.
1B -- maintenance, development or expansion of downhill ski areas.
2A -- semi-primitive motorized recreation opportunities.
2B -- rural/roaded natural recreation opportunities.
3A -- semi-primitive non-motorized recreation opportunities.
4B -- wildlife habitat management.
5B -- management for big-game winter range.
6B -- livestock grazing.
7E -- commercial timber management.
10D -- protection of river corridors which have been determined eligible for inclusion in the National Wild and Scenic Rivers System

The attached maps (1/2" scale) depicting 12 proposed management area adjustments on the Dolores Ranger District. The adjustments are as follows:

1) Hoppe Point: Amendment changes management area emphasis from 5B to 6B. The mesa tops are not critical winter range for wildlife. Primary livestock grazing emphasis is more appropriate.

2) Bradfield Bridge Area: amendment changes management emphasis of the area from 2A and 10D to 5B. This area is out of the river corridor. Serves as big game winter range.

3) House Creek and McPhee Recreation Areas: Amendment changes primary management emphasis from 5B to 1A. Area receives heavy year-around recreation use since completion of McPhee Dam. Amendment increases emphasis for recreation investment and maintenance in lower dam area.

4) Taylor Mesa: Amendment changes primary management emphasis from 6B to 4B. Reflects allotment management plan recommendations to address conflicts between wildlife and livestock for forage.

5) Kohne: Changes primary management emphasis from 5B to 6B. The area provides only marginal opportunities for management as winter range. Expenditures should be directed towards improvement of summer grazing land.

6) Landslip Mt./Calico Peak: Amendment changes primary management emphasis from 2A to 3A. Topography is too steep, and soils too erosive, for motorized recreation. Primary use is semi-primitive non-motorized recreation.

7) Johnny Bull: Changes management primary management emphasis from 2A to 3A. Topography is too steep for motorized recreation. Current and preferred use is semi-primitive non-motorized recreation.

8) Lizard Head: Amendment changes management emphasis from 2A to 3A. Land is very steep and erosive, not suitable for motorized recreation. Has higher use as semi-primitive non-motorized recreation.

9) Nipple Mountain: Amendment changes primary management emphasis from 6B to 4B. Expenditures should be directed towards wildlife habitat improvement and resolution of conflicts between livestock and wildlife for forage.

10) Spring Creek: Changes Forest Plan management area map to reflect amendment enacted in Spring Creek Project decision notice signed 10/12/89. Amendment changes management emphasis from 2A to 4B, 7E and 3A.

11) West Branch: Amendment changes primary management emphasis from 6B to 4B. Topography and forage production limit livestock production. The area provides winter/spring elk habitat and compliments adjacent 4B management prescriptions.

12) Ryman Creek: Amendment changes primary management emphasis from 5B and 2A to 4B. The area is too high in elevation for big game winter range and contains erosive soils. It is more characteristic of and should emphasize management of summer habitat for wildlife indicator species (elk).

Scoping is an integral part of the environmental analysis process for determining the issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR 1501.7). The purpose of scoping is to determine what environmental conditions and what benefits in the form of goods, services, and uses that people want from the Forest. Scoping for this amendment consisted of notifying the public according to 40 CFR 1505.3(d), using the Forest Plan Amendment Mailing list. Contacts were also made with potentially affected parties.

Regulations permit amendments that may result in either significant or nonsignificant changes to the Forest Land and Resource Management Plan (36 CFR 219.10(f)). I have determined that the proposed changes are not significant

according to 40 CFR 1508.27 in "context" or "intensity," and as stated in FSM 1922.51: "2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management."

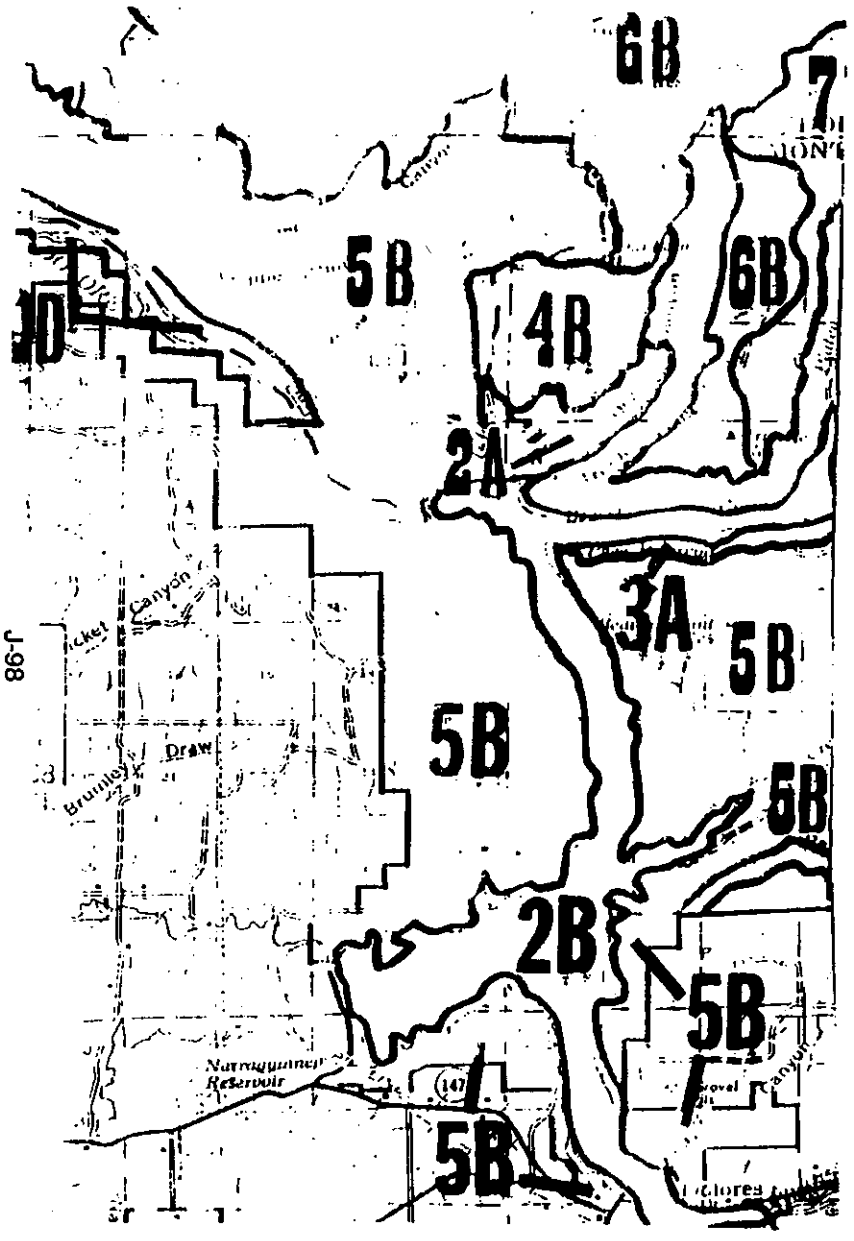
This decision is subject to appeal pursuant to 36 CFR Part 217 (Federal Register, Vol. 54, No. 13, January 23,1989,pages 3357 to 3362). To initiate an appeal, a written notice must be submitted to Gary Cargill, Regional Forester (R-2), 11177 W. 8th Ave., Lakewood, CO. (303-236-9431), within 45 days of **the day after publication** of notice in the Durango Herald, with a concurrent copy to the Deciding Officer: William T. Sexton, Forest Supervisor, San Juan National Forest, 701 Camino del Rio, Durango, CO. (303-247-4874).

This amendment will be effective the date of notification of my decision in the Durango Herald.

William T. Sexton

WILLIAM T. SEXTON
Forest Supervisor

9/7/90
Date



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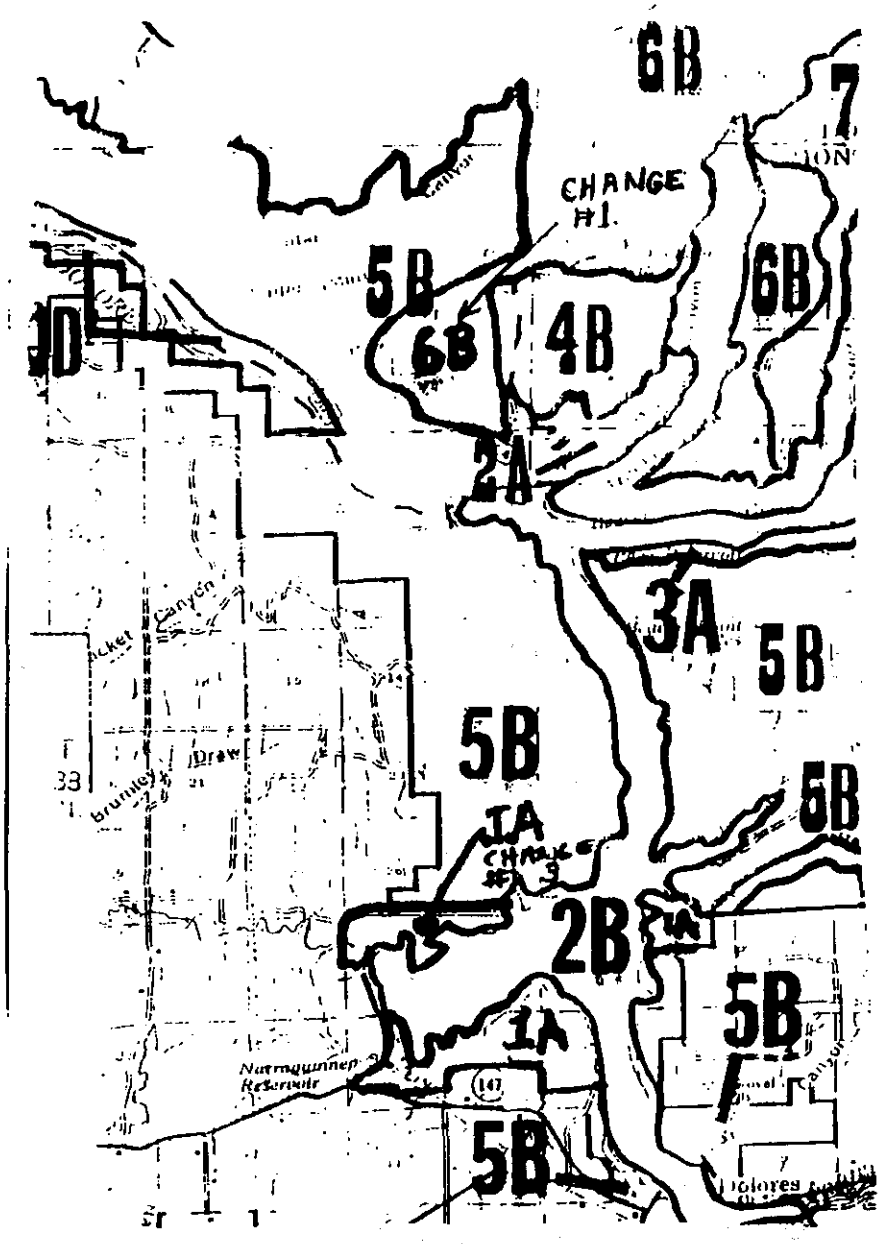
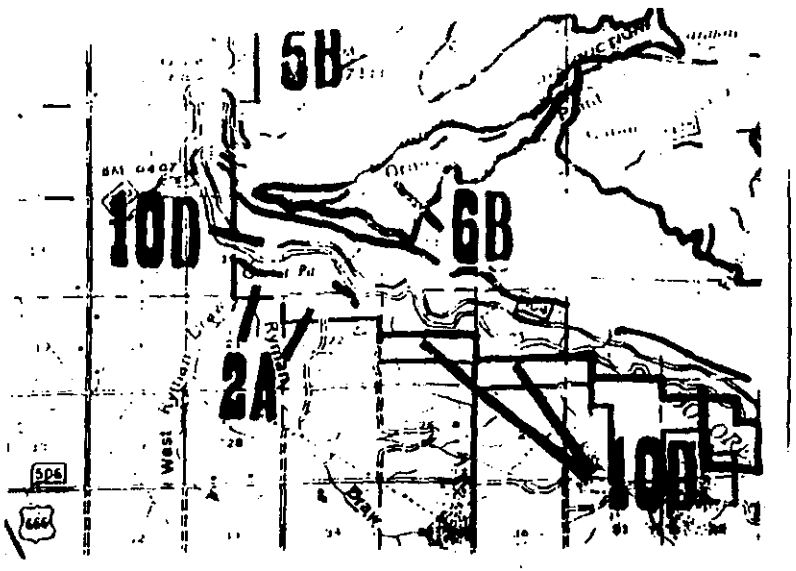


AMENDED

DOLORES RANGER DIST.

MANAGEMENT AREA CHANGES #1, #3



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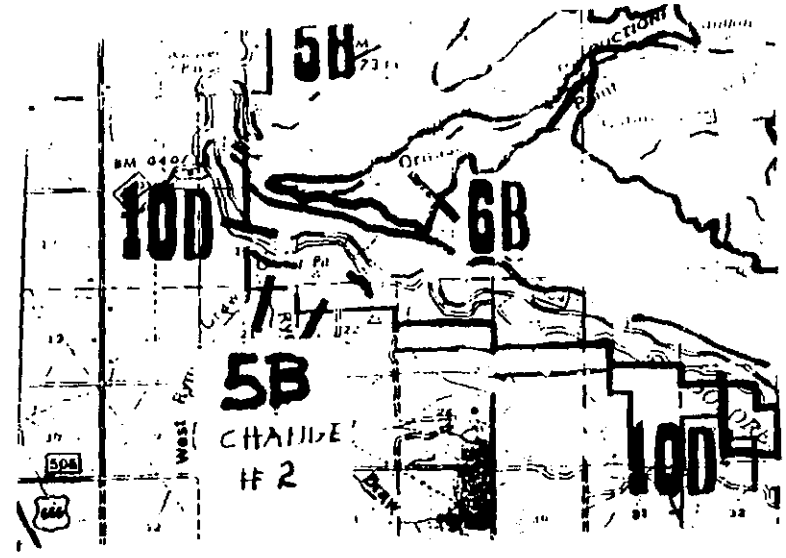
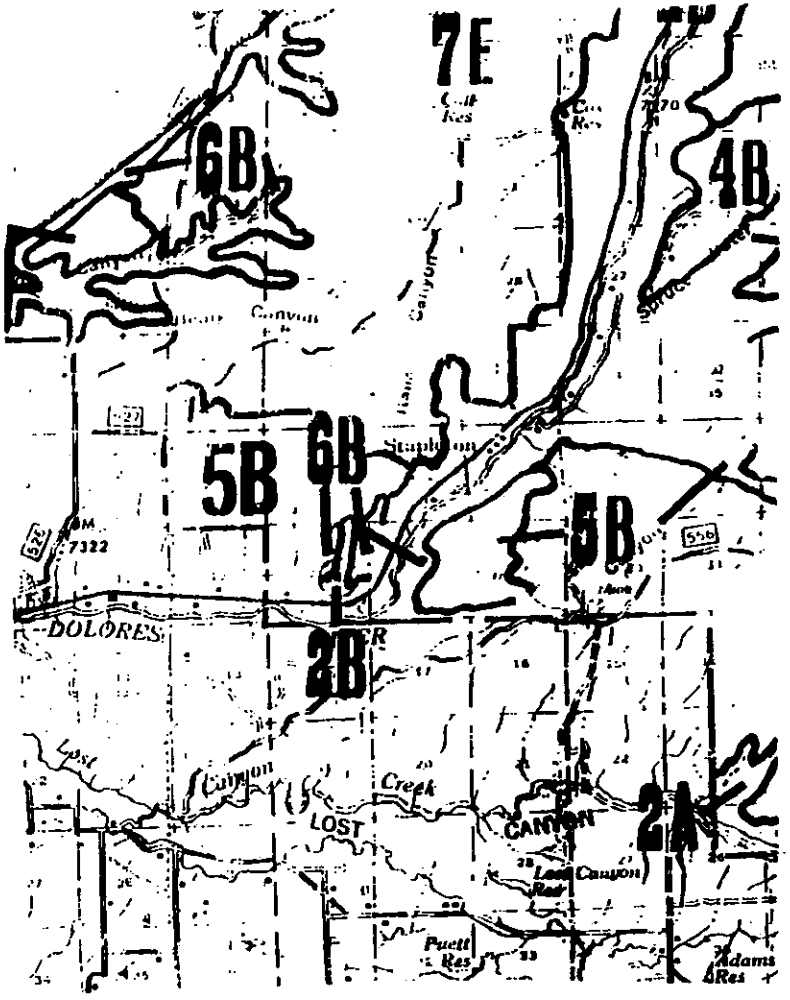


CURRENT

DOLORES RANGER DISTRICT

MANAGEMENT AREA CHANGE # 2



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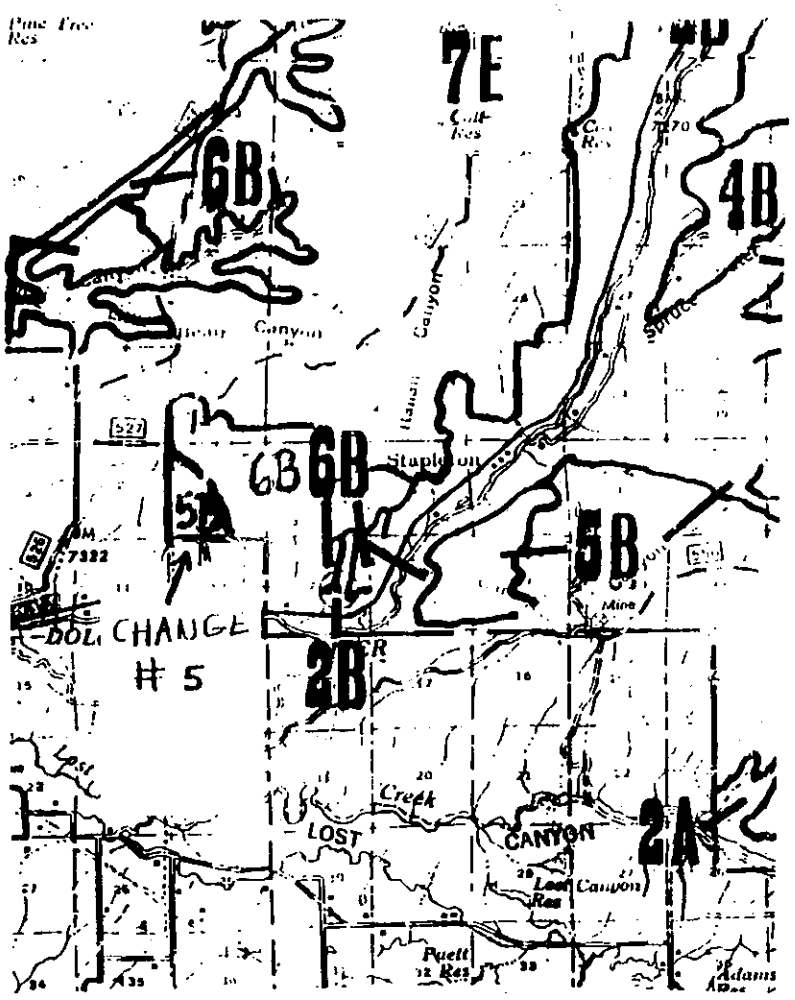
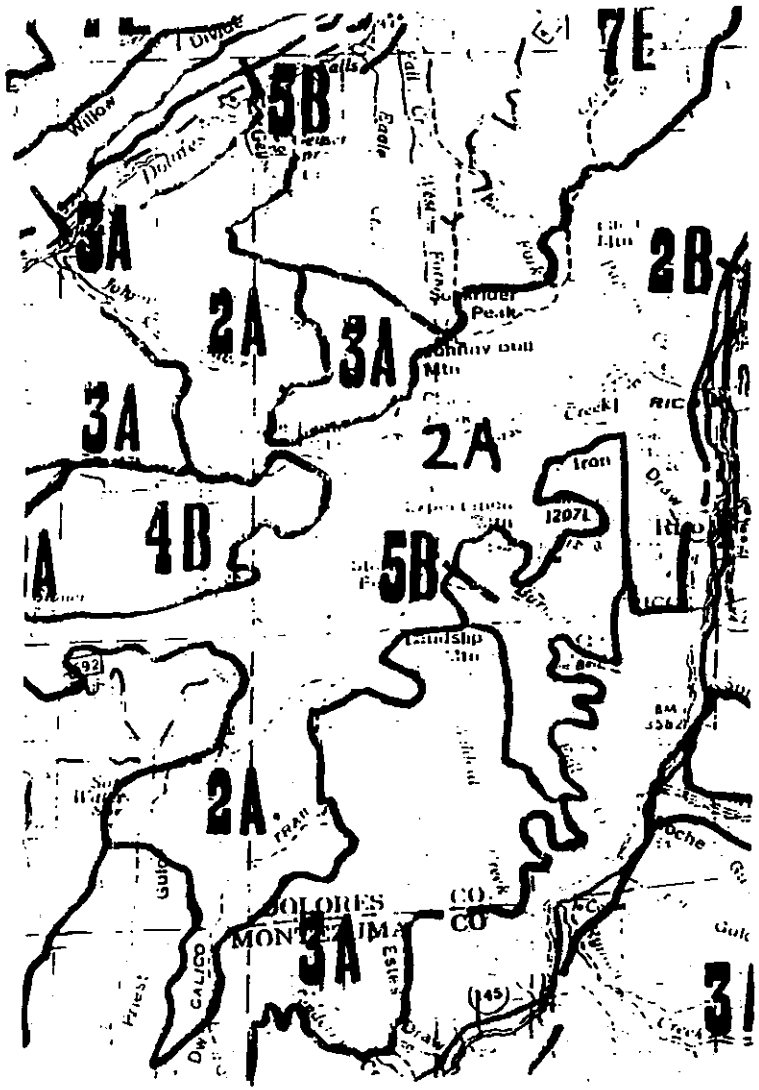


AMENDED

DOLORES RANGER DISTRICT

MANAGEMENT AREA CHANGE # 5



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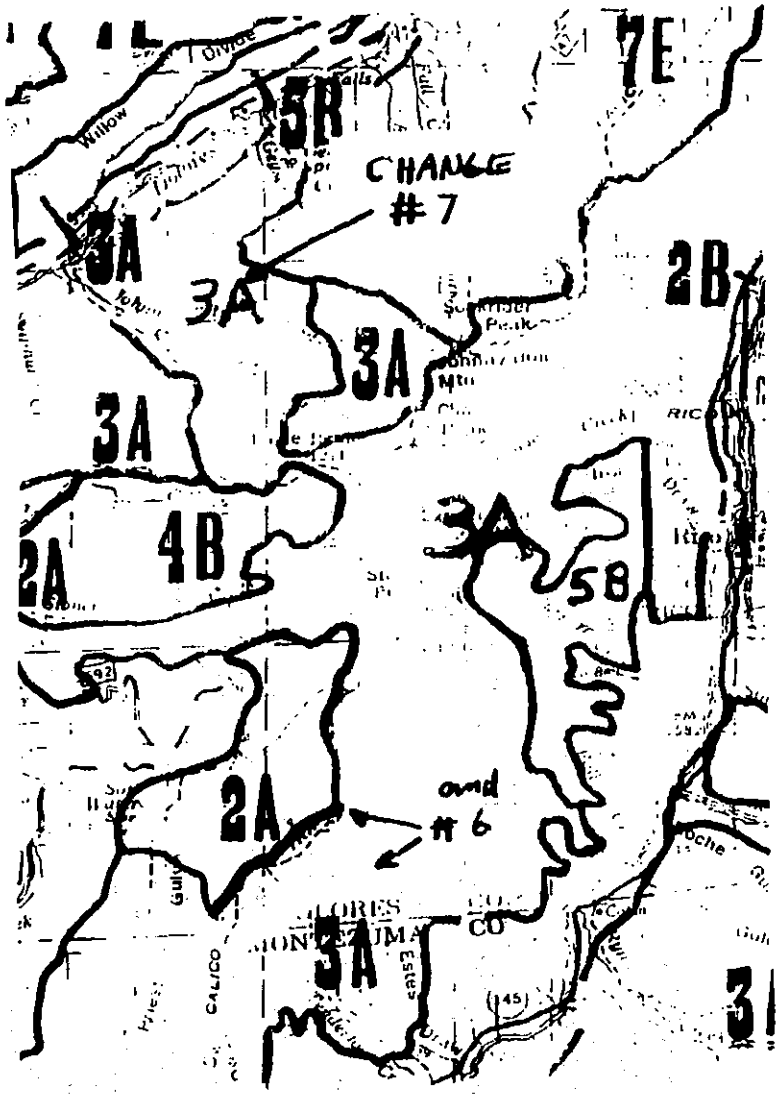

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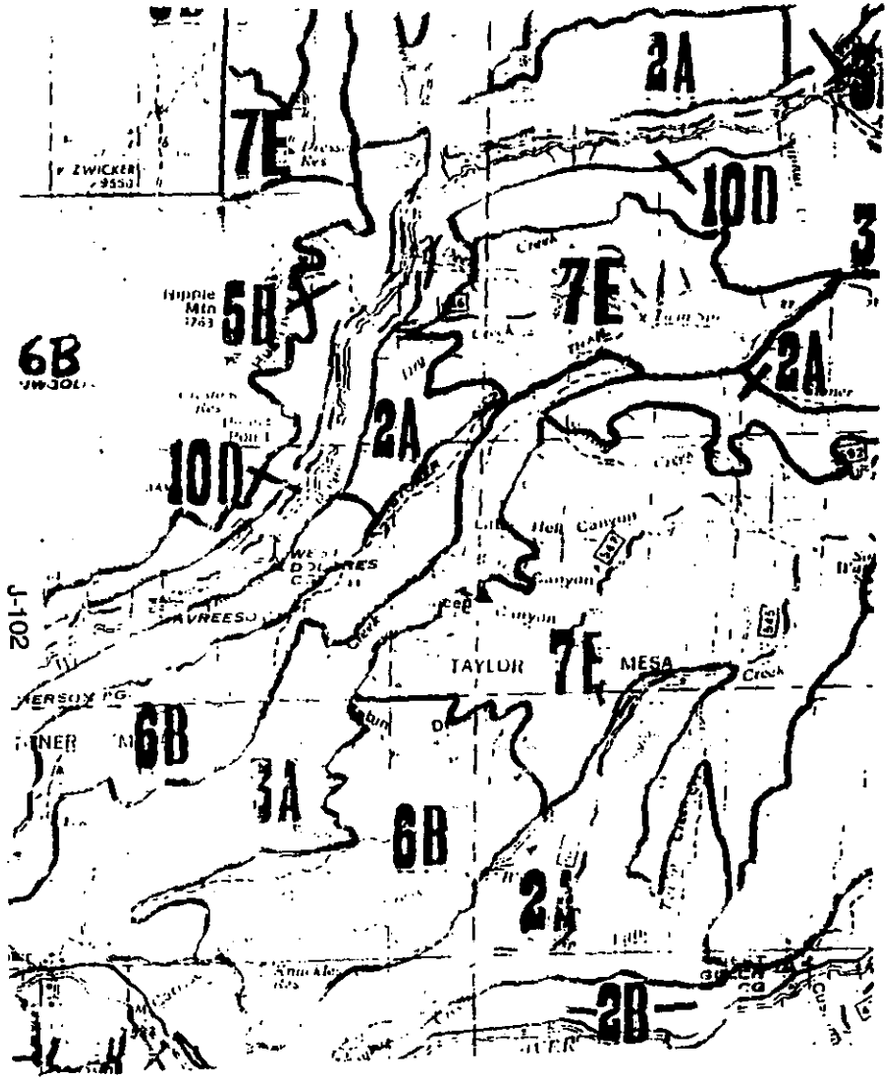
DOLORES RANGER DISTRICT

MANAGEMENT AREA CHANGES #6, #7



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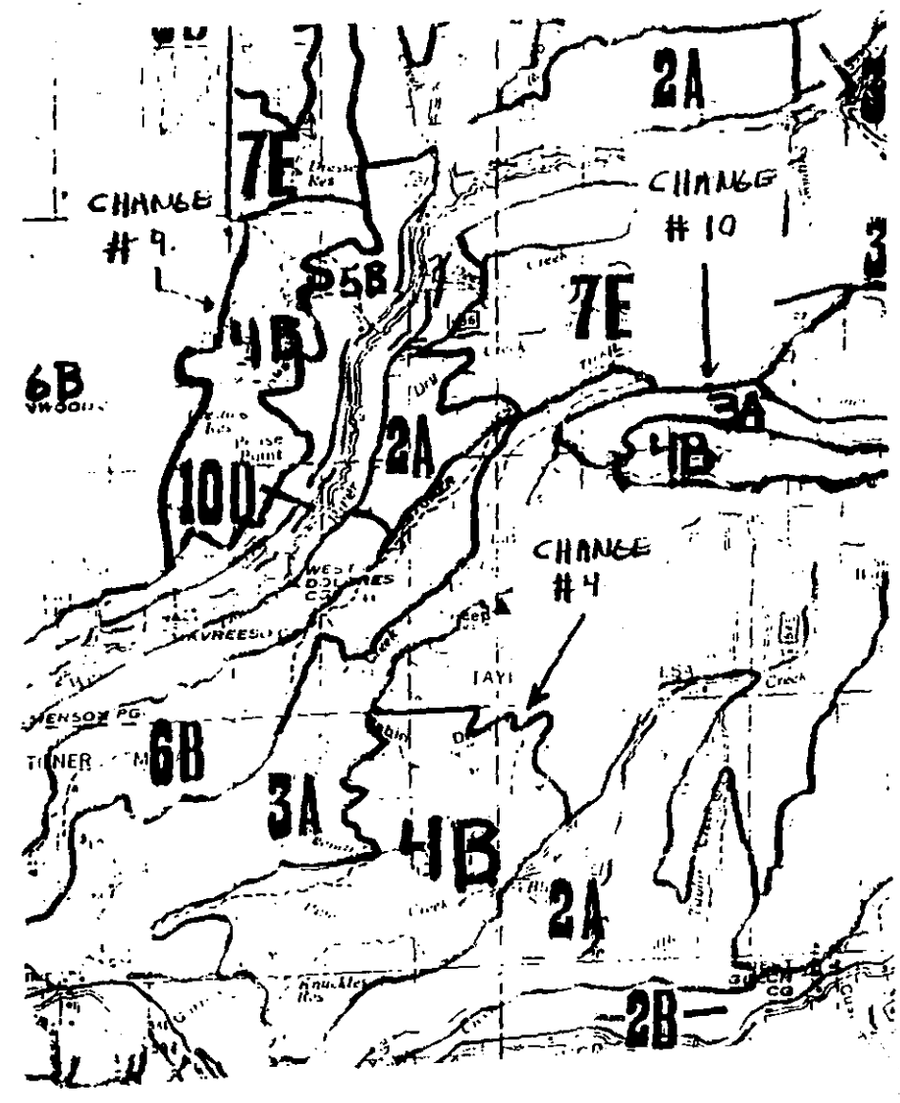
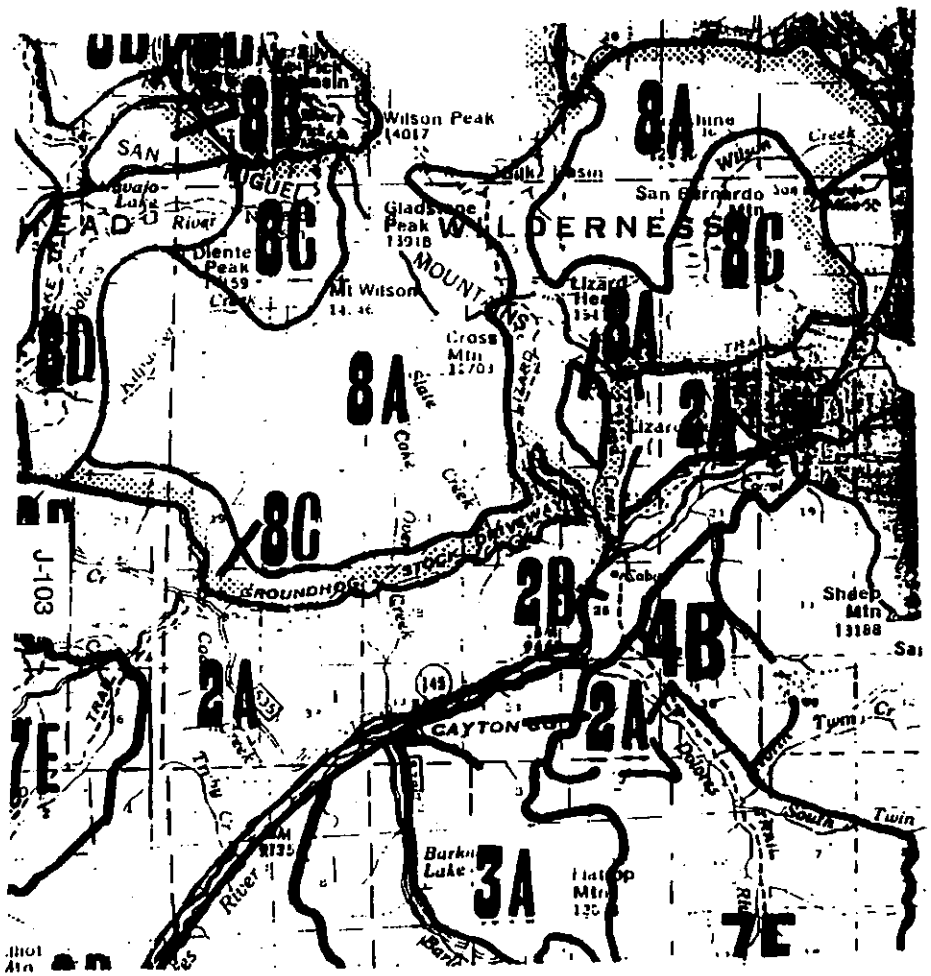


AMENDED

DOLORES RANGER DISTRICT

MANAGEMENT AREA CHANGES #4, #9, #10



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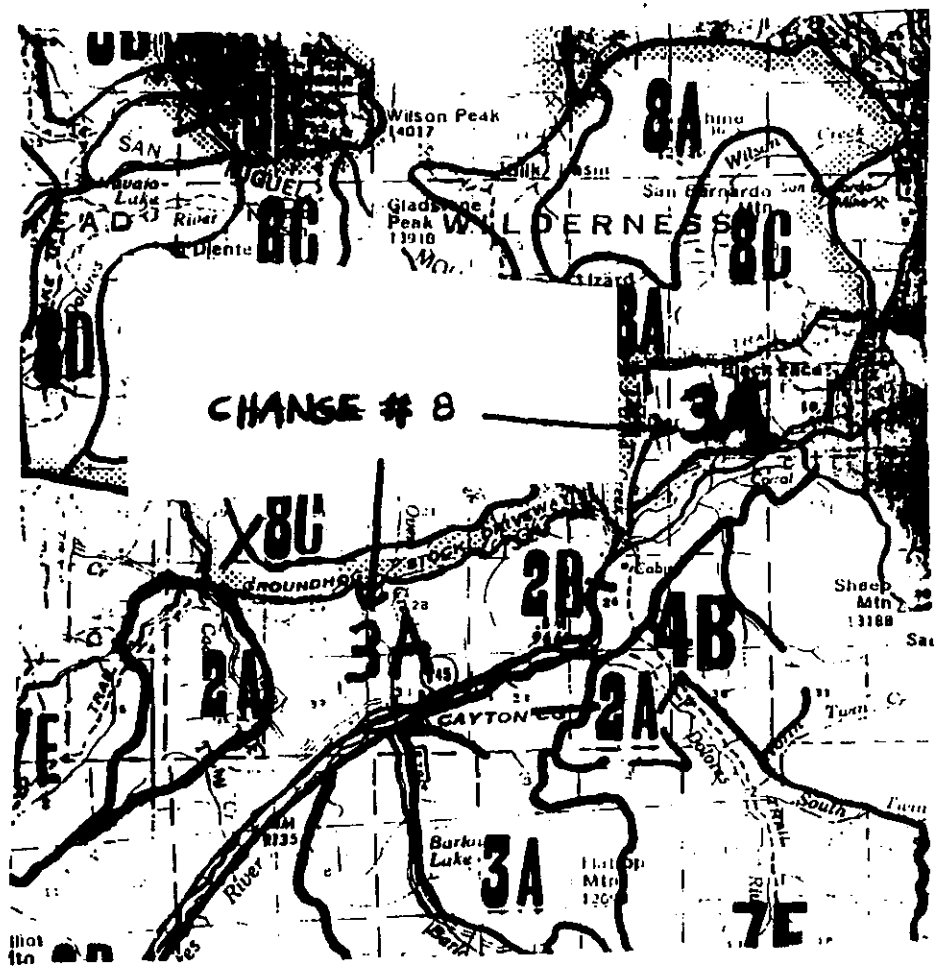
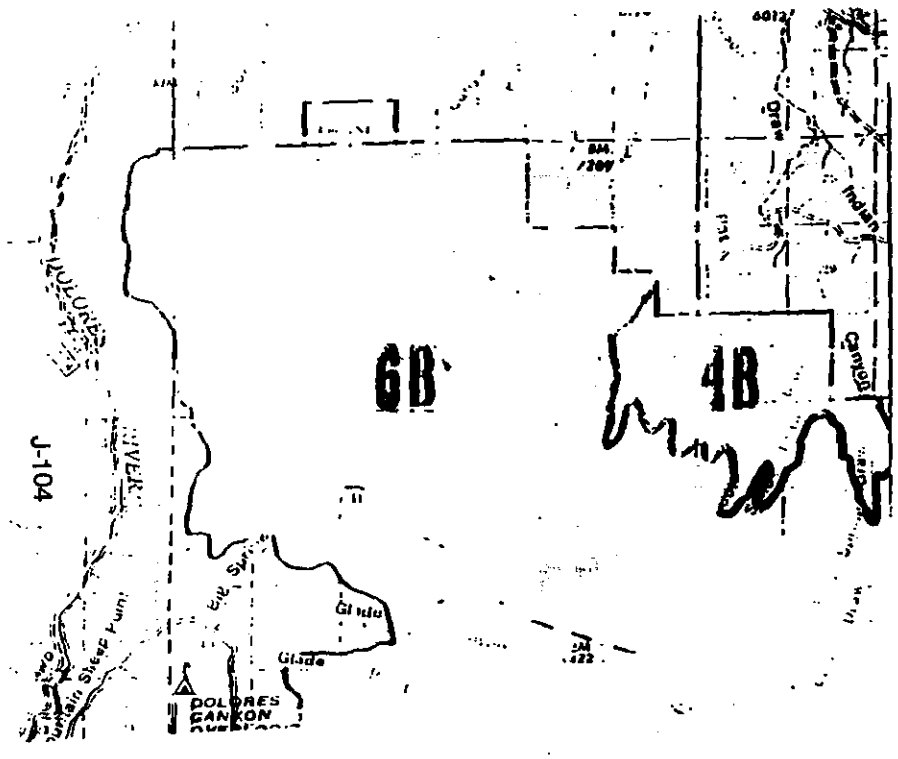


AMENDED

DOLORES RANGER DISTRICT

MANAGEMENT AREA CHANGE #8



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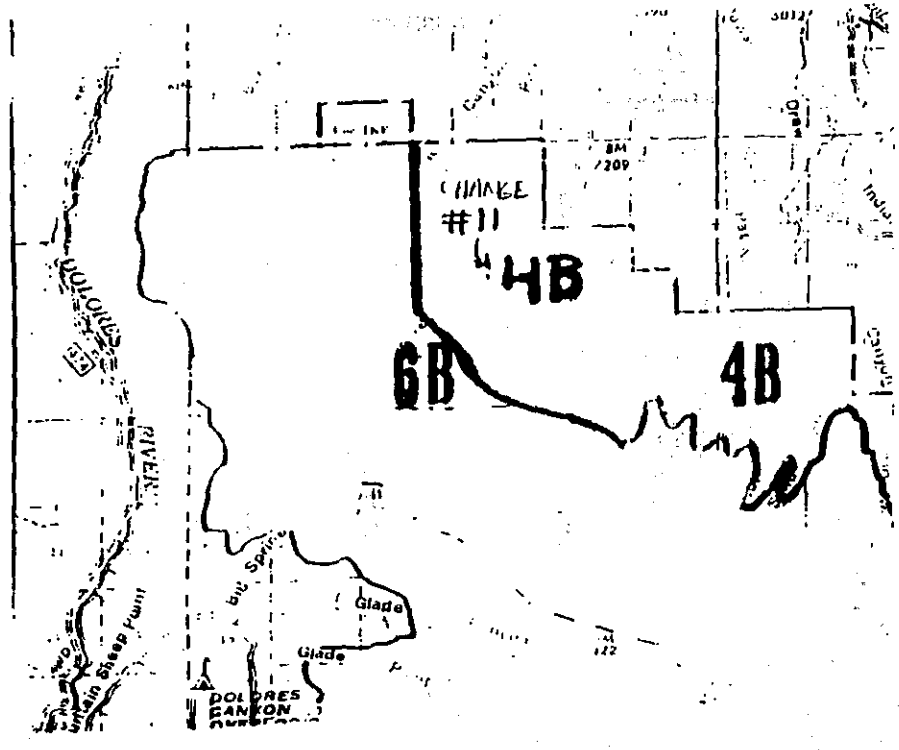
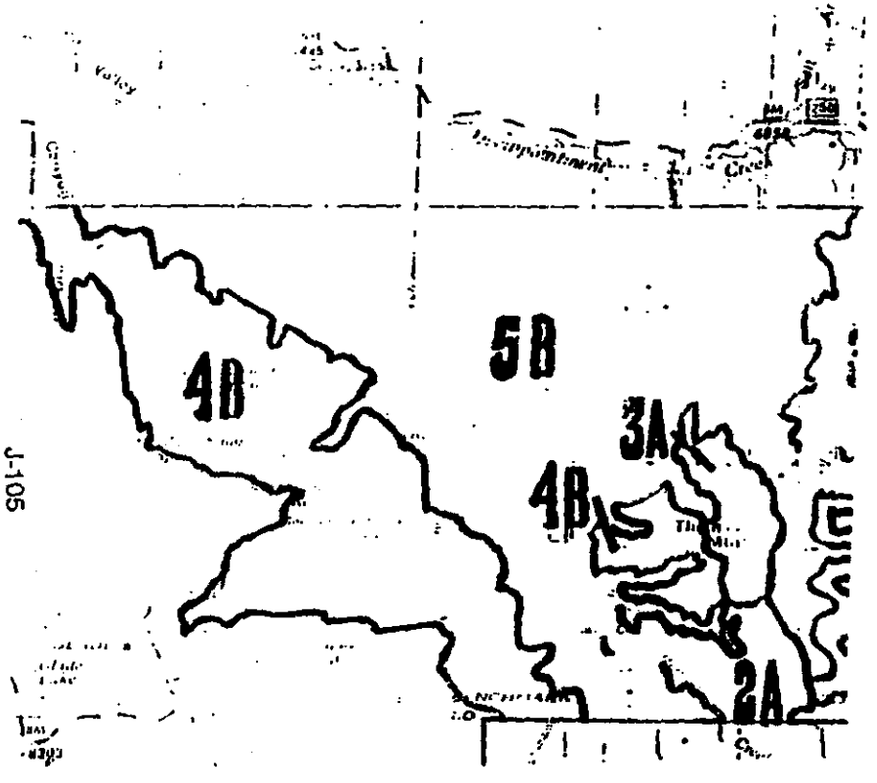


AMENDED

DOLORES RANGER DISTRICT

MANAGEMENT AREA CHANGE #11



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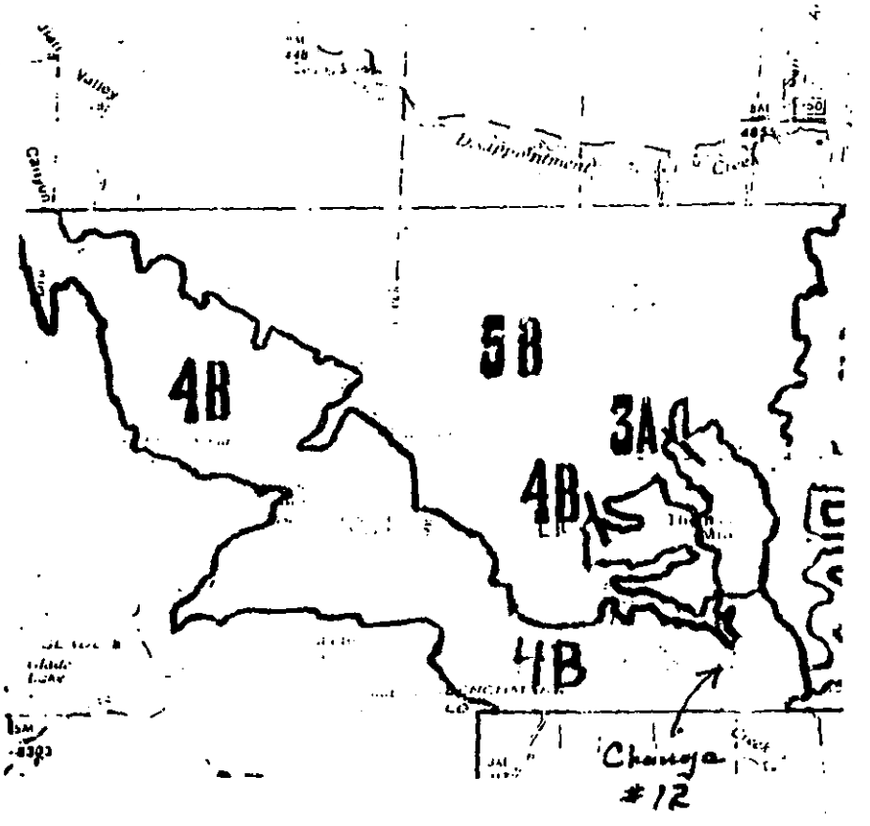


AMENDED

DOLORES RANGER DISTRICT

MANAGEMENT AREA CHANGE #12

REGIONAL AMENDMENT 91-01
FOREST AMENDMENT NUMBER 12
SAN JUAN NATIONAL FOREST

September 1991

LOCATION

The following amendment pertains to all lodgepole pine stands receiving regeneration cuts on the San Juan National Forest lands found in the the State of Colorado.

BACKGROUND

This amendment is being enacted throughout the Rocky Mountain Region of the U.S. Forest Service and is intended to remove the seven-year regeneration standard for lodgepole pine contained in the Forest Direction. Note that while this amendment affects a regional standard and guideline adapted by the national forests, it has no real effect on the San Juan National Forest. The San Juan has no more than 3,000 acres of lodgepole pine. This tree species is not native to the San Juans but was planted in scattered areas of the Forest to rehabilitate burned areas, and following some clearcuts during the 1950's and 60's. We have not scheduled any of these areas for harvest over the life of the Forest Plan, nor would they be candidate for harvest over the next 20 - 30 years.

THE AMENDMENT

The text on page III-43 of the San Juan National Forest Land and Resource Management Plan is amended to read as follows:

Management Activity

Reforestation
(E04)

General Direction

1. Establish a satisfactory stand on cutover areas, emphasizing natural regeneration within five years after final harvest except:
   a. For permanent openings that serve specific management objectives;
   b. When other resource objectives dictate a different period such as spruce-fir clearcuts where planting must occur within three years after harvest;
   c. When provided for otherwise in specific management prescriptions.

NOTE: The amendment constitutes a deletion of item 1. (c) on the current page III-41. The deletion shall be made as a pen and ink correction by lining through the deleted portion and revising the consecutive lettering sequence as appropriate.

United States Department of Agriculture | Forest Service | San Juan National Forest | 701 Camino Del Rio, #301 Durango, CO 81301 303-247-4874

Reply to: 1920/1950 **Date:** July 31, 1991

Subject: Amendment Number 13 to the Forest Plan

Location: San Juan National Forest, Colorado

It is my decision to amend the San Juan National Forest Land and Resource Management Plan (Forest Plan).

This amendment changes Table III-1, Projected Average Annual Outputs, Expenditures, and Returns.

Following annual review of the table, we have found several instances where the budget required to implement specific Forest Plan objectives is in need of adjustment. These finding are based on seven years experience implementing the Plan and the interdisciplinary team finding that the budget programmed is not adequate to meet the overall desired future condition stated by the Plan.

A copy of the amendment is enclosed. I have determined that there is no significant effect on the human environment from this action. The action is categorically excluded from documentation in an environmental assessment or environmental impact statement in accordance with FSH 1909.15 (ID No. 2, Feb. 28, 1989) Sec. 26.1b.3(2).

/s/ R. F. Salazar (for)
WILLIAM T. SEXTON
Forest Supervisor

enclosure: Amendment #13

SAN JUAN NATIONAL FOREST
LAND AND RESOURCE MANAGEMENT PLAN

July 1991
Amendment No. 13

Table III-1

Page Code	Superceded	New
III-9	0	0

Line item change to Total Budget line of Table III-1, column 6. Change total budget for time period 1991-2000 from 7,632 to 10,986. This entry is expressed in thousands of 1978 constant dollars.

/s/ R. F. Salazar (for)
WILLIAM T. SEXTON
Forest Supervisor

Date: July 31, 1991

Appendix K
Glossary

APPENDIX K
GLOSSARY

Acre Foot - A water volume measurement equal to the amount of water that would cover one acre to a depth of one foot (43,560 cubic feet or 325,851 gallons).

Allowable Sale Quantity - The quantity of timber that may be sold from the area of suitable land covered by the forest plan for a time period specified by the plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity." (36 CFR 219.3)

Analysis Area - A delineated area of land subject to analysis of (1) responses to proposed management practices in the production, enhancement, or maintenance of forest and rangeland outputs and environmental quality objectives, and (2) economic and social impacts.

Analysis Area Prescription - A coordinated set of practices for a specific area of the Forest. The same as a FORPLAN PRESCRIPTION or FORPLAN RX. Such a prescription includes the costs of each practice and estimates of outputs and effects which would result from application of the listed practices to a specific area.

Animal Unit Month (AUM) - The quantity of forage required by one mature cow (1000 lbs) or the equivalent for one month.

Arterial Roads - Primary travel routes that provide service to a large land area and which usually connect with public highways or other Forest Service arterial roads.

Aspen Sawtimber - Aspen sold as sawtimber. Minimum utilization standards are seven inches diameter at breast height (d.b.h.); six inches top merchantable diameter; eight foot length; at least 50 percent sound.

Aspen with Conifer Invasion - Aspen classification for stands with two or more distinct age classes of conifer present. (Mueggler, in "Aspen: Ecology and Management in the Western United States", pp 46).

ASQ - See Allowable Sale Quantity.

Baseline Water Yields - Estimate of what water yield would be in the absence of any man-caused modifications in the precipitation runoff process.

Base Sale Schedule - A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade, and this planned sale and harvest for any decade in not greater than the long-term sustained yield capacity. (36 CFR 219.3)

Base Timber Harvest Schedule - The timber harvest schedule in which the planned sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade of the planning period, provided that this harvest quantity is not greater than the long-term sustained yield capacity.

Benchmark Analysis - Benchmark analysis provides baseline data necessary to formulate and analyze alternatives. Benchmarks display a forest's physical, biological, and technical capabilities to produce goods and services. The development of benchmarks is not limited by Forest Service policy or budget, discretionary constraints, or program and staffing requirements.

Benefit/Cost Ratio - (B/C Ratio) - The total value of all monetary and nonmonetary benefits divided by the total discounted costs required to produce those benefits.

Board Foot - Measure of an amount of timber equivalent to a piece of 12" x 12" x 1".

Capability - The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at given levels of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils and geology, as well as the application of management practices, such as silviculture or protection from fire, insects and disease. (36 CFR 219.3)

Carrying Capacity - In range management, it is the maximum stocking rate possible without inducing damage to vegetation or related resources. In wildlife management, it relates to the maximum number of individual animals that can survive the greatest period of stress each year on a given land area. In recreation, it is the maximum human use an area can sustain on a long-term basis without unacceptable physical deterioration or psychological crowding.

Clearcutting - A regeneration method used to establish even-age stands whereby all trees are removed in one harvest.

Conifer Sawtimber - Engelmann Spruce, Subalpine Fir, Lodgepole Pine, Ponderosa Pine, Douglas-fir, and other conifer species. Minimum utilization standards are seven inches diameter at breast height (d.b.h.); six inches top merchantable diameter; eight foot length; at least 33.33 percent sound.

Constraint - A qualification of the minimum or maximum amount of an output or cost that could be produced or incurred in a given time period.

Cost Efficient - See definition of Economically Efficient.

Cost Efficiency - The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs including environmental, economic, or social impacts, are not assigned monetary values but are achieved at specified levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate.

Culmination of Mean Annual Increment - The age at which the average annual growth is greatest for a stand of trees. Mean annual increment is expressed in cubic feet measure and is based on expected growth according to the management intensities and utilization standards assumed in accordance with 36 CFR 219.16(a)(2)(i) and (ii). Culmination of mean annual increment (CMAI) includes regeneration harvest yields and any additional yields from planned intermediate harvests.

Cumulative Impacts - Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period time (CEQ Regs).

Decision criteria - Criteria used in the formulation and evaluation of alternatives and ultimately to help select the preferred alternative.

Demand - The amount of an output that users are willing to take at a specified price, time period, and condition of sale.

Demand Analysis - A study of the factors affecting the schedule of demand for an output, including the price-quantity relationship if applicable.

Demand Cutoff Points - Used in FORPLAN to limit the quantity of an output which contributes to the PNV objective function to the level of demand.

Demand Schedule (Curve) - A schedule of quantities of an output that users are willing to take at a range of prices, at a given point in time, and conditions of sale.

Demand Trends - The expected future need or desire for outputs, services and uses.

Determinant Aspen Stand - Aspen stands that consist of essentially single-storied, even-aged clones or stands, with little, if any, sucker regeneration occurring within the stand because of a tightly closed canopy. If these clones are isolated from others, they are usually ringed by young growth spreading into adjacent, unoccupied land. Determinate stands probably develop from root sprout vegetation following fire (or other disturbance) within the recent past and have grown under intense competition.

Developed Recreation - Recreation that requires facilities that results in concentrated use of an area. Examples are campgrounds and ski areas. Facilities might include: roads, parking lots, picnic tables, toilets, drinking water, ski lifts and buildings.

Discount Rate - An interest rate that represents the cost or time value of money in determining present value of future costs and benefits.

Diversity - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan. (36 CFR 219.3)

Diversity Units - Basic land unit of analysis for aspen management. The original use for diversity unit was for Plan implementation for wildlife. Forest Plans require that structural diversity of vegetation be maintained on units of land 5,000 to 20,000 acres in size or fourth order watersheds. These land areas are called diversity units. They will also be used for monitoring wildlife.

Economic Efficiency - The effectiveness of inputs (costs) in producing outputs (benefits) and effects when the computations include all identified and valued costs and benefits. Usually, measurement of economic efficiency uses present net value, though the use of benefit-cost ratios and rates-of-return sometimes may be appropriate.

Environmental Impact Statement (EIS) - The version of the statement of Environmental Effects required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA), and released to the public and other agencies for comment and review. It is a formal document which must follow the requirements of NEPA, The Council on Environmental Quality (CEQ) guidelines, and directives of the agency responsible for the project proposal.

Even-aged Management - The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Managed even-aged forests are characterized by a distribution of stands of varying ages (and, therefore, tree sizes throughout the forest area). The difference in age between trees forming the main canopy level of a stand usually does not exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands. (36 CFR 219.3)

Economically Efficient - Any time the value of the benefits exceeds the costs. A measure of direct and indirect market and non-market costs and benefits considering monetary (dollar) values assigned to various outputs including the non-timber multiple use benefits.

Financially Efficient - Any time an activity produces net returns to the U.S. Treasury. A measure of direct market costs and benefits considering only monetary (dollar) values.

Forest Land - Land at least 10 percent occupied by forest trees of any size, or formerly having had such tree cover and not currently developed for nonforest use. Lands developed for nonforest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width, and adjoining road clearing and powerline clearing of any width.

FORPLAN - Acronym for the linear programming computer model used as the primary analysis tool for National Forest System land management planning.

FORPLAN Prescription - (FORPLAN RX) - A coordinated set of practices for a specific area of the Forest. The same as an ANALYSIS AREA PRESCRIPTION. Such a prescription includes the costs of each practice and estimates of outputs and effects which would result from application of the listed practices to a specific area.

Fourth-Order Watershed - A watershed drained by a network of stream segments, the largest segment being a fourth-order segment.

Goal - A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms, and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principle basis from which objectives are developed. (36 CFR 219.3)

Group Selection - The cutting method that describes the silvicultural system in which trees are removed periodically in small groups resulting in openings that do not exceed an acre or two in size. This leads to the formation of an uneven-aged stand in the form of a mosaic of age-class groups in the same forest.

Habitat Capability - The estimated ability of an area, given existing or predicted habitat conditions, to support a wildlife, fish or plant populations. It is measured in terms of numbers. In the Rocky Mountain Region the computer model R2HABCAP estimates habitat capability.

Habitat Capability Model - A model which depicts the relationship of a species to a variety of habitat factors which provide for quantitative predictions of a species relationship (animal numbers) to habitat condition, thereby allowing for predictions of changes in animal numbers as a result of habitat changes.

Habitat Effectiveness - The degree to which a physical wildlife habitat is free from man-caused disturbances, and therefore attractive to wildlife occupancy.

Hiding Cover - Vegetation capable of hiding 90 percent of an adult standing deer or elk at a minimum distance of 200 feet. The minimum canopy closure of the overstory is 50 percent (80 percent is optimum); minimum size is 10 acres (30 acres is optimum); and minimum width is 600 feet (1,200 feet is optimum). A majority of overstory trees or shrubs must be at least six feet high.

Horizontal Diversity - The distribution and abundance of plant and animal communities or successful stages across an area of land; the greater the number of communities, the higher the degree of horizontal diversity. This concept is close to, but not exactly the same as "even-aged management", although each may influence the other. Application of even-aged management, for example, can be designed to accomplish horizontal diversity objectives. See also "Vertical Diversity".

HYSED - Acronym for computer model used as an analysis tool to display water yield and sediment production figures.

HYSED Water Yield Sediment Model - Computer model used to evaluate the water yield and sediment yield effects of proposed land management treatments. Developed by Lee Silvey and Dave Rosgen, Region 2, U.S. Forest Service.

ICO's - Acronym for public issues, management concerns and resource use and development opportunities.

IMPLAN - Acronym for the computer model used as an analysis to a display social effects of various alternatives developed during the land management planning effort.

Indeterminate Stand - Self-perpetuating aspen stands that include all age classes, from new sucker sprouts to decadent and old, dying trees. These stands have probably not been regenerated by fire for at least several centuries and have developed the open canopy representative of adventitious sucker growth, but stem densities are low. The resulting trees tend to be limby and crooked, and probably do not reach a height or growth form representative of either clonal genetic potential or site capability. Indeterminate clones and stands will probably maintain themselves indefinitely, often being climax species on these sites.

Indicator Species - Those species identified in the planning process that are used to monitor the effects of planned management activities on viable populations of wildlife and fish species, including those species that are socially or economically important.

Indirect Impacts - Impacts or effects which are caused by the action and are later in tune if farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Integrated Resource Management - A management strategy which, among other things, emphasizes no resource element to the exclusion or violation of the minimum legal standards of others. A management strategy which was developed considering the interrelationships of the different resource elements, i.e. management for one resource was not developed without consideration of other resource elements.

Intensive Grazing Management - Management designed to maintain or increase the carrying capacity on an allotment. There are significant investments in range improvements and/or complex grazing management systems are employed. A deferred rotation grazing systems on sheep allotment with no range improvements in considered intensive grazing management.

Intermediate Harvest - Any removal of trees from an even-aged stand between the time of its formation and the regeneration cutting.

Intermittent Road - (Intermittent Use Road) A road developed and operated for periodic service and closed for more than one year between periods of use.

Irretrievable - Applies to losses of production, harvest, or use of renewable natural resources. For example, some or all of the timber production from an area is irretrievably lost while and area is used as a winter sports site. If the use is changed, timber production can be resumed. The production lost is irretrievable, but the action is not irreversible.

Irreversible - Applies primarily to the use of non-renewable resources, such as minerals or cultural resources, or to those factors which are renewable only over long time spans, such as soil productivity. Irreversible also includes loss of future options.

KV Funds - In 1930, Congress passed the Knutson Vanderberg Act (KV Act) to authorize collection of funds (KV Funds) for reforestation and timber stand improvement work on areas cut over by a timber sale.

Local Roads - Roads that connect terminal facilities with collector roads, arterial roads, or public highways. May be developed for either long-term or short-term service.

Long Term Effects - A relative indicator as to the duration of an impact or change; the effects last longer than the period of time which is considered reasonable for recovery. An effect is long term when it persists through or beyond natural lifetime of an individual.

Long-term Sustained Yield Capacity (LTSYC) - The highest uniform wood yield from lands being managed for timber production that may be sustained, under a specified management intensity, consistent with multiple-use objectives. (FSM 1900).

M - 1,000 Units.

Management Area - An area that has common direction throughout that differs from neighboring areas. The entire Forest is divided into management areas. Each is described, and policies and prescriptions relating to their use are listed.

Management Concern - An issue, problem, or a condition that constrains the range of management practices identified by the Forest Service in the planning process.

Management Direction - A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them. (36 CFR 219.3)

Management Intensity - A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services. (36 CFR 219.3)

Management Opportunity - A statement of general actions, measures or treatments that address the public issue or management concern in a favorable way.

Management Practice - A specific activity, measure, course of action, or treatment and associated costs designed to obtain different levels of goods and services.

Management Prescription - Management practices and intensity selected and scheduled for application on a specific area to attain multiple use and other goals and objectives. (36 CFR 219.3)

MBF - One thousand board feet of timber.

Migration Routes - Routes followed by an animal species during periods of annual movement usually between summer and winter ranges.

Mitigate - To offset or lessen real or potential impacts of effects through the application of additional controls or actions. Counter measures employed to reduce or eliminate undesirable or unwanted results.

MM - 1,000,000 Units.

MMBF - One million board feet of timber.

MMCF - One million cubic feet.

MRVD - One thousand recreation visitor days.

Multiple-Use - The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people: making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in the use to conform to changing needs and conditions: that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output. (36 CFR 219.3)

Multiple-Use Benefits - An Output or Effect desired by one or more interested publics or local, state or Federal governmental entities resulting from management of National Forest lands and resources. These benefits may be achieved through harvesting timber, other non-timber harvesting methods of vegetation treatment or through non-vegetation management projects.

Net Public Benefits - An expression used to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principles of multiple-use and sustained-yield. (36 CFR 219.3)

NIC - See Non-Interchangeable Component.

Noncommercial Species - Tree species of small size, poor form or inferior quality which normally do not develop into trees suitable for industrial wood products.

Nondeclining Even-Flow - That quantity of timber that can be sold from each National Forest equal to or less than a quantity that can be removed from such Forest annually and in perpetuity on a sustained-yield basis.

Non-Interchangeable Component (NIC) - Timber resource planning terminology. A designation that can be given to certain lands that are suitable for timber production. The ASQ is made up of NIC's; NIC's relate to acres and associated volume for a specific wood product where separate demand projections have been identified. As an example, an ASQ of 20 MMBF could be made up of 15 MMBF sawtimber and 5 MMBF POL. The two cannot be interchanged throughout the decade; that is no more than 150 MMBF sawtimber and 50 MMBF POL can be offered for sale in the decade. NICs are applicable only to existing mill capacities and not for new industry, expansion of existing facilities or speculative forecasts. Separate NIC contributions to the total ASQ cannot be applied to other suitable lands.

> As an example, if an existing mill indicated a trend of steadily increasing purchases, due to an increase in demand for a specific wood product, the projectual change in demand over a 10 year period could be identified as a separate NIC in the suitable timber base.

Nonpoint Source Pollution - (Non-Point Pollution Source) - Pollution whose source is general rather than specific in location. It is widely used in reference to agricultural and related pollutants. For example, production of sediment from road systems where no point source can be identified. See also POINT SOURCE POLLUTION.

Nonstructural Range Improvement - A modification of existing vegetation to improve the grazing resource. Examples are spraying or plowing sagebrush and seeding to grass.

Non-Waferwood Conifer Products Other Than Logs (POL) - Conifer and other hardwoods except aspen sold as POL. Includes posts and poles, commercial firewood, mine props and pilings, and miscellaneous products. Minimum utilization standards are five inches diameter at breast height (d.b.h.); four inches top merchantable diameter; 6.5 foot length.

"OAC" Lands - See Opportunity/Available/Capable (OAC) Lands.

Opportunity/Available/Capable (OAC) Lands - Lands (acres and volume) identified in the planning documents which are designated as unsuitable for timber production in the Forest Plan because they are not needed to meet the identified anticipated timber demand. However, if and when there is an increase in demand by industry, these acres and corresponding volume could be added to the suitable land base and ASQ, respectively, through the plan amendment or revision process.

Opportunity Costs - The value of the benefits foregone or given up due to the effect of choosing another management alternative that either impacts existing outputs or shifts resources away from other activities so that they are no longer produced and their benefits are lost.

Output, Market - A good, service, or on-site use that can be purchased at a price.

Output, Nonmarket - A good, service, or on-site use not normally exchanged in a market.

PAOT - See "Persons-At-One-Time."

Persons-At-One-Time (PAOT) - The number of people in an area or using a facility at one time. Generally used as "maximum PAOT" to indicate the capacity of an area or facility to support peak usage within established user-density standards and without degradation to biophysical resources.

Planning Horizon - the overall time period considered in the planning process that spans all activities covered in the analysis or plan and all future conditions and effects of proposed actions that would influence the planning decisions. The current planning horizon covers the years 1980 to 2030.

Planning Period - One decade. The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

Planning Question - A major policy question of long-range significance, derived from the public issues and management concerns, to be decided when selecting among Forest Plan alternatives.

Point Source Pollution - Pollution whose source is specific rather than general in location. For example, particulate matter emanating from a specific smoke stack, or sediment entering a stream from a specific bridge construction site.

POL - Acronym for products other than logs.

Potential Yield - The level of timber harvest achievable by intensive management on every available acre.

Predominately Aspen - Classification for aspen stands which exhibit neither signs of conifer invasion nor signs of self-regeneration. Existing knowledge is inadequate to predict with certainty the type and timing of future successional stages.

Prescribed Fire - Fire burning under conditions specified in an approved plan to dispose of fuels, control unwanted vegetation, stimulate growth of desired vegetation, change successional stages, etc., to meet range, wildlife, recreation, wilderness, watershed, or timber management objectives.

Present Net Benefit (PNB) - Present (current) value of all benefits discounted to the present.

Present Net Value (PNV) - The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area. (36 CFR 219.3)

Price Quantity Relationship - A schedule of prices that would prevail in a market for various quantities of the output exchanged.

Program Budget - A plan that allocates annual funds, work force ceilings and targets among agency management units.

Project - An organized effort to achieve an objective identified by location, activities, outputs, effects, and time period and responsibilities for execution.

Record of Decision - A document prepared as a public Record of Decision in cases requiring an environmental impact statement.

Recreation Opportunity Spectrum (ROS) - Land delineations that identify a variety of recreation experience opportunities categorized into six classes on a continuum from primitive to urban. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs, based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use. The six classes are:

1. **Primitive** -- Area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted. A subclass of the primitive ROS class, used in wilderness presumptions is pristine. (Pristine -- Area is characterized by essentially pristine biophysical conditions and high degree of remoteness for both wildlife and humans with no perceptible evidence of past human use. Interaction between users is very low. All resource management activities are integrated so that natural biological processes are not adversely or artificially changed over time by human use.)

2. **Semi-primitive Non-motorized** -- Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum onsite controls and restrictions may be present but would be subtle. Motorized recreation use is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impact on recreational experience opportunities.

3. **Semi-primitive Motorized** -- Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum onsite controls and restrictions may be present but would be subtle. Motorized recreation use of local primitive or collector roads with predominately natural surfaces and trails suitable for motorbikes is permitted.

4. **Roaded Natural --** Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of man. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

5. **Rural --** Area is characterized by a natural environment that has been substantially modified by development of structures, vegetative manipulation, or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

6. **Urban --** Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans are predominant onsite. Large numbers of users can be expected both onsite and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

Recreation Visitor Day (RVD) - Twelve visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

Road Density - The measure of the degree to which the length of road miles occupies a given land area, i.e., 1 mi/sq. mi. is one mile of road within a given square mile.

Rotation - The planned number of years between the formation of a generation of trees and its final cutting at a specified stage of maturity.

Roundwood - Logs, bolts, and other round sections cut from trees.

Selection Harvest Cut - A system which removes trees individually in a scattered pattern from a large area each year. (1) Individual tree selection cutting involves the removal of selected trees of all size classes on an overstory canopy after each cut. (2) Group selection cutting involves the removal of selected trees of all size classes in groups of a fraction of an acre up to 23 acres. Regeneration occurs in the groups under conditions similar to those found in small clearcuts.

Self-Regenerating Aspen - Classification for aspen stands which exhibit the following characteristics:

1. Two or more distinct age classes.
2. Understory (generally seedling/sapling but may be poles up to 6.0" DBH) greater than 1,000 stems per acre.
   [Gullion letter of 9/30/78 to Region 2 Director of Range and Wildlife and personal communication with Wayne Sheppard and Glen Crounch (June, 1983)]

Shelterwood Cutting - The removal of a stand in a series of two or more cuts over a period of not more than 20 years. Regeneration of the new stand occurs under the cover of a partial forest canopy. A final harvest cut removes the shelterwood and permits the new stand to develop in the open as an even-aged stand.

Short Term Effects - A relative indicator as to the duration of an impact or change; the effect is repairable within a reasonable period of time following the action. See LONG TERM EFFECTS.

Stagnated Lodgepole Pine - Classification for a Lodgepole Pine stand which exhibits the following characteristics:

1. Stand age greater than 60 years.
2. Greater than 2000 stems per acre.
   "Density Management Diagram for Lodgepole Pine" by McCarter and Long, 1983.

Structural Diversity - Variety in a forest stand that results from layering or tiering of the canopy; and increase in layering leads to an increase in structural diversity.

Suitable Forest Land - Land to be managed for timber production on a regulated basis.

Suitable Range - Range which is accessible to livestock or wildlife, and which can be grazed on a sustained yield basis without damage to other resources.

Sustained Yield - The achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of the National Forest without impairment of the productivity of the land.

Tentatively Suitable Forest Land - Forest land that is producing or is capable of producing crops of industrial wood and: (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that it is possible to restock adequately within 5 years after final harvest; and (d) adequate information is available to project responses to timber management activities.

Timber Suitability Classification - National Forest System land is evaluated under each of the land management alternatives to determine its suitability for timber management. The following descriptions pertain to each of the suitability classifications;

Nonforest Land - Land which has never supported forests and lands formerly forested where timber management is precluded by development for other uses (for example, administrative sites, roads and pipeline or powerline corridors).

Forest Land - Lands capable of supporting trees whose canopies can cover 16 percent or more of the land surface, or lands formerly having had such tree cover and not currently developed for nonforest use.

Available Forest Land - Productive forest land that is not reserved or deferred from timber management (also referred to as commercial forest land).

Unavailable Forest Land - Lands classed as either productive reserved or productive deferred. Unavailable lands have been legislatively or administratively withdrawn from timber production (wilderness, wilderness study areas).

Tentatively Suitable Forest Land - Available forest lands which can be harvested without significant degradation of inherent productivity and on-site resources (for example, wildlife habitat, water quality and soil stability).

Suitable Forest Land - Suitable forest lands which will receive scheduled silvicultural treatments during the Plan period.

Nonsuited Forest Land - Available forest lands where silvicultural treatment is not a goal of management and harvest volumes (if any) are unscheduled (administrative and developed recreation sites, for example).

Transitory Range - Relatively short-term grazing areas produced by timber harvest or other activity that temporarily increases forage production.

Two-Step Shelterwood - An even-age silviculture system in which the old stand is removed in two or more successive cuttings.

Uneven-aged Management - The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection. (36 CFR 219.3)

Unsuitable Forest Land (Not Suited) - Forest land not managed for timber production because: (a) Congress, the Secretary, or the Chief has withdrawn it; (b) it is not producing or capable of producing crops of industrial wood; (c) technology is not available to prevent irreversible damage to soils productivity, or watershed conditions; (d) there is no reasonable assurance based on existing technology and knowledge, that it is possible to restock lands within 5 years after final harvest, as reflected in current research and experience; (e) there is, at present, a lack of adequate information about responses to timber management activities; or (f) timber management is inconsistent with or not cost efficient in meeting the management requirements and multiple-use objectives specified in the Forest Plan.

Vegetation Treatment - A management technique in administering the multiple-use resources of the National Forest to attain the overall goal of a healthy, vigorous forest.

A ground-disturbing activity to adjust existing plant communities to best meet the needs of vegetation and goals and objectives of the Forest.

Vegetation treatment is accomplished without impairment of land productivity and is guided by the Management Requirements of the Plan.

Vegetation treatment can be directed towards the following:

1. Providing additional recreation
2. Providing downhill ski areas;
3. Providing public service through utility corridors and electronic sites;
4. Increase opportunities for significant cultural resource discovery;
5. Improving visual quality;
6. Increasing big game winter range;
7. Improving range conditions;
8. Providing wood fiber;
9. Increasing tree growth and vigor;
10. Increasing water yield without impairing water quality;
11. Increasing the forest's resistance to insect and disease infestations;
12. Reducing unwanted fuel accumulations;

13. Returning revenue to the U.S. Treasury;
14. Maintaining industries dependent on National Forest System land management;
15. Increasing non-game wildlife habitat diversity by increasing edge.

Through commercial and noncommercial treatment activities, the above goals are achieved. Vegetation treatment activities include, but are not limited to the following:

1. prescribed burning;
2. roller chopping;
3. rotobeating;
4. rootplowing;
5. commercial timber harvest;
6. noncommercial timber treatment;
7. dozer scarification;
8. dozer piling and burning;
9. dozer scattering;
10. opening an area to firewood cutters;
11. herbicide applications;
12. biological applications (genetic stock seeding and planting, fertilizing, and thinning).

Vertical Diversity - The diversity in a stand that results from the complexity of the above ground structure of the vegetation; the more tiers of vegetation or the more diverse the species makeup, or both, the higher the degree of vertical diversity. This concept is close to but not exactly the same as "uneven-aged management", although each may influence the other. See also "Horizontal Diversity",

Visual Absorption Capability (VAC) - The ability of the landscape to absorb management activities without alternation of the characteristic landscape. Rated as high, moderate, and low.

Visual Resource - The composite of basic terrain, geologic features, water features, vegetative patterns and land use effects that typify a land unit and influence the visual appeal of the unit. For planning and management purposes the visual resource is classified into characteristic landscapes and visual variety classes.

Characteristic Landscape - Ecological land units that have common distinguishing visual characteristics of landform, vegetation patterns and soils and waterform characteristics. These landscape character types serve as a frame of reference in classifying the physical features of an area into variety classes.

Visual Variety Classes - There are three variety classes which identify the degree of visual variety in the natural characteristic landscape:

Class A - Distinctive -
Refers to those areas where features of landform, vegetation and waterform are of unusual or outstanding visual quality. They are usually not common in the character subtype.

Class B - Common -
Refers to those areas where features contain variety in form, line color and texture or combinations thereof, but which tend to be common throughout the subtype and are not outstanding in visual quality.

Class C - Minimal -
Refers to those areas whose features have little change in form, line, color or texture. Includes all areas not found in Classes A and B.

Visual Quality Objective (VQO) - Categories of acceptable landscape alteration measured in degrees of deviation from the natural-appearing landscape.

1. **Preservation** -- Ecological change only here.
2. **Retention** -- Human activities should not be evident to the casual Forest visitor.
3. **Partial Retention** -- Human activity may be evident, but must remain subordinate to the characteristic landscape.
4. **Modification** -- Human activity may dominate the characteristic landscape, but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.
5. **Maximum Modification** -- Human activity may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.

Waferwood (POL) - Aspen posts and poles, commercial firewood, mine props and pilings, and miscellaneous products including waferwood manufactured by Louisiana Pacific Corporation. Minimum utilization standards are five inches diameter at breast height (d.b.h.); four inches top merchantable diameter; 6.5 foot length.

Wildlife Habitat - The sum total of environmental conditions of a specific place occupied by a wildlife species or a population of such species.

Wildlife Structure - A site specific improvement of a wildlife or fish habitat, i.e., spring development or dugout to provide water, brushpile for cover, nestbox for birds, or rock and log placement in a stream for fish cover and pool creation.

Winter Range - Habitat used by wildlife species for food and shelter during the winter months.

Appendix L
Summary of Changes in Forest Direction and Management Area Prescriptions

APPENDIX L IS A COLLECTION OF ALL OF THE PAGES FROM CHAPTER III WITH CHANGES IN MANAGEMENT DIRECTION IN THIS AMENDED PLAN. THIS APPENDIX HAS A DUAL PAGE NUMBERING SYSTEM. THE LOWER NUMBER INDICATES THE APPENDIX PAGE NUMBER. THE UPPER NUMBER IS THE ACTUAL PAGE NUMBER FROM CHAPTER III.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Silvicultural Prescriptions	01 Provide for wildlife habitat improvement and enhancement of other renewable resources in Sale Area Improvement Plans. (0014) (FDR)	
	General:	
	*** 02 The silvicultural prescription will consider integrated pest management and long term forest health. Pests include insect, disease, animals and vegetation. Protective measures should be integrated into silvicultural treatment objectives where conditions exist or are anticipated which may cause unacceptable damage or reductions in tree stocking or growth.	
	03 The preference given to one commercial species over another during timber harvest or other silvicultural activities should be based on: a. application of economic principles' b. long term stand health and vigor, including potential insect and disease problems, c. needs for biological diversity and d. needs for wildlife habitat or other resource considerations.	
	04 Where small stands of aspen are found as inclusions in management areas, management of these aspen stands will be included in site specific silvicultural prescriptions. In general, strong consideration should be given to maintenance of these inclusions where practical. ***	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions	*** 05 Vegetation management objectives identified in silvicultural prescriptions should be defined in terms of the desired future condition of the forest vegetation within the project area: a. following the proposed treatment b. through the eventual regeneration of the treated vegetation. Identification of the desired future condition of important vegetative communities is key to successful achievement of integrated resource management. 06 The landscape is the primary unit of analysis for silviculture. A landscape is broadly defined here as an association of landforms such as an order IV watershed (diversity unit) or a distinct landform such as a mesa. Landscapes frequently consist of a variety of vegetative communities, displaying varying degrees of forest structural diversity. 07 Tailor the silvicultural prescriptions to the characteristics of each individual landscape. The following three general kinds of landscape are defined in terms of forest structure. They represent discrete examples on a continuum of landscape conditions: Open landscapes: These landscapes are typified by relatively open forests interspersed with numerous large openings. These landscapes are a result of natural ecological variability and/or past silvicultural activities. Meadows, high elevation grasslands, riparian areas, and numerous forest stands are scattered throughout the landscape. ***	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions	*** Continuous closed canopy landscapes: Landscapes dominated by continuous high canopy forest. Typically made up of mature forests with few meadow or wetland openings in the landscape. These landscapes generally display more or less continuous forest cover and distribution over a large expanse. Intermediate forest landscapes: Lying between the open and continuous forest cover landscapes is a kind which has the characteristics of both present within the same watershed or landform. These landscapes typically display a mosaic of vegetative communities which include open and closed canopy forests, meadows and wetlands. Large and small openings are commonly interspersed with forest communities in various successional stages. These landscapes generally contain a diverse mixture of even-aged and uneven-aged forests due to natural variability or past silvicultural treatment. ***	

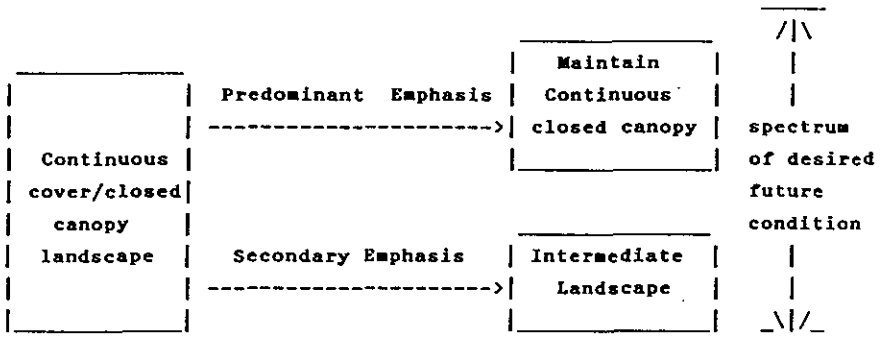
*** Denotes change from original Plan.

CONTINUATION OF: Silvicultural Prescriptions

*** DESIRED FUTURE CONDITION

08 For continuous cover/ closed canopy landscapes:

Existing Condition | Desired Future Condition



a. The desired future condition (predominant emphasis) for these continuous cover/ closed canopy landscapes will be one that emulates the current forest structure, providing for a landscape that maintains continuous high forest cover with small well interspersed openings. These landscapes will feature high within stand structural diversity (vertical diversity); providing additional horizontal diversity will be of lesser importance. Emphasize uneven-aged silvicultural systems to manage all but the aspen tree species, only breaking up the large expanses of forest where needed to prevent risk from insects, disease and wildfire, or where needed to provide plant communities used for wildlife forage.

***

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions ***	Where considered inappropriate to maintain the closed canopy landscape as a result of other resource management objectives, provide for a mix of uneven-aged and even-aged silvicultural activities that may gradually transform the landscape to one more closely resembling an intermediate landscape condition. Temporary openings will be larger and more abundant, and the landscape may display more horizontal diversity than currently exists. b. Where the silvicultural system being used is uneven-aged, harvest trees designated for timber production based on a "q" factor that will move the treated stand toward a desired distribution of size/age classes. Desired density will depend on existing stand and site characteristics, forest type, and other resource objectives. c. Where the silvicultural system being used for an area of the landscape is even-aged, harvest units should be such as to emulate the naturally occurring openings in the landscape. d. Alter large unbroken expanses of forests where needed to prevent insect, disease, and wildfire attack. e. Maintain some aspen stands in the landscape, even at the expense of spruce-fir or other late-successional stands. ***	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF: Silvicultural Prescriptions

*** 09 For open landscapes:

Existing Condition	Change agent	Desired Future Condition
Open	If landscape is naturally open / diverse ---------->	Open
Open	If current landscape is result of prev. mgt. act. ---------->	Intermediate

a. If the open landscape is the result of natural ecological site variability and is characterized by large permanent openings with well interspersed forest stands, emphasize uneven-aged silvicultural methods to maintain existing forested cover. Within stand structural (vertical) diversity will be high. Where it is more desireable for non-timber resources to maintain an even-aged stand structure (low within stand diversity) even-aged silvicultural methods may be used. Because of site characteristics, these open landscapes will continue to remain in an open landscape condition.

If the open landscape is the result of a recent natural disturbance or past silvicultural practices, emphasize silvicultural practices that gradually transform the open landscape to an intermediate landscape condition. The future landscape will be more vertically diverse and contain fewer and smaller temporary openings than currently.

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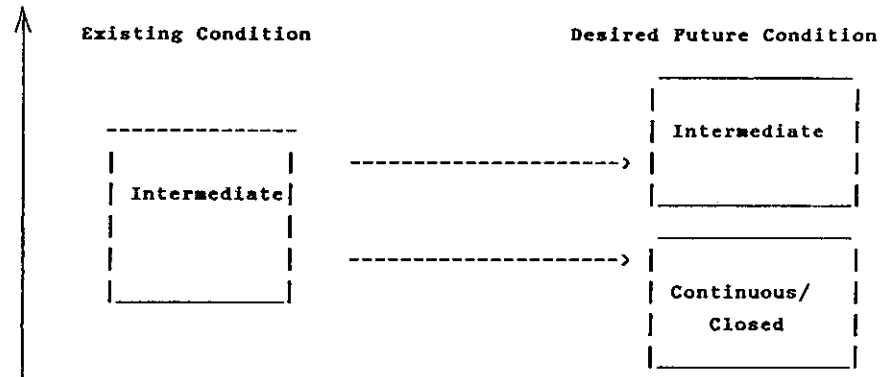
*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions *** 10 For intermediate landscapes:



a. For intermediate landscapes provide a desired future condition that either maintains the current (intermediate) extent and distribution of forest cover types and structural diversity, or gradually converts the landscape to one displaying more of the elements of a continuous closed canopy landscape. Apply both even and uneven-aged silvicultural systems to shape the patterns of growth of individual stands within the landscape so as to keep the entire mosaic relatively constant. Or where the desired future condition features more the elements of a continuous closed canopy landscape, place greater emphasis on uneven-aged systems (group and individual tree selection). Rotation ages and cutting cycles will vary in order to grow the trees to ages and in configurations typical of these intermediate landscapes.

b. Maintain some aspen stands in the landscape, even at the expense of spruce-fir or other late-successional stands.

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*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions

SILVICULTURAL SYSTEMS
General Direction

***

Landscape and Forest Type	Primary options	Secondary Options[1]
Continuous Closed Canopy Landscapes		
Ponderosa Pine	Single tree or Group Selection	Shelterwood, Seed Tree
Mixed Conifer	Single tree or Group Selection	Shelterwood, Seed Tree
Aspen	Clearcut	Group Selection
Engelmann Spruce / Subalpine-fir	Single Tree or Group Selection	Shelterwood, Seed Tree
Open Landscapes		
Ponderosa Pine	Single tree or group Selection	Shelterwood, Seed tree
Mixed Conifer	Single tree or Group Selection	Shelterwood, Seed tree
Aspen	Clearcut	Group Selection
Engelmann Spruce / Subalpine-fir	Single Tree or Group Selection	Shelterwood, Seed Tree
Intermediate Landscapes		
All Cover Types	Even aged or Uneven-aged As appropriate from above	

[1] - Secondary options are available when the primary option is inapproriate

***

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		a. The appropriate harvest methods by forest cover type are:

Forest Cover Type	Appropriate Harvest Methods* Even-aged	Uneven-aged
Interior Ponderosa Pine	SW,CC&S	GS & ST
Mixed Conifer	SW & CC	GS
Aspen	CC	--
Lodgepole pine	SW & CC	GS
Engelmann spruce-Subalpine fir	SW & CC	GS & ST

* The following abbreviations are used for harvest methods:

SW = Shelterwood
CC = Clearcut
GS = Group Selection
ST = Single Tree Selection
S = Seed Tree

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~Ponderosa pine sites which are presently non-stocked or above 30 percent slope are considered unsuitable for timber production because of regeneration difficulties. This determination does not apply to stands on slopes less than 30 percent which may become "non-stocked" in the future through management prescribed or natural means such as fire.~~

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		~~When a harvest method other than shelterwood is used in interior ponderosa pine, remove trees in units less than one acre in size.~~ ~~* Mixed Conifer includes interior Douglas fir and white fir forest cover types.~~

*** (8001SJ) (FDR)

b. Utilization standards by National Forest for live and dead material are:

Species	Min. DBH.	Min Top Dia.	Length (Feet)	%Net of Gross
Live Trees - All Periods				
Sawtimber				
Conifers	7.0.	6.0	8	33-1/3
Aspen	7.0.	6.0	8	33-1/3
Products Other than Sawtimber	5.0.	4.0	6-1/2	----
Dead Trees - All Periods				
Sawtimber				
Conifers	8.0.	6.0	16	33-1/3*

*** Denotes change from original Plan.

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions

growth.

1) Clearcut:

Forest Cover Type	Rotation Age	Growing Stock Level	Thinning Cycle
Mixed Conifer	100 to 180 yrs.	80 to 150	20 to 40 yrs.
Spruce-fir	100 to 180 yrs.	80 to 180	20 to 40 yrs.
Lodgepole Pine	90 to 140 yrs.	80 to 140	10 to 30 yrs.
Aspen	70 to 120 yrs.	NA	NA
Other	100 to 180 yrs.	80 to 120	20 to 40 yrs.

2) Two-Step Shelterwood:

Forest Cover Type	Rotation Age	Growing Stock Level	Thinning Cycle
PP, MC, and SP	90 to 180 yrs.	70 to 160	20 to 40 yrs.

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Mixed conifer and Spruce-fir; BA 20-40 for Lodgepole Pine BA 20-60 for other forest cover types
		Second cut (removal cut): Remove all overstory when regenerated stand meets minimum stocking standards.
		3) Three-step shelterwood: Rotation age, growing stock level and cutting cycle is the same as two-step shelterwood.
	*** ↕ ***	First Cut (preparatory cut): Remove 10 to 40 percent of the basal area or, Cut to BA 50-80 for Interior Ponderosa Pine, Mixed Conifer, and Lodgepole Pine. Cut to BA 50-80 for all other forest cover types.
		Second Cut (seed cut): Remove 40 to 50 percent of the remaining basal area or

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions

after preparatory cut for other species.

Third Cut (removal cut):
Remove all overstory when regenerated stand meets minimum stocking standards.

4) Selection:

Forest Cover Type	Residual BA	Thinning Cycle
SF and MC	80 to 180	20 to 40 yrs.
Other	40 to 120	20 to 30 yrs.

*** ↕ ***

(8003SJ) (FDR)

d. To facilitate the control of soil erosion within acceptable tolerance:

1) Permit conventional logging equipment on slopes of less than 20 percent in shale capability areas and on slopes of less than 25 percent in hard sediment capability areas that have less tha 20 percent coarse fragments (gravel, cobble, stone) where soil surveys or site-specific soil data are unavailable.

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		The above restrictions may be modified on the basis of more site specific soils information. (8004SJ) (FDR)
	*** 11 Clearcuts may be applied to dwarf mistletoe infected stands of any forest cover type. *** (0138) (FDR)	

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)	08 Make Christmas trees, firewood and other roundwood products available in areas where other resource objectives can be accomplished through commercial sales or personal use. (2502SJ) (FDR)	
Reforestation (E04)	01 Establish a satisfactory stand on cutover areas, emphasizing natural regeneration within five years after final harvest except: a. For permanent openings that serve specific management objectives; b. When other resource objectives dictate a different period such as spruce-fir clearcuts where planting must occur within three years after harvest; ~~c. In those lodgepole pine stands where the period for natural regeneration should be extended up to seven years after clearcutting; and~~ d. When provided for otherwise in specific management prescriptions. (0013) (FDR)	~~a. Establish a seven-year regeneration period for lodgepole pine stands meeting the following criteria:~~ ~~(1) Natural regeneration is expected to provide satisfactory stocking within 7 years after cutting;~~ ~~(2) Establishment of trees is not impaired by competing vegetation, and~~ ~~(3) Maintenance of favorable site condition does not require additional site preparation.~~ ~~(6005) (FDR)~~ b. Minimum stocking standards by productivity and forest cover type.

Forest Cover Type	Site Prod. (Ft. 3/A/ Yr.)	Planting* Densities (Trees/A)
Spruce-fir	85+	340-1000
	50-84	340-1000
	20-49	340-1000
Aspen	All	---
Mixed Conifer	85+	340-680
	50-84	340-680
	20-49	340-680
Lodgepole Pine	85+	360-680
	50-84	360-540
	20-49	300

Amendment #12 removes the seven year regeneration option for lodgepole pine (9/1/91)

Denotes deleted Text.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Range Resource Management	03 Protect regeneration from livestock damage in areas managed for timber production. (2051SJ) (02A)	a. Exclude livestock from plantations and naturally regenerating areas when utilization of useable forage exceeds 20 percent or when seedling stocking is less than the desired number per acre as shown in Forest Direction under management activity "Reforestation." (7626SJ) (02A)
Range Improvement and Maintenance	01 Construct and maintain allotment boundary fences, short drift fences and water developments necessary to implement management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives. (2039SJ) (02A)	
Silvicultural Prescriptions	01 Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, vistas, diversity and insect and disease control. (0159) (02A)	
*** ↕ ***	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction.	a. Silvicultural Standards are specified in the Forest Direction.

*** Denotes change from original Plan.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		b. Silvicultural Standards: (These standards may be exceeded on areas managed for old growth) 1) Clearcut.*

Forest Cover Type	Lodgepole Pine	Aspen
Rota-	90-140	70-90

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT PRESCRIPTION 02A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		tion Yrs Yrs Age Growing Stock Level 80-140 N/A Thinning cycle N/A N/A * Does not apply on slopes > 60%. Restrict to blocks < 20 acres in size. 2) Two-Step Shelterwood:* Forest Cover Type Interior Ponderosa Pine Rotation Age 100-140 Yrs Growing Stock Level 80-120 Thinning Cycle 20-30 Yrs

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~First Cut (seed cut) Cut to BA 30-50~~ ~~Second Cut (removal cut) Remove all overstory when re-generated stand meets minimum stocking standards.~~ ~~* Does not apply on slopes > 30% Restrict to units of < 20 acres in size.~~

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Extend rotation age to 300 years on selected trees within the foreground zone along roads and trails. 3) Three-Step Shelterwood.*

Forest Cover Type	Engelmann spruce-Subalpine Fir & Mixed Conifer
Rotation Age	180-200 Yrs
Growing Stock Level	N/A
Thinning Cycle	N/A

First Cut (preparatory cut). Remove up to 30 percent of the basal area.

Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT PRESCRIPTION 02A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Cut to: BA 60-80 10-20 Yrs after preparatory cut Third Cut (removal cut). Remove all overstory when regenerated stand meets minimum stocking standards. * Does not apply on slopes > 60% Restrict to blocks of < 20 acres in size.

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural Prescriptions

(8055SJ) (02A)

~~03 Apply intermediate treatments in interior ponderosa pine forest cover type to maintain growing stock level standards. (2538SJ) (02A)~~

04 Utilize firewood material using both commercial and noncommercial methods.
(0147) (02A)

05 For management purposes, a cut-over area is considered an opening until such time as:

- Increased water yield drops below 50 percent of the potential increase;
- Forage and/or browse production drops below 40 percent of potential production;
- Deer and elk hiding cover reaches 60 percent of potential;
- Minimum stocking standards by forest cover type and site productivity are met; and
- The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape.

(0500) (02a)

a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cutover area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Improvement and Maintenance	01 Construct and maintain allotment boundary fences, short drift fences and water developments necessary to implement management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives. (2039SJ) (02B)	
Silvicultural Prescriptions	01 Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, diversity and insect and disease control. (0159) (02B)	
	02 Manage forest cover types according to the following objectives: a) Interior ponderosa pine on slopes <30%: Manage to retain or create mature character. Mature stands should have moderate to large diameter trees adequate to maintain an open park-like appearance. b) Aspen: Maintain an attractive mix of stands with variety of sizes, heights and ages. Do not convert to conifers. c) Mixed Conifer: Manage for a representation of large tree character. Introduce small scale diversity of different age classes. d) Engelmann Spruce-Subalpine Fir: Manage to strive for a variety of age class distribution (young to old). (2435SJ) (02B)	
	*** 03 Manage forest cover types using the primary and secondary methods specified in the Forest Direction. - Clearcut in aspen and lodgepole. - Shelterwood in interior ponderosa pine, mixed conifer - and Engelmann spruce-subalpine fir. (0463) (02B)	a. Apply harvest treatments to forest cover types as specified below on at lease 80% of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (02B)

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		b. Silvicultural Standards are specified in the Forest Direction. 1) Clearcut.* Forest Cover Type Lodgepole Pine / Aspen Rotation Age: 90-140 Yrs / 70-90 Yrs Growing Stock Level: 80-140 / N/A Thinning cycle: 20-30 Yrs / N/A * Does not apply on slopes > 60%. Restrict to units <5 acres in size. 2) Two-Step Shelterwood:* Forest Cover Type Interior Ponderosa Pine

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~Rotation Age~~ ~~100-140 Yrs~~
		~~Growing Stock Level~~ ~~50-100~~
		~~Thinning Cycle~~ ~~20-30 Yrs~~

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~after preparatory cut~~
		~~Third Cut (removal cut). Remove all overstory when regenerated stand meets minimum stocking standards.~~
		~~* Does not apply on slopes > 60%. Restrict to units <5 acres in size (8058SJ) (02B)~~
	~~04 Apply intermediate treatments to maintain growing stock level standards. (0140) (02B)~~	
	05 Utilize firewood material using both commercial and noncommercial methods. (0147) (02B)	
	06 For management purposes; a cut-over area is considered an opening until such time as: - Increased water yield drops below 50 percent of the potential increase; - Forage and/or browse production drops below 40 percent of potential production; - Deer and elk hiding cover reaches 60 percent of potential - Minimum stocking standards by forest cover type and site productivity are met; and - The area appears as a young forest rather than a restocked opening, and takes on the appearance of the adjoining characteristic landscape. (0500) (02B)	a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/acre)	Tree Height 1/ (% of the adjacent mature stand height)

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Improvement and Maintenance	01 Construct and maintain allotment boundary fences, short drift fences and water developments necessary to implement management systems. Use on-site or rustic materials and mechanical methods compatible with prescription objectives. (2039SJ) (03A)	
Silvicultural Prescriptions	01 Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, diversity and insect and disease control. (0159) (03A)	
	*** 02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. *** ~~- Clearcut in aspen and lodgepole.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ ~~(0463) (03A)~~	~~a. Apply harvest treatments to forest cover types as specified below on at lease 80% of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (03A)~~ b. Silvicultural Standards: are specified in the Forest Direction. ~~1) Clearcut.~~ ~~Forest Cover Type~~

*** Denotes change from original Plan.

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES		
CONTINUATION OF: Silvicultural Prescriptions		Lodgepole Pine	Aspen	Other Forest Cover Types
		Rotation Age 90-140 Yrs	90-120 Yrs	100 or More Yrs
		Growing Stock 80-140	N/A	60 to 120

Deleted General Direction or Standard & Guidelines replaced by Management Requirements beginning on page III - 35 of the Forest Direction.

MANAGEMENT PRESCRIPTION 03A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions

Level

Thinning cycle	20-30 Yrs	N/A	20 to 30 yrs

2) Two-Step Shelterwood:

	Forest Cover Type	
	Engelmann spruce-sub-alpine fir, Interior Ponderosa Pine & Mixed Conifer	Other Forest Cover Types
Rotation Age	100-180 yrs	100 or more yrs
Growing Stock Level	80-160	60-120
Thinning Cycle	20-30 yrs	20-30 yrs

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		First cut (Seed cut): Remove 40 to 70 percent of the basal area or Cut to: BA 25-60 BA 20-60 Second Cut (Removal cut): Remove all overstory when regenerated stand meets minimum stocking standards. 3. Three-Step Shelterwood: Forest Cover Type

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MANAGEMENT PRESCRIPTION 03A

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES	
CONTINUATION OF: Silvicultural Prescriptions		Engelmann spruce-sub-alpine fir, Interior Ponderosa Pine & Mixed Conifer	Other Forest Cover Types
		Rotation Age 100-180 yrs	100 or more yrs
		Growing Stock Level 80-160	60-120
		Thinning Cycle 20-30 yrs	20-30 yrs
		First cut (preparatory cut): Remove 10 to 40 percent of the basal area or Cut to: BA 60-80	BA 50-80
		Second Cut (Seed cut): Remove 40 to 50 percent of the remaining basal area or Cut to: BA 25-50	BA 20-50
		10-20 yrs	10-20 yrs

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		~~after preparatory cut~~ ~~after preparatory cut~~
		~~Third Cut (removal cut): Remove all overstory when regenerated stand meets minimum stocking standards.~~
		~~(6300) (03A)~~
	03 Timber will be available on a low yield basis, although sustained non-declining timber yield is not planned. (2539SJ) (03A)	

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Inland Ponderosa Pine 30 70% Mixed Conifers 30 75% Lodgepole Pine 30 75% Engelmann Spruce-Subalpine fir 30 75% Aspen 30 75% 1/ Applies to trees specified as minimum stocking level. 2/ Percent of plots or transects that are stocked. (0316) (03A)
Water Resource Improvement and Maintenance	01 Permanent openings may be employed to enhance water production. (0497) (03A)	

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands		with forage species. b. on slopes . 60%. Manage for natural succession to favor wildlife management indicator species, deer and elk. 3. Mixed Browse: On all slopes, manage under a 100-year rotation to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. Plant additional browse species. 4. Grassland: On all slopes, manage to retain in forage to favor wildlife management indicator species; elk, and for livestock. Reseed with forage species. (6028SJ) (04B)
	*** 02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions" in the Forest Direction. *** (0041SJ) (04B)	

*** Denotes change from original Plan.

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MANAGEMENT PRESCRIPTION 04B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. ~~- Clearcut in aspen.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ (2526SJ) (04B)	~~a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction.~~ ~~(607A) (04B)~~ *** b. Silvicultural Standards are specified in the Forest Direction. ~~1) Clearcut.~~ ~~Forest Cover Type~~ ~~Lodgepole~~

*** Denotes change from original Plan.

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES	
CONTINUATION OF: Silvicultural Prescriptions		Pine	Aspen
		Rotation Age	90-140 Yrs	70-90 Yrs
		Growing Stock Level	80-120	N/A
		Thinning cycle	20-30 Yrs	N/A

* Does not apply on slopes > 60%

2) Two-Step Shelterwood.*

Forest Cover Type	Interior Ponderosa Pine
Rotation Age	100-140 yrs. on 80% of type. 200 + yrs. on 20% of type.

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Growing Stock Level: 80-120 on 80% of area. 160-180 on 20% of area.
		Thinning Cycle: 20-30 Yrs
		First Cut (seed cut). Cut to: BA 30-50
		Second Cut (removal cut) Remove all overstory when regenerated stand meets minimum stocking standards.

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions (E03, 06 & 07)		* Does not apply on slopes > 30% 3) Three-Step Shelterwood:* Forest Cover Type: Engelmann spruce-Subalpine Fir & Mixed Conifer Rotation Age: 180-200 Yrs Growing Stock Level: 110-130 Thinning cycle: 25-35 Yrs First Cut (preparatory cut). Remove up to 30 percent of the basal area. Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or Cut to: BA 60-80 10-20 yrs after preparatory cut Third Cut (removal cut). Remove all overstory when regeneration stand meets minimum stocking standards.

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MANAGEMENT PRESCRIPTION 04B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Diversity on National Forests and National Grasslands (A00)		species; elk. Seed with forage species. b) On slopes > 60%: Manage for natural succession to favor wildlife management indicator species; deer and elk. Spot burn to improve forage. 3) Mixed Browse: On all slopes, manage under a 100-year rotation to strive for a variety of age class distribution from young to mature to favor wildlife management indicator species; deer, elk. Plant additional browse species. 4) Grassland: a) On slopes: On all slopes, manage to retain in forage to favor wildlife management indicator species; elk, and for livestock. Reseed with forage species. (6032SJ) (05B)
	*** 02 Manage commercial forest cover types to meet diversity objectives through harvest treatments specified under management activity "Silvicultural Prescriptions" in the Forest Direction. *** (0041SJ) (05B)	

*** Denotes change from original Plan.

MANAGEMENT PRESCRIPTION 05B

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF:		
Silvicultural Prescriptions ***	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. ~~- Clearcut in aspen.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ (2526SJ) (05B)	~~a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction.~~ ~~(6074) (05B)~~ *** b. Silvicultural Standards are specified in the Forest Direction.

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		1) Clearcut.*

Forest Cover Type	Lodgepole Pine	Aspen
Rotation Age	90-140 Yrs	70-90 Yrs
Growing Stock Level	80-120	N/A
Thinning Cycle	20-30 Yrs	N/A

* Does not apply on slopes > 60%

2) Two-Step Shelterwood:*

Forest Cover Type	Interior Ponderosa Pine

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Rotation Age: 100-140 yrs. on 80% of type. 200 + yrs. on 20% of type.
		Growing Stock Level: 80-120 on 80% of area. 160-180 on 20% of area.
		Thinning Cycle: 20-30 Yrs
		First Cut (seed cut). Cut to: BA 30-50

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Second Cut (removal cut) Remove all overstory when regenerated stand meets minimum stocking standards.
		* Does not apply on slopes > 30%
		3) Three-Step Shelterwood:*
		Forest Cover Type: Engelmann spruce-Subalpine Fir & Mixed Conifer
		Rotation Age: 180-200 Yrs
		Growing Stock Level: 110-130
		Thinning cycle: 25-35 Yrs
		First Cut (preparatory cut). Remove up to 30 percent of the basal area.
		Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or Cut to: BA 60-80 10-20 yrs after preparatory cut
		Third Cut (removal cut). Remove

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Silvicultural Prescriptions (E03, 06 & 07)	01 Maintain and manage forested inclusions to provide a high level of forage production, wildlife habitat, and diversity. (0333) (06B)	
***	02 Manage forest cover types using the primary and secondary harvest methods specified in the Forest Direction. - ~~Clearcut in aspen, mixed conifer, lodgepole pine, and engelmann spruce-subalpine fir.~~ - ~~Shelterwood in interior ponderosa pine. (2529SJ) (06B)~~	~~a. Apply harvest treatments to forest cover types as specified below on at least 80 % of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction. (6074) (06B)~~ b. Silvicultural Standards are specified in the Forest Direction.

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
Range Improvement and Maintenance	01 See the "Diversity on National Forests and National Grasslands" management activity for specific vegetation treatment for livestock objectives. (2028SJ) (07E)	
	02 Invest in cost-effective allotment management or forage value rating to moderately high or better (0327) (07E)	a. Base range condition on the standards in Range Analysis Handbook (FSH 2209.21). (6290) (07E) b. Structural improvements will not adversely affect big-game movement. (6182) (07E)
Silvicultural Prescriptions ***	01 Manage Forest cover types using the primary and secondary methods specified in the Forest Direction. ~~- Clearcut in aspen and lodgepole.~~ ~~- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.~~ (0463) (07E)	~~a. Apply harvest treatments to forest cover types as specified below on at least 80% of the forest cover type. Up to 20 percent of the type may be treated using other harvest methods specified in Forest Direction.~~ ~~(6074) (07E)~~ *** b. Structural Standards are specified in the Forest Direction.

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		1) Clearcut:

	Forest Cover Type	
	Lodgepole Pine	Aspen
Rotation Age	90-140 Yrs	70-90 Yrs
Growing Stock Level	80-140	N/A

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Thinning cycle 20-30 Yrs N/A
		2) Two-Step Shelterwood:
		Forest Cover Type
		Interior Ponderosa Pine
		Rotation Age 100-140 yrs. on 95% of type. 200 + yrs. on 5% of type.
		Growing Stock Level 80-120 on 95% of area. 160-180 on 5% of area.
		Thinning Cycle 25-35 Yrs
		First Cut (seed cut) Cut to BA 30-50

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MANAGEMENT PRESCRIPTION 07E

MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		Second Cut (removal cut) Remove all overstory when regenerated stands meet minimum stocking standards.
		3) Three-Step Shelterwood:
		Forest Cover Type
		Engelmann spruce-Subalpine Fir & Mixed Conifer
		Rota- 180-200

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MANAGEMENT ACTIVITIES	GENERAL DIRECTION	STANDARDS & GUIDELINES
CONTINUATION OF: Silvicultural Prescriptions		tion Age Yrs
		Growing Stock Level 110-130
		Thinning Cycle 25-35 Yrs
		First Cut (preparatory cut). Remove up to 30 percent of the basal area.
		Second Cut (seed cut). Remove 40 to 50 percent of the remaining basal area or Cut to: BA 60-80 10-20 Yrs after preparatory cut
	02 Apply intermediate treatments to maintain growing stock level standards. (0140) (07E)	
	03 Utilize firewood material using both commercial and noncommercial methods. (0147) (07E)	Third Cut (removal cut). Remove all overstory when regenerated stand meets minimum stocking standards.
		(8027SJ) (07E)

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MANAGEMENT PRESCRIPTION 07E

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