



United States  
Department of  
Agriculture

Forest  
Service

Southwestern  
Region



# Apache-Sitgreaves National Forests Plan



*"A conservationist is one who is humbly aware that with each stroke he is writing his signature on the face of his land. Signatures of course differ, whether written with axe or pen, and that is as it should be."*

*Aldo Leopold  
1887-1948  
The Sand County Almanac*

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# 1. Introduction

## ***PURPOSE OF THE PLAN***

This plan defines the direction for managing the Apache-Sitgreaves National Forests for the next 10-15 years.

The Plan provides for integrated multiple use and sustained yield of goods and services from the Forest in a way that maximizes long-term net public benefits in an environmentally sound manner.

Preparation of the Forest Plan is required by the Renewable Resources Planning Act (RPA), as amended by the National Forest Management Act (NFMA).

The Forest Plan replaces all previous resource management plans prepared for the Forest. Upon approval of the Forest Plan, all subsequent activities affecting these lands, including budget proposals, will be based on the Forest Plan [36 CFR 219.10 (e)]. In addition, all permits, contracts, and other instruments for the use and occupancy of these National Forest System Lands must be consistent with the Forest Plan [36 CFR 219.10 (e)].

The Planning principles in the NFMA regulations [36 CFR 219.1 (b)] were integrated throughout the process. These principles are:

- 1) Establishment of goals and objectives for multiple-use and sustained-yield management of renewable resources without impairment of the productivity of the land;
- 2) Consideration of the relative value of all renewable resources, including the relationship of nonrenewable resources, such as minerals, to renewable resources;
- 3) Recognition that the National Forests are ecosystems and their management for goods and services requires an awareness and consideration of the interrelationships among plants, animals, soil, water, air, and other environmental factors within such ecosystems;
- 4) Protection and, where appropriate, improvement of the quality of renewable resources;
- 5) Preservation of important historic, cultural, and natural aspects of our national heritage;
- 6) Protection and preservation of the inherent right of freedom of American Indians to believe, express, and exercise their traditional religions;
- 7) Provisions for the safe use and enjoyment of the forest resources by the public;
- 8) Protection, through ecologically compatible means, of all forest and rangeland resources from depredations by forest and rangeland pests;
- 9) Coordination with the land and resource planning efforts of other Federal agencies, State and local governments, and Indian tribes;
- 10) Use of a systematic, interdisciplinary approach to ensure coordination and integration of planning activities for multiple-use management;
- 11) Early and frequent public participation;
- 12) Establishment of quantitative and qualitative standards and guidelines for land and resource planning and management;
- 13) Management of National Forest System lands in a manner that is sensitive to economic efficiency; and
- 14) Responsiveness to changing conditions of land and other resources and to changing social and economic demands of the American people.

Land management prescriptions and standards and guidelines are a statement of the Plan's management direction. Projected output, services, and rates of implementation are, however, dependent on the annual budget process. Implementation schedules can be changed to reflect annual budget and amended accordingly after appropriate public notification.

## ***ORGANIZATION OF THE FOREST PLAN DOCUMENTATION***

Chapter 2 of the Forest Plan describes the major issues and concerns and how the proposed action responds to issues and concerns. Chapter 3 summarizes the AMS. It depicts the current levels of goods and services produced, and projects supply and expected future use on the Forest. Chapter 4 details the mission, goals, objectives, proposed vicinity, and timing of management practices; projects the conditions of the Forest by the end of the fifth period from implementation of the Plan; and describes management direction and prescription and associated resource management standards and guidelines. A management area map, keyed to the prescriptions in Chapter 4 is included with the EIS/PLAN package. Chapter 5 is the monitoring plan. The Glossary defines terms used in the Plan. Appendix A lists activity codes.

## **2. Public Issues and Management Concerns**

### **OVERVIEW**

A Notice of Intent to prepare an EIS appeared in the Federal Register in September 1980. Key people, groups, and organizations were contacted to discuss the process. The Tonto National Forest met with the Governor and Congressional delegation on behalf of the Arizona Forests. Forest employees were briefed. Notices, paid and free, were placed with the news media across the State, and a State-wide scoping effort was announced involving every Forest in Arizona except the Coronado, a Forest far along in planning. The Arizona Forests developed a coordinated plan to solicit and analyze public opinion.

Posters with the same information as mentioned above were placed in stores, post offices, and gathering places, in communities on or near the Apache-Sitgreaves National Forests. Radio stations in Show Low, Holbrook, Winslow, and Clifton ran public service announcements (PSA's) concerning ICO meetings. News releases were published in all local papers during the comment period.

A response booklet was designed that contained an overview of planning. The booklet was divided by resource area by Forest, including general descriptions of each Forest and individual pages categorized by RPA resource elements. Over 14,000 booklets were mailed to people in Arizona and elsewhere. Another 8,000 booklets were distributed at public meetings, workshops, and by other means. In addition, 32,000 interest response cards were mailed to people who had applied for Christmas tree permits for the previous year.

State-wide and local public meetings and workshops were held to explain the process and gather input. The Forest participated in eight separate meetings, four of them State-wide, four locally; two of these four were held in concert with neighboring Forests.

An additional involvement plan was developed, approved, and implemented concerning outside agency coordination. Meetings were held in the afternoon of the same day of the general public meetings mentioned above. The purpose was the same, but the meetings afforded a more personal contact with County, State, and local agency officials and planners.

The booklet generated about 20,000 detailed responses pertinent to the Arizona Forests. The public meetings comments were coded and added to the comment data base. All together, the public involvement effort generated over 7,000 comments specific to the Apache-Sitgreaves National Forests.

A detailed content analysis was done on all public input in January and February 1981 to determine the context and intensity of various issues raised by commentors.

The Issues raised by the public were compared and added to concerns raised by managers at the beginning of the process. Forest managers compiled a list of preliminary ICO's based on previous experience, input already gathered for the Regional Guide, newspaper clippings, and internal input.

### **FINAL ICO'S**

All comments were treated as preliminary ICO's and compiled for review and decision by the Management Team. Each comment was subjected to a series of screens to determine whether or not it was broad enough in scope, within the Regional Forester's authority to resolve, and within the Forest's physical and fiscal capability to resolve. The comments were further screened as to their duration, quantifiability, intensity, and whether the ICO's dealt with existing or anticipated conflicts. A list of the final ICO's was sent to the Regional forester for approval, and to the public for comment and information on July 1981.

## ROADLESS AREA RE-EVALUTION

After the 9<sup>th</sup> Circuit Court's decision on the adequacy of the RARE II EIS, every jurisdiction was again contacted to help re-evaluate the roadless inventory. The roadless/wilderness issue was resolved in the summer of 1984 with the passage and signing into law of the Arizona Wilderness Bill.

### Issue Resolution/Contacts

The major current issues were identified for the Apache-Sitgreaves National Forests, and an action plan was implemented to discuss these issues and the potential to resolve them, with key members of environmental groups, recreation groups, agency officials, industry, congressional representatives, and interested individuals. Four meetings were held covering the local and metropolitan areas. Potential outputs for each resource area were discussed, as well as a preliminary range of alternatives, excluding any preferred alternative. The purpose of these contacts was to display the ranges of outputs, and the effects caused by changes in budget level.

## ISSUES

The following information describes the major issues and opportunities which were selected to be addressed in the planning process and how the proposed Forest Plan responds to each issue.

## TIMBER AND FUELWOOD

What timber harvest level should be maintained – reforestation is inadequate in some areas. In others, slash is not being adequately treated. The level of timber harvest affects the opportunities for management and use of other resources, and the economic stability of local communities. There are views that the current timber harvest level is too high, too low, and just right. Some feel that timber harvest on steep slopes should not be initiated while others felt it would be appropriate.

Other issues and concerns have to do with the fact that demand for many species of fuelwood may soon be or already is exceeding supply in some areas; that commercial and personal-use wood cutters compete for the available supply; that logging debris and residue be made available for firewood where timber has been cut; and requirements be placed on logging operations to yard unmerchantable material (YUM) for other uses, thereby reducing waste of material, but increasing cost of timber. The information on these firewood sources should be made available to the public.

### Quantifiable Comparison

	PERIOD 1	
Sawtimber Produced	MBF	99,000
Long-Term Sustained Yield Capacity	MCF	36,813
Fuelwood	MBF	15,707
% of Demand Met (Fuelwood)		63%

### Non-Quantifiable Comparison

There will be approximately 781,000 acres managed for timber under the suitable category. Management for wildlife habitat, recreation development and other uses and activities, and modifying silvicultural practices to accommodate these uses and activities, are reducing the growth rate and potential amount of timber available for harvest.

Present age class distribution is so unbalanced that even 200 years of management will not totally create an even distribution, though it will be much closer to even distribution after 200 years.

Fuelwood demand will not be met in any decade and if population projections come true, demand and supply will be even further apart in 50 years.

## RANGE MANAGEMENT

The range resources are perceived as being overgrazed in some areas there are livestock conflicts with other resources on range lands. These conflicts occur between livestock grazing and timber, wildlife, riparian resources, soils, and watershed resources. Range management forage improvement practices such as pinyon-juniper overstory modification are controversial.

Other factors include livestock overuse of riparian areas, woodland species are increasing on land suitable for grazing, some allotments may need reductions in numbers while others have the potential for increase, and conversion of woodland to grassland will reduce the long term supply of firewood.

### Quantifiable Comparison

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	PERIOD 1	
Use	MAUMS	204
Capacity	MAUMS	204
% of Maximum		100

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MAUMS = Thousands of Animal Unit Months

### Non-Quantifiable Comparison

Use will be balanced with capacity in the first decade through the use of structural and non-structural improvements and implementation of revised allotment management plans.

## SOIL AND WATER

Water quality is adversely impacted in some areas by activities and management practices. Manipulation of vegetation and activities such as road building, off-road-vehicle use, and grazing are believed to be causes of soil movement. Downstream demand for water exceeds supply.

### Quantifiable Comparison

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	PERIOD 1	
% of Forest in Unsatisfactory Condition		17
Water Yield	MACFT	379

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MACFTS = Thousands of Acre Feet



### Non-Quantifiable Comparison

The maximum emphasis is provided to resolve unsatisfactory watershed conditions by the end of the fourth decade. Soil movement will be greater than background levels proportionate to the amount and types of activities occurring. However, balancing permitted use and grazing capacity in Period 1, building substantially less arterial and collector roads, opening up dense pinyon juniper woodlands by fuelwooding, and other direct and indirect improvements; all account for watershed enhancement.

All alternatives will reduce on-site soil loss by the year 2030 which should enhance long-term productivity of all other resources.

The proposed action provides a modest increase in water yield.

## LAND OWNERSHIP

What adjustments in ownership should be made, considering community expansion in Show Low, Pinetop, and Lakeside. Intermingled ownerships, resource and administrative needs, and property line identification are of concern to the public and land managers.

Consideration should be given to land exchange and townsite act sales to meet the special needs of local communities for support services such as land fills, airports, sewage treatment facilities, and fire protection. Management efficiency needs to be addressed.

### Non-Quantifiable Comparison

The proposed action provides for personnel and contracting options to respond to all feasible land exchange proposals in a timely manner. Land lines are located and all desirable rights-of-way are purchased before the end of the third decade. Special needs of communities are met where appropriate.

## RECREATION MANAGEMENT

The demand for developed recreation sites exceeds the availability of improvements, particularly around lakes and along streams – Miles of trails are insufficient in high demand areas such as along the Mogollon Rim, in the Pinetop/Lakeside area, and in the vicinity of Big Lake and Black River.

This issue includes consideration of the level of maintenance of recreation improvements and trails, the impact of recreational use on lakes and streams, public safety, allowable length of visit and length of visitor use season, insufficient law enforcement and protection, and proximity to metropolitan areas of New Mexico and Arizona.

### Quantifiable Comparison

PERIOD 1		
Developed Recreation	MRVDS	759
% of Estimated Demand		100
Dispersed Recreation	MRVDS	714
<u>Miles Trail - High Use Areas</u>		<u>25</u>

MRVDS = Thousands of Recreation Visitor Days

### Non-Quantifiable Comparison

All existing developed sites are upgraded to a higher maintenance level. Visitor use seasons are lengthened at selected sites. Dispersed recreation in high-use areas is managed at a high intensity level, even though use will increase significantly. Quality settings such as near lakes and streams will be managed to minimize adverse effects. The highest priority in trails will be development of the General Crook Trail along the Mogollon Rim. Routes will be identified near Pinetop, Lakeside, Big Lake, and/or Black River.

## ORV MANAGEMENT

Damage from Off Road Vehicle use is occurring in certain areas. Conflicts are occurring in both the winter and summer. Other factors concern motorized vs. non-motorized use on and off trails in the summer, demands for open/closed areas to ORV use, and resource damage from motorized vehicles.

There is concern over the conflict between snowmobiles and cross country skiers.

### Quantifiable Comparison

	Thousands Acres
ORV Restriction Acres	322,954 *
Acres with No ORV Restrictions	1,688,870

### Non-Quantifiable Comparison

The proposed action has approximately 84% open to ORV use. However, a significant number of acres in wildlife habitat areas and ROS areas classified as primitive or semi-primitive non-motorized are not in the 322,954, yet management calls for no motorized activities. More intensive dispersed area management will be implemented along the Mogollon Rim. Higher funding levels allow for more effective enforcement of management actions. Unwanted ORV use near developed sites will be controlled. Approximately 1,500 acres will be managed strictly for cross-country skiing, and 34,160 acres will be managed specifically for motorized snow travel.

## WILDERNESS MANAGEMENT

Visitors to existing and recommended wildernesses are experiencing conflict with the Apache Indians, range management, and fire management. Wilderness classification restricts access by the handicapped.

### Non-Quantifiable Comparison

The issue of access to the summit of Mt. Baldy cannot be resolved as it is on Indian lands. However, a better signing program will be implemented along the boundary and more frequent personal visitor contacts made. There will be an increase in coordination with White Mountain Apache representatives concerning management of the Mt. Baldy Wilderness. Fire management activities will be prescribed as part of maintaining the overall wilderness character.

## FISH AND WILDLIFE

Managers and the public are concerned that grazing, timber harvesting, and associated activities will reduce fish and wildlife habitat or adversely affect animal diversity and populations. At the same time, wildlife is dependent on a variety of age classes and stand conditions that can most efficiently be perpetuated through timber harvest. Many

species are dependent upon riparian areas. Conflicts in these areas are occurring between recreation, road construction, grazing, and water use demands. Although riparian areas account for less than 0.1% of our total land area, they receive the heaviest demands.

#### Quantifiable Comparison

Fish and Wildlife Habitat		
% of Diversity Unit Managed for Old Growth	18	
Potential Change from existing – Elk		+18
– Turkey		+15
Acres Riparian in Satisfactory or Better Condition		8,352 (Per.1)
		*10,101 (Per.3)
*Total Classified in Forest Database		

#### Non-Quantifiable Comparison

The proposed action strongly emphasizes old growth with 18% of each diversity unit managed toward old growth. This is 9% greater than minimum management requirements, and much greater than current which does not emphasize old growth. Big game habitat capability significantly improves in the proposed action, and riparian area condition class will be satisfactory on 80% of the areas by period 1, and 100% by Period 3.

## TRANSPORTATION

The transportation system, standards, and maintenance do not always accommodate the wide range of vehicles such as motor homes, camp trailers, logging trucks, and automobiles that travel the roads – Productive land is lost to transportation corridors. Demand is increasing for more signed trails and more access is wanted by various commodity users. Many forest visitors feel we have too many roads and there are conflicts between the number of roads, wildlife, and dispersed recreation.

#### Quantifiable Comparison

The following output for roads and trails would have to be accomplished as a means of responding to the transportation issue. These estimated outputs were developed in conjunction with resolution of other issues requiring roads, trails, and rights-of-way.

Unit of Measure	Output	Percent Issue Resolution By Preferred Alternative
Rights-of-way needed – Mi.	4.2 by 2030	100
Maintenance – Mi.	8040 annually	100
Construction and Reconstruction – Mi.	150 by 2030	100
Travelways obliterated – Mi.	3000 by 2030	100

#### Non-Quantifiable Comparison

Deeded rights-of-ways and easements to counties will be negotiated whenever opportunities arise. Road maintenance objectives will be met on all managed system roads.

## **PUBLIC INFORMATION**

People's information needs and desires concerning National Forest management are not being met – The public stated that problems from user demands and resource conflicts may be eliminated by better public information programs or public notice. More information is needed about things such as: fuelwood location and access, personal-use or commercial use of firewood, restrictions, laws regulations, use restrictions concerning certain areas, and resource management practices such as prescribed burning.

### **Non-Quantifiable Comparison**

The Apache-Sitgreaves National Forest is committed to establishing a more sensitive relationship and recognition of Native American needs and viewpoints.

Public affairs will strengthen Forest management by improving the dialogue between administrators and the public they serve.

The Forests maintain a full-time Public Affairs Program to appropriately involve the public in Forest management.

An analysis of how well the Forest is meeting public affairs objectives overall, is performed annually and at the beginning of each major project or program.

Line Officers and key staff actively address National, State, and local issues to keep them in local perspective.

A Forest Public Affairs Plan and Citizen Participation Plan are prepared or updated annually or when needed for significant emerging issues.

## **UNAUTHORIZED USE**

Violations of specific laws and regulations were mentioned by many respondents – Violations were said to be committed by ORV users, pot hunters, poachers, timber thieves, length-of-stay violators, and drivers on Forest roads. There is insufficient law enforcement capability to handle every violation.

### **Non-Quantifiable Comparison**

An overview of proposed direction to reduce violations of laws and regulations is presented in Chapter 4 under Forest-wide Standards and Guidelines. Proposed law enforcement management practices are described for each resource and support activity by management area as appropriate. There is increased emphasis on law enforcement, especially for cultural resources, ORV use, fuelwood theft, and vandalism. The combination of increased law enforcement and public education curtail violations of laws and regulations, even with greatly increased forest use.

### 3. Summary of the Analysis of the Management Situation

#### OVERVIEW

An analysis of the Management Situation (AMS) was prepared and documented in April of 1983 (updated July 1985). The document was then used to determine the Forests' capacity to supply various goods and services. Copies of the AMS are filed at Ranger District Offices, the Forest Supervisor's Office and the Regional Office.

This chapter summarizes supply and projected future use of various Forest goods and services which were analyzed to identify necessary improvements, resolve issues, and prevent future conflicts. A goal of the Plan is to identify the level and type of Forest uses that would help meet projected future use while enhancing or maintaining resources in a cost effective and integrated resource manner. Table 1 compares key outputs proposed for the first and fifth periods with the maximum which can be supplied and projected future use.

**Table 1. Comparison of Key Outputs with Projected Future Use and Supply**

Resource Output	Unit of Measure	Average Annual					
		Proposed Plan		Potential Supply		*Projected Future Use	
		Period 1	Period 5	Period 1	Period 5	Period 1	Period 5
Sawtimber Sales	MBF	99,000	139,928	173,483	155,088	163,000	163,000
Wood Products (Roundwood)	MBF	20,356	25,000	20,356	25,000	20,356	51,300
Fuelwood	MBF	15,780	15,489	21,091	20,713	25,000	110,000
Grazing Capacity	MAUM	204	200	213	249	213	249
Permitted Livestock Use	MAUM	204	200	213	249	213	249
Wilderness Recreation (excluding wildlife)	MRVD	19	32	35	75	35	75
Developed Recreation (including skiing)	MRVD	1,035	2,293	1,035	2,293	1,035	2,293
Dispersed Recreation (Excluding Highway Use)	MRVD	714	1,553	900	2,700	891	1,850
Water Yield	MACF	379	381	379	385	379	385

\* Projected future use of timber products is the amount that would be used if available, given certain assumptions. These assumptions are listed below.

1. Saw-timber – The amount that would be needed to operate all existing sawmills; two shifts per day.
2. Wood Products – Period 1 is the amount needed to fulfill the terms of the Colorado Plateau Pulpwood Contract. Period 5 is the estimated amount needed to supply two pulp mills, assuming the proposed mill at McNary is built.
3. Fuelwood – Use is based on current use plus anticipated growth at 3% per year (equal to projected population growth).

Supply represents the amount of a good or service which could be supplied if that output were emphasized at the expense of other goods or services. Some of the proposed plan outputs are produced at levels well below their potential supply in the first period. Roundwood product outputs in the plan are the same as potential supply for all 5 periods and meet the projected future use in period 1. For period 5, however, supply is less than one-half of projected use. Fuelwood in the plan includes outputs from logging slash and other residual material from various activities, but will never satisfy demand.

Grazing capacity and use in the plan are only slightly below potential supply and projected future use for period 1, and fall to about 80 percent by period 5.

Wilderness recreation output in the proposed plan for period 1 is a little over one-half of the projected supply and future use, and less than one-half by period 5. Most of the difference is explained by the amount of use in the Mt. Baldy Wilderness being limited to standard service level capacity.

Developed recreation output remains in line with supply and projected use through period 5. Dispersed recreation is below both supply and projected use throughout the planning horizon. However, the actual demand for dispersed recreation will probably be met because of the higher amount and available developed recreation opportunities.

Water yield output is equal to potential supply and projected future use for period 1 and about 99 percent in period 5.

## 4. Management Direction

### OVERVIEW

Chapter 4 contains the management direction for the Apache-Sitgreaves National Forests. It begins with the overall Forest-wide mission statement, followed by the goals for management, and then by specific program component goals. The objectives for the program components are shown in the next portion of the text in the form of tables with the specific numerical objectives from the analysis. The main and final portion of this chapter describes the management prescriptions that contain the standards and guidelines for the Forest. The standards and guidelines apply until amended or the next revision or update of the Forest Plan.

### **Mission**

A mission is a guiding principle toward which activities focus and contribute. Mission statements are very general. They describe the general direction of the organization, and are broad, comprehensive statements. They contain statements about why the organization exists and what it hopes to accomplish, and are used to validate organizational objectives.

The Apache-Sitgreaves Forest mission is to effectively and efficiently manage National Forest lands and resources to meet the needs and desires of the public while enhancing the environment. This plan increases emphasis on recreation, wildlife, and fishery resources to strengthen and round out multiple-use management in response to rapidly increasing public demand in Arizona. Because of increasing public demands, conflicts over resource emphasis and allocations are inevitable and will increase. The management challenge for the next decade is to be responsive, equitable, efficient, and understanding in making resource decisions.

### **Goals**

A goal is defined as “a concise statement that describes a desired condition to be achieved sometime in the future...it has no specific date by which it is to be completed.” (36 CFR 219.3).

By the end of Decade 5, the Forest is attempting to achieve a management situation that can respond to local and national demands for wood products, livestock production, water yield, and a wide mix of recreation opportunities, including hunting and fishing, that range from the primitive to the urban. The goal is to produce these outputs and opportunities on a sustained basis while maintaining air, soil, and water resources at or above minimum applicable standards. Levels of outputs and uses are adjusted to be within long-term supply potentials, and to ensure the harmonious and coordinated management of all resources, each with the other, without impairing the productivity of the land. Non-renewable resources are adequately protected to ensure their future availability. Goals have been identified for each resource.

### **Outdoor Recreation**

Manage the recreation resource to provide opportunities for a wide variety of developed and dispersed experiences. Provide for developed site and dispersed visitor use.

Where concentrated dispersed recreation conflicts with wildlife or riparian objectives, consider alternative recreation strategies to meet demand.

Maintain and enhance visual resource values by including visual quality objectives in resource planning and management activities.

Provide visitor information services (VIS) to interpret the resources, uses, and management of the Forest.

Maintain a variety of Forest trails, considering people's needs. Includes foot and motorized and challenge and adventure opportunities, as well as opportunities for the handicapped.

Continue to integrate the Recreation Opportunity Spectrum (ROS) system into the Forest planning process to quantify recreation opportunity changes, guide forest management, and coordinate recreation with other resources.

Establish ORV use areas and closures as needed to meet demand and other resource objectives. Manage ORV use to provide ORV opportunities while protecting resources and minimizing conflicts with other users.

Inventory, evaluate, nominate, protect, study, interpret, and enhance cultural resources in accordance with the management prescriptions. Coordinate planning for these activities with the State Historic Preservation Office, State Archeologist, and other State and Federal agencies.

## **Wilderness**

Provide a wilderness management program that achieves the intent of the Wilderness Act of 1964 and direction in FSM 2230. More specifically, the program must maintain enduring, high quality wilderness values while providing for quality wilderness recreation experiences. Allow wildfire to play a more natural role. Protect the current status of air quality related values (AQRV's) in the Mt. Baldy Class I Airshed and in other wildernesses.

Initiate the Wilderness Opportunity Spectrum (WOS) system in the Forest wildernesses. Use and track Limits of Acceptable Change (LAC) to develop wilderness management direction.

## **Wildlife and Fish**

Maintain habitat to maintain viable populations of wildlife and fish species and improve habitat for selected species. This is accomplished "directly" through habitat management and "indirectly" through coordination of habitat management in conjunction with other resource activities.

Cooperate with the Arizona Game and Fish Department to achieve management goals and objectives specified in the Arizona Wildlife and Fisheries Comprehensive Plan, and on proposals for reintroduction of extirpated species into suitable habitat. Support the Arizona Game and Fish Department in meeting its objectives for the State. No unapproved species are introduced.

Cooperate with the Arizona Game & Fish Department to achieve management goals and objectives in the Arizona Cold Water Fisheries Strategic Plan.

Improve habitat for listed threatened, endangered, or sensitive species of plants and animals and other species as they become threatened or endangered. Work toward recovery and declassification species.

Identify and protect areas that contain threatened, endangered, and sensitive species of plants and animals.

Increase opportunities for wildlife and fish oriented recreation opportunities.

## **Riparian**

Improve vegetation condition in riparian areas. This is an emphasis area for the plan. Improvements will be accomplished by reducing or, in some cases, eliminating adverse impacts from grazing, vehicles, and over-use by man.

## **Range**

Provide a program of range management that emphasizes high quality range forage and improvements. Benefits are improved watershed conditions, improved range forage production, improved wildlife habitat, and enhanced visual quality.

## **Timber**

On forested lands identified as suitable for commercial timber production, manage the timber resource to provide a sustained yield of forest products through integrated stand resource management. Timber management activities will be designed to integrate considerations for economic, water quality, soils, wildlife habitat, recreation opportunities, visual, and other values to meet forest plan objectives. Develop and implement a sustained yield program for firewood and other miscellaneous forest products including posts, poles, Christmas trees, and wildings.

Through integrated pest management (IPM), manage resources to prevent a build-up of insects and diseases to prevent or reduce serious, long lasting hazards. Manage to decrease dwarf mistletoe.

## **Soil, Water, and Air Quality**

Maintain, or where needed, enhance soil productivity and watershed condition. Put all areas in a satisfactory watershed condition by 2020. Maintain a high quality sustained water yield for Forest users and others. Identify and protect wetlands and floodplains.

## **Minerals**

Administer the mineral laws and regulations to minimize adverse surface resource impacts. Support sound energy and minerals exploration and development.

## **Lands**

Acquire lands that are needed for landownership consolidation and improved management efficiency through land exchange, purchase, or donation.

Acquire the road and trail rights-of-way needed to administer the Forest and produce resource outputs.



Resolve unauthorized occupancy and trespass.

Administer the Small Tracts Act to best serve the public and the resources.

Manage summer homes and organization camps for the public's benefit.

Administer special uses to best meet public needs.

Minimize the number of electronic sites and utility corridors consistent with appropriate public services that can only be met on Forest lands.

## **Transportation & Administrative Facilities**

Provide and manage a serviceable road transportation system that meets needs for public access, land management, resource protection, and user safety. Provisions are made for construction/reconstruction, maintenance, seasonal and special closures, and obliterating unnecessary roads.

Provide administrative facilities to meet resource and activity needs and that meet Federal and State pollution abatement standards where applicable.

Implement a long-range building betterment program, and when needed, plan new construction.

Develop a long-range water and sewage system betterment program.

## **Fire and Fuels Management**

Fire is used as a resource management tool where it can effectively accomplish resource management objectives. Fire prevention and control are used to protect life, property, and resources.

## **Law Enforcement**

Cooperate with State and local law enforcement agencies to properly protect forest resources, employees, visitors, and property.

Improve the law enforcement program by taking an aggressive posture that emphasizes good public education, better employee training, more employee field presence, increased line manager accountability, and increased public awareness.

## **Research Natural Areas (RNA's), Botanic Areas, and Geologic Areas**

Manage RNA's for scientific research or baseline studies. Protect potential RNA's pending implementation.

Manage specifically designated areas according to the enabling orders and to protect their special qualities.

## **Public Affairs**

Provide and promote public participation concerning Forest management to both internal and external publics. Appropriately involve the public in the decision making process. Seek advice and counsel from people who are affected by Forest management.

## **Human Resources**

Manage human resource programs to provide employment, employee well being, and economic opportunities to communities while meeting natural resource goals.

## **Land Management Planning**

Provide coordination and ensure interdisciplinary input for implementing, monitoring, and updating the Forest Plan.

## **General Administration**

Provide a line and staff organization and administrative support needed to ensure responsive and efficient public land management.

## ***Objectives***

An objective is defined as “a concise, time-specific statement of measurable, planned results that responds to pre-established goals” (36 CFR 219.3). Forest objectives are quantitative; they can be measured. They are completed in a given time and with a given budget level. The objectives are needed to meet mission and goal statements and are consistent with the mission and goals.

Objectives are the annual activities implemented to accomplish the goals and to help address the issues.

## **Regional Guide/Forest Plan**

Forest planning occurs within the framework of both national and regional planning. Through the national RPA program, the Regional Guide establishes management standards and guidelines, attempts to resolve regionally significant issues, and assigns outputs and activities (RPA targets) to the Forests in the Region.

## **Outputs and Range of Implementation**

The average annual outputs levels are shown in Table 2. These outputs can be expected to be produced given the assumptions used in the analysis (see Appendix B of the EIS). However, there are forces that can affect the

production of outputs such as weather, budget appropriations from Congress, local economics, and political decisions.

Standards and guidelines to achieve the objectives are found in the Management Prescriptions section. Objectives for the Forest are shown in the following tables.

**Table 2. Comparison of the Forest Plan Outputs and R-3 Guide Output Targets in Average Annual Units by Resource.**

Resource		Output	
		Forest Plan	R-3 Guide Targets
Developed Recreation (MRVD)	Decade 1	1,035	1,150
Dispersed Recreation (MRVD)	Decade 1	<u>1/</u> 714	1,100
Grazing Use (MAUM)	Decade 1	204	237
Timber Volume Offered (MMBF)	Decade 1	119 <u>2/</u>	107

1/ Does not include highway use.

2/ The 119 MMBF Allowable Sale Quantity (ASQ) is made up of 99 MMBF of sawtimber and 20 MMBF of products. On May 15, 1990, a Settlement Agreement was signed in which the Parties agreed to an Interim Offering Schedule with a reduced rate of implementation, and to additional analysis to determine what the Offering Schedule should be for the remainder of the decade. The Interim Offering Schedule is documented in Table 3. If the Forest Supervisor determines that changes are needed to Table 3 prior to September 30, 1992, a meeting of the Parties to the Settlement Agreement will be convened to address the issues needing resolution.

Prior to September 30, 1992, an amendment or revision to the Plan will be prepared with revisits timber management Standards, Guidelines, and outputs. Those items to be revisited include: The ASQ; existing Standards and Guidelines which have timber program implications; Plan direction for old growth, including its allocation and management, and whether it should be designated as a separate management area; and specific monitoring to measure achievement of Plan goals, objectives, and Standards and Guidelines.

The ASQ will be recalculated using the best available information, technology, and methodology according to Forest Service Regulations. Acreage of suitable and available land will be recalculated according to current applicable regulations, with emphasis on the following items: transition and stringer fringe questions. PJ/Ponderosa zones and stringer Ponderosa stands in drainages. RARE II lands, Terrestrial Ecosystem Survey suitability guidelines, and stream courses.

ASQ's will be calculated for the Apache and Sitgreaves National Forests, both combined and separately. The calculations will be figured in both cubic feet and board feet. They will incorporate the Mexican spotted owl guidelines, old-growth management directions, other Threatened, Endangered, and Sensitive species considerations, steep ground (40%+ slope) limitations in canyons with live water, wood products demand, the aspen component, and any other factors to be determined by the Parties to the Settlement Agreement.

The recalculated ASQ will result in changes in the Offering Schedule (Table3) for the remaining years of the Plan. The revised Offering Schedule will emphasize acres to be treated to meet multiple-resource objectives. In the event that the Offering Schedule has not been revised to incorporate the recalculated ASQ prior to September 30, 1992, the Parties to the Settlement Agreement will reconvene to agree upon a revised interim Offering Schedule, with the harvest level not to exceed 83 MMBF of sawtimber per year.

An action plan will be developed, in consultation with the Parties to the Settlement Agreement, that ensures orderly and timely resolution and completion of the future amendment or revision that addresses all factors to be determined by the Parties.

Prioritize resource improvement issues, concerns, and opportunities by Ranger District using the IRM process. Complete projects will be scheduled by project and by Ranger District according to Forest priorities. Initial priorities will be completed by December 15, 1988 and updated annually. Projects will be incorporated into the Forest Plan Ten Year Implementation Schedule which is available for public review. Project design will include consideration of a full range of funding sources, strategies, and management practices and is not limited in the project area scheduling by the original Forest Plan budget constraint.

## Standard Vegetation Treatment Table

Standard Vegetative Management Practices For Certain Composition, Structure, and Function Attributes  
(use at the site/stand level)

COMPOSITION (Forest Type*)	Aspen & Western Live Oak	Engelmann Spruce-Subalpine Fir, White Fir, Blue Spruce, Limber Pine, Rocky Mountain Juniper, Cottonwood-willow, Interior Ponderosa Pine, Pinyon-Juniper, Arizona Cypress, and Mesquite.						All forest Types	Grass-land, Meadow and Alpine	
STRUCTURE	DESIRED ONE-AGED, SINGLE-STORIED STAND  (One-age class comprises $\geq$ 90% of total stand BA for most of the rotation. Age difference between oldest and youngest tree in a class is less than 20% of the rotation)	DESIRED TWO-AGED TWO- STORIED STAND  (Two age classes, each > 10% BA most of rotation)	DESIRED UNEVEN-AGED, MULTI- STORIED STAND  (more than two age classes)	ANY DESIRED ONE-, TWO-, OR MULTI- STORIED STAND	OPEN					
FUNCTION	Coppice Regeneration Method  (vegetative regeneration function)	Clearcutting Regeneration Method  (no trees function for seed/shelter)	Seed Tree Regeneration Method  (some trees function for seed only)	Shelterwood Regeneration Method  (some trees function for seed/shelter)	Irregular Shelterwood Regeneration Method  (function for continuous tree cover)	Single-Tree Selection Regeneration Method  (function for continuous tree cover)	Group- Selection Regeneratio n Method  (group size $\leq$ 2 to 4 acres)	Irregular Group Shelterwo od Regenerat ion Method  (tree cover between stand formation and regeneration)	No or Few Trees  (maintain open)	
VEGETATIVE MANAGEMENT  PRACTICE	Activity Coppice Coppice W/Reserves	Activity $\leq$ 5% tree cover post harvest: Patch cut Strip cut Stand cut	Activity Preparatory Seed 1-10% tree cover post harvest:	Activity Preparatory Seed Group Seed Strip Seed Removal Group Removal Strip Removal Final Removal W/Reserves	Activity Preparatory Seed Removal Final Removal W/Reserves	Activity Coppice Regeneration Method Coppice W/Standards (understory must regenerate vegetatively suckers/sprouts)	Activity Single Tree/ (Individual- Tree) Selection  Group- Selection Group- Selection W/Reserves	Activity Seed Removal Final Removal Final Removal W/Reserve s	Activity Improvement Liberation Thinning Commercial & Non- Commercial Mortality Salvage Sanitation Salvage Cull Salvage Prescribed Fire Cleaning Weeding	Activity Meadow Maintenance & creation

\*FYRE, F.H. 1980. Forest cover types of the United States and Canada. Society of American Foresters, Washington, D.C. 148 P.

**Table 4. Timber Suitability Land Classification for Apache-Sitgreaves National Forests.**

<b>Classification</b>	<b>Acres</b>
Total National Forest Land	2,011,824*
Non-Forested Land	290,607
**Not Capable	721,335
Capable But Not Available	90,923
Capable and Available, But Not Suitable	98,430
Tentatively Suitable	810,529
Not Appropriate	36,706
Suitable	773,823

\*Includes approximately 8,272 acres on the Gila National Forest administered by the Apache-Sitgreaves National Forests.

\*\*This is primarily pinyon-juniper woodland. It includes 110,175 acres in wilderness or primitive areas or proposed additions to the primitive areas.

**Table 13. Vegetation Management Practices.**

<b>Vegetation Type</b>	<b>Practice</b>	<b>Forest Decade Acres</b>	<b>Rationale</b>
Ponderosa pine, mixed conifer, and aspen	Shelterwood Harvest		
	Regeneration Cut	32,329	This practice is applied to regenerate timber stands that have reached culmination of mean annual increment. The shelterwood method is appropriate because it is cost effective, maintains a partial canopy, provides a natural seed source, and a favorable microclimate for establishing seedlings. Regeneration success has been more favorable than with other regeneration methods.
	Removal Cuts	113,640	This practice is the final stage in a shelterwood regeneration method. When regeneration is established in the regeneration harvests described above, the remaining trees are removed to provide needed light and moisture for growth of the new stand and to use the remaining timber.
	Clearcut	8,000	This practice is optimal for creating small openings to obtain habitat diversity for wildlife and to control insects and diseases, particularly dwarf mistletoe. Other regeneration harvest methods do not create the edge effect and habitat conditions obtained from small clearings. Clearcutting is used to convert to aspen from a mixture of aspen with ponderosa pine or mixed conifer. It is also best where all potential seed trees are severely infected with disease or insects. (Aspen clearcuts comprise 2,500 acres of the total).

**Table 13. Vegetation Management Practices. (Continued)**

Vegetation Type	Practice	Forest Decade Acres	Rationale
	Intermediate Cut	59,535	This practice is applied to enhance the growth and vigor of the stand, salvage timber that would die before a regeneration harvest is made, and reduce the potential for loss to insects and disease.
	Precommercial Thinning	92,611	This practice is applied to young stands. Thinning to maintain the spacing and number of trees per acre at a level that will maintain growth and vigor of the remaining trees. Diseased and poorly formed trees are removed to enhance the health and quality of the stand.
Uneven-aged <u>Harvest</u> Selection Cut			<p>Uneven-aged harvest methods will be specified where they are determined to be the best way to meet objectives for the sale area as identified during the IRM process. At this time, total acres to be harvested by this method cannot be accurately predicted. However, during Fiscal Years 1991 and 1992, uneven-aged silviculture will be used on at least twotimber sale offerings as demonstration areas for future use as a management alternative.</p> <p>This practice is applied to regenerate an area while maintaining at least a two-story condition. It maintains good visual quality and provides good wildlife habitat for many species. Uneven-age management has not been effective where dwarf mistletoe is a problem, and has favored conversion of ponderosa pine stand to white fir, Douglas fir, or spruce on mixed conifer sites. Aspen will not regenerate successfully with this treatment.</p>
	Reforestation Artificial Natural	3,233 33,233	<p>This practice is applied to establish new timber stands. Site preparation is done for both artificial (planting) and natural reforestation (establishment from seed fall from seed trees). Artificial reforestation is used when the number of natural seedlings is not adequate.</p>

**Table 13. Vegetation Management Practices. (Continued)**

Vegetation Type	Practice	Forest Decade Acres	Rationale
	Prescribed Burning	45,000	This practice is applied to reduce ground fuels. This reduces the fire hazard, helps prepare a favorable seedbed for natural regeneration, and increases forage production for wildlife and livestock. It reduces some competition for light and moisture between tree seedlings and other plants. Burning is used because it is the most effective and cheapest method of fuel treatment.
	Salvage	Variable	This practice is used to capture volume from mortality in either suitable or unsuitable lands. Harvest will be by individual tree selection because it is the only method suitable for salvages, except in cases of widespread catastrophic fires.
	Seeding	Variable	This practice is seeding of grass and forbs after all cuts except regeneration cuts to increase forage production for livestock and wildlife. Seeding methods include harrowing, broadcast, or aerial application with shade tolerant multi-growing season species. Actual on site investigations may show less acreage will be seeded if an adequate understory exists.
Pinyon-Juniper	Firewood Harvest	20,000	<p>This practice is the harvest of pinyon and juniper stands for firewood. The harvest is done using shelterwood silviculture or intermediate harvests or small clearcuts for wildlife openings. Shelterwood and clearcuts regenerate the stands and are the most cost effective. Intermediate harvests open the stand up so more grass is produced for forage and watershed protection.</p> <p>Follow-up prescribed burning may be used in intermediate harvest areas to reduce the ground fuels and stimulate new growth of forbs and browse plants to benefit wildlife and livestock grazing. The fuel reduction decreases the fire hazard. Burning increases grass and forbs because competition from pinyon-juniper reproduction is reduced. Burning is the most cost effective method.</p> <p>Follow-up seeding on firewood harvest areas with warm and cool season forage species for the benefit of wildlife and livestock grazing may be done where natural seed sources are inadequate. Areas seeded will have a soil rating of moderate or high forage production and be on slopes of 0-15 percent.</p>

**Table 13. Vegetation Management Practices. (Continued)**

Vegetation Type	Practice	Forest Decade Acres	Rationale
	Overstory Control – Retreatment	16,900	<p>This practice is the reduction of pinyon-juniper overstory regrowth of residual and new trees to maintain seral grassland on previously treated areas. Retreatment will be accomplished within areas of 0-15 percent slope and on soils with a moderate or high rating for forage production. Treated areas are maintained in a savannah type with pinyon-juniper overstory crown canopy of less than 20 percent. Control of overstory is accomplished by using herbicides, mechanical pushing, or prescribed fire, using the following criteria.</p> <p>-Mechanical - Eighty percent of stand greater than 10 feet in height with a minimum of 75 trees per acre. Treatment is cost-effective where the area needs it, and is suitable for revegetation;</p> <p>-Herbicides – Use when most cost efficient and environmentally sound. Stands where 60 percent of the trees are less than 4 in height and with more than 50 trees per acre. Areas do not need revegetation. Herbicides would generally be last resort after all other aspects of integrated pest management are considered.</p> <p>Follow-up seeding on overstory retreatment areas with warm and cool season forage species may be needed where natural seed sources are inadequate for the benefit of wildlife and livestock grazing. Areas seeded will have a soil rating of moderate or high forage production and be on slopes of 0-15%.</p> <p>Additional criteria are described in the standards and guidelines in Management Area 4.</p>
	Overstory Control Treatment	4,000	<p>This practice is the reduction of pinyon-juniper overstory to develop seral grassland for livestock and wildlife forage. The treatment will occur on areas that are currently too remote or non-merchantable for fuelwood. Areas with a low soil forage production rating will not be treated.</p>



**Table 13. Vegetation Management Practices. (Continued)**

Vegetation Type	Practice	Forest Decade Acres	Rationale
	Overstory Control		<p>Treatment of overstory is accomplished by using herbicides, mechanical pushing, or prescribed fire using:</p> <ul style="list-style-type: none"> <li>-Mechanical - Eighty percent of stand greater than 10 feet in height with a minimum of 75 trees per acre. Treatment is cost-effective where the area needs it, and is suitable for revegetation;</li> <li>-Prescribed Fire – Adequate fuels are present to carry fire and kill 80% of the trees which are 6’ in height or less. Areas do not generally need regeneration.</li> <li>-Herbicides – Use when most cost efficient and environmentally sound. Stands where 60 percent of the trees are less than 4 feet in height and with more than 50 trees per acre. Areas do not need revegetation.</li> </ul> <p>Follow-up seeding on overstory treatment areas with warm and cool season forage species may be needed where natural seed sources are inadequate for the benefit of wildlife and livestock grazing.</p>
Riparian	Seeding/Planting	500	<p>This practice is seeding or planting browse and forb species for the benefit of wildlife. Treatment is done to promote browse and forage production in certain areas. This practice is seeding or planting native riparian species to re-establish natural health and composition in riparian ecosystems. The treatments are done in conjunction with control of livestock use levels.</p>

## **MANAGEMENT PRESCRIPTIONS**

Mission, goals, and objectives for the Forest are realized by applying groups of management activities to specific units of land. Groups of management activities are called “Prescriptions” and the land units are called “Management Areas”. This portion of the Forest Plan describes which prescriptions are applied to which management area.

Prescriptions are management practices selected and scheduled to apply to a specific area to attain multiple use and other goals and objectives [36 CFR 219.3(u)]. A management area is a unit of land where a given prescription is to be applied. These areas are outlined on the Management Area Map accompanying this Forest Plan.

Prescriptions developed for the Forest Plan integrate a number of resource and support element activities and produce a variety of outputs when applied to a management area. Each prescription is broken down into the following categories: description, management emphasis, analysis area(s), program components, activities, standards and guidelines.

### **Management Area Description**

Includes a brief description of the physical, biological, and administrative characteristics of the management area to which the prescription applies. The description includes resource management emphasis statements.

### **Analysis Areas**

Prescriptions for management are applied to individual analysis areas (AA’s). A list of AA’s is included in Appendix B of the EIS. The purpose of delineating AA’s is to predict how specific land areas will respond to various management activities. The AA’s are marked on maps and can be identified on the ground. Data is generated by AA to estimate the capability of the AA to provide goods, services, or resource uses under each prescription.

Analysis areas are not necessarily contiguous areas. Separate areas of the same type are found on the Forest with the total of all such areas defining a single AA. Each prescription is expected to have the same consequences or to produce the same average results when applied to any acre within the AA. The Analysis Area Index in Appendix B of the EIS is a quick reference.

### **Management Emphasis**

This summarizes the management direction for the management area and highlights some of the most important direction.

### **Program Components**

A program component is a grouping of activities such as timber sales or wildlife habitat improvement for which budgets are prepared and for which a manager makes decisions on the spending level and scope, direction, or quality of the work to be performed. Individual projects are grouped by program component for use in short-range program planning and in the budget process. An index of program components is provided in Appendix A.

### **Activities**

An activity is resource management work done to carry out a management practice. Activities are grouped into resource or support elements and are identified by alpha/numeric codes such as A201 for Recreation and Planning Inventory. Each activity has a unique code, title, and unit of measure for the work performed. An index is provided in Appendix B.

## Standards and Guidelines

Standards and guidelines direct the timing and intensity of planned activities; specific policies that apply to activities in each prescription, and mitigation measures and coordinating requirements needed to protect resources and the environment.

There are two categories of standards and guidelines: Forest-wide standards and guidelines; and management area standards and guidelines. Forest-wide standards and guidelines apply to the Forest as a whole. The management area standards and guidelines are specific either to the management area as a whole or to individual analysis areas in a management area. In some cases, there is a difference between the Forest-wide standards and guidelines and the management area standards and guidelines for a resource area and/or activity. In these cases, the management area standards and guidelines supersede the Forest-wide standards and guidelines.

Unless otherwise noted, the management practices indicated in various standards and guidelines take place annually.

## How to Apply the Prescriptions

To apply management practices or activities, locate the practices or activities on management and analysis area maps and field check the location to determine the applicable standards and guidelines to be met. Then determine the suitability of applying the practices or activities at the specific location. Practices or activities are monitored in accordance with Chapter 5, Monitoring Plan, to ensure compliance with costs, outputs, and standards and guidelines.

The transition between vegetative zones is highly variable. The variability results in isolated parcels of individual analysis areas that don't match the management areas for which the standards and guidelines were written. In these instances, proposed practices or activities are governed by standards and guidelines from the Forest Plan that most accurately depict the real situation.

A management area prescription number was assigned to each management area in order to link the prescription to the land area. The location of the management area is mapped for the entire Forest and is contained on the accompanying management area map. Inclusions of different vegetation and slope occur within the management areas, but are too small to map; for example, a 20 acre patch of Aspen within a large pine stand. When inclusions are encountered during implementation, the appropriate prescription will be applied.

Read the Forest-wide and Management Area prescriptions. In a few instances, the prescriptions do not totally mesh with those for more specific areas. If this occurs, follow the direction for the more specific areas. The Forest-wide standards and guidelines must be general to cover all circumstances. The standards and guidelines for management areas are usually more specific.

Be sure to read the standards and guidelines for all the program components. For example, many standards and guidelines that affect wildlife habitat management are under the timber program components.

Check for possible impacts on objectives. Make sure the project does not jeopardize the objectives. The intent is to meet the objectives.

If the planned action is consistent with prescriptions, the manager performs an Environmental Analysis (FSH 1909.15). As needed, an Environmental Assessment (EA) documents coordination of the action with the standards and guidelines, and provides for additional management constraints, if necessary. The responsible official approves the decision notice.

If the planned action is in conflict with standards and guidelines or unsuitable for the area, the line officer must decide whether to proceed or amend the Forest Plan. If it is decided to implement the action, the District Ranger

prepares an Environmental Analysis to determine the need for and significance of an amendment to the Forest Plan. If, based on the Environmental Analysis, the amendment is determined not to be significant, it may be implemented by the Forest Supervisor following appropriate public notification (36 CFR 219.10).

Activities, outputs, and standards are monitored and evaluated according to the Monitoring Plan (see Chapter 5). The monitoring Plan specifies the criteria for evaluating the need for amendments for revisions to the Plan.

<b>MANAGEMENT AREA #</b>	<b>MANAGEMENT AREA</b>	<b>% of FOREST</b>	<b>Page #</b>
1	Timberlands – Commercial/Unsuitable	43.1	95
2	Woodland – Pinyon/Juniper	32.0	115
3	Riparian	0.3	121
4	Grasslands	12.2	128
5	Developed Recreation Sites	0.1	131
7	Mt. Baldy Wilderness	0.4	138
8	Blue Range Primitive	9.9	141
9	Escudilla Demonstration	0.5	144
10	Research Natural Area	0.1	157
11	Water	0.2	159
12	Bear Wallow Wilderness	0.6	162
13	Escudilla Wilderness	0.3	165
14	Black River	0.1	168
15	West Fork Black River	0.1	171
16	Chevelon Canyon	0.1	174
17	East & West Forks Little Colorado River	0.1	177
18	Sandrock	0.9	180

## FOREST-WIDE STANDARDS AND GUIDELINES

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
ALL	ALL	ALL	<p><u>Public Involvement/IRM</u></p> <p>All projects to implement this Plan will be designed using Region 3's Integrated Resource Management Process (IRM).</p> <p>Projects will be included in the Forest's 10 Yr. Implementation Schedule. This Schedule will be mailed to interested members of the public after each scheduled update.</p> <p>Provide a clearinghouse for each District IRM activities. The clearing house will be available to the public on the DG on each District and in the Forest Supervisor's office. Clearinghouse data will include which members of the public were contacted and when the contact was made. Clearinghouse data will be printed and sent to interested publics at least twice a year from each District Ranger.</p> <p>Notification of all project decisions will be mailed to all interested parties. Additional decision notification may also occur through radio, television, telephone, etc.</p>
A02	J22	ALL	<p>By Ranger District, prepare and maintain inventory and project location maps which are available to the public for at least the following information:</p> <ol style="list-style-type: none"> <li>1. Old growth (existing and future)</li> <li>2. Terrestrial ecosystem survey</li> <li>3. Pinyon juniper treatment/retreatment areas</li> <li>4. Pinyon juniper inventory</li> <li>5. Timber inventory</li> <li>6. Grazing suitability</li> <li>7. Critical elk winter range</li> <li>8. Big game herd units</li> <li>9. Riparian inventory</li> <li>10. Management indicator species habitats and populations.</li> <li>11. Suitable Timber Acres</li> <li>12. Prescribed Burn Acres</li> <li>13. Old growth (existing and future)</li> <li>14. Terrestrial ecosystem survey</li> <li>15. Pinyon-Juniper treatment/retreatment areas</li> <li>16. Pinyon-Juniper inventory</li> <li>17. Timber inventory</li> <li>18. Grazing suitability</li> <li>19. Critical elk winter range</li> <li>20. Big game herd units</li> <li>21. Riparian inventory</li> <li>22. Management indicator species habitats and populations.</li> <li>23. Suitable Timber Acres</li> <li>24. Prescribed Burn Acres</li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01	ALL	<p><u>Recreation Management</u> Annually maintain and update RIM data and RIM reports using information provided through campground hosts, compliance checks, facility condition inventory, and other sources.</p>
	A01		<p>On an opportunity basis-complete visitor studies, market studies, and customer questionnaires (within Office of Management and Budget requirements) to guide future recreation facility construction projects and recreation management activities.</p>
A2	A01,A06		<p>Initiate dispersed area management plans for all concentrated use areas beginning with the Rim area between Coconino N.F. boundary and Forest Lakes Estates to be completed by Fiscal Year 1987. The second priority will be the area along the East and West Forks of the Black River. The third priority will address the urban interface lands in the Show Low/Lakeside/Pinetop area. The objectives of dispersed area management plans are to determine the maximum capacity of an area while maintaining a natural appearing setting and a high experience level.</p>
	A01		<p>Assess the feasibility of the development of reservoirs on Pigeon Creek and Phoenix Park Wash. Develop reservoirs in both locations if feasible and if assessed as acceptable upon completion of Integrated Resource Management analysis.</p> <p>Study the main stem of the Blue River from its confluence with the San Francisco River upstream to its confluence with McKittrick Creek in the Blue Range Primitive Area as a candidate stream for eligibility in the Wild and Scenic River System. Timber harvesting and new road construction are prohibited in the potential wild and scenic river corridor; one quarter mile each side of the stream. Also, consistent with any outstanding rights, dams, diversions, or other water resource developments are also prohibited until the study is completed. The study will be completed by 1994.</p> <p>All plans must be consistent with Arizona Game and Fish Department's Cold Water Strategic Plan (1995-1990) and the Arizona Trout Recovery Plan, and coordinated with the Arizona Game and Fish Department.</p>
	A01,A02		<p>Complete Recreation Opportunity Guide for the Forest by 1993. Print the guide in an easily readable and marketable format.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	A01		<p>Region 3 operation and maintenance standards will be used for administration of developed sites, winter sports sites, and dispersed areas. Update operation and administration plans annually to reflect these standards.</p> <p>All existing facilities reconstructed and rehabilitated as needed to bring up to an acceptable maintenance class, and keep to that standard indefinitely.</p>
	A14,A15		<p>Issue and administer dispersed recreation special use permits and agreement to minimize user conflicts and ensure public safety and resource protection.</p>
	A01, A07		<p>Manage to ensure the maintenance of the existing diversity of recreation opportunities, settings, and activities.</p>
A2	A01, A07	ALL	<p><u>Camping Stay Limits</u></p>
			<p><u>Objective</u> – The objective in enforcing stay limits is to insure the Forest recreation opportunities are made equally available to the greatest number of users possible:</p> <p>Stay limits will be imposed at the discretion of the District Ranger under the following guidelines:</p> <p><u>Developed Facilities</u></p> <ol style="list-style-type: none"> <li>1. Both concessionaire and Forest Service operated campground will be operated under the following guidelines: <ol style="list-style-type: none"> <li>a) A 14-day stay limit will be enforced when the entire facility consistently fills to capacity on weekends during most of the prime recreation season (Memorial Day through Labor Day). The exception is when a visitor’s 14-day stay ends on a weekday. If the campground usually has available units during the week, that visitor can extend their stay to a time Friday not to interfere with the coming of the weekend visitors.</li> <li>b) In campgrounds where weekend or weekday use seldom meets capacity and stay limits are not mandated in item #1. a. above. The District Ranger can endorse stay limits on specific sites within the campground that are highly desirable.</li> <li>c) Post camping stay limits, including these standards and guidelines, on campground bulletin boards and wherever else that is practical.</li> <li>d) Place camping stay limits regulations where appropriate in the Recreation opportunity Guide.</li> <li>e) For those places where stay limits are imposed on specific sites within a campground, identify those sites to the public.</li> </ol> </li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2

A02,  
A07

ALL

Concentrated Undeveloped Use Sites

1. 14-day stay limits may be imposed in desirable locations (water, view, solitude, etc.) within a concentrated undeveloped area. These sites will be posted or users personally notified by a Forest Officer.
2. 14-day stay limits may be imposed for entire concentrated dispersed use areas. These areas will be posted.
3. Stay limits will be imposed for a concentrated use area when the District Ranger feels any 1 or more of the following conditions are likely to occur:
  - a) A concentration of users because of their number, actions, or equipment would detract from the area’s natural setting or significantly reduces the quality of the standard recreational experience expected for the area.
  - b) Vegetation damage or soil compaction is a problem in the area and extended stay prevents even partial relief from these adverse effects.
  - c) Users tend to construct certain improvements or bring in equipment that detracts from the area’s setting and that normally doesn’t occur when visits are of shorter duration.

Undeveloped Portions of National Forest

The same criteria as for concentrated undeveloped use sites will be utilized to determine where stay limits are to be imposed.

Generally, the Forest Service will be less restrictive in imposing stay limits outside of campgrounds and concentrated undeveloped use areas.

A2

A03

ALL

The following variations in the actual (recognizing probable mapping errors of existing classifications) Recreation Opportunity Spectrum (ROS) Classes are acceptable:

- a. Primitive – No Change
- b. Semi-Primitive Non-Motorized +5%
- c. Semi-Primitive Motorized +10%
- d. Roaded Natural +15%
- e. Rural +15%

On the Sitgreaves National Forest, acres of semi-primitive classes in the virgin timber stands will be maintained without variation.

A01,  
A07

Silvicultural prescriptions in semi-primitive non-motorized areas will take into consideration that a predominately natural appearing environment will be maintained.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	A01, A07		Semi-primitive non-motorized, and to a lesser degree semi-primitive motorized areas will be utilized to provide a significant proportion of the Forests vertical diversity and old growth requirements.
	A01, A07		Road construction and silvicultural prescriptions in a semi-primitive motorized area will take into consideration that a natural appearing environment will be maintained. Most new roads should be closed following project. Roads left open will be managed at Maintenance Class 2.
	A01, A07		All dispersed recreation use is managed at the Standard Service level beginning in Period 2.
			Permit gathering of dead and down firewood for recreation use while camping or picnicking.
A2	A01, A06	ALL	Prepare site plans and capital investment proposals for justified (resource protection, program development) dispersed facilities.
			Higher priority dispersed facility construction needs:
			<ol style="list-style-type: none"> <li>1. Parking areas, trailheads, cul-de-sacs, barrier systems and related facilities for dispersed use near Woods Canyon Lake, Willow Springs Lake, and Al Fulton Point.</li> <li>2. Relocation of trailhead for 94 and 95 (Sheeps Crossing) on the east side of Forest Road 113 (as part of Forestwide Trailhead Project).</li> <li>3. Black River barrier and site modifications (as part of Forks-Black River Project Phase 2).</li> <li>4. Parking area and surfacing for Rim Interpretive Trail (609).</li> <li>5. Development and signing of trailheads for Trails 94 &amp; 95 south of Greer at end of Forest Rd. 575 or at another location in the same vicinity accessed by public road.</li> <li>6. Greer Valley Interpretive Trailheads.</li> <li>7. Trailheads for trails associated with Pinetop/Lakeside Community Trail System (part of Forestwide Trailhead Project).</li> <li>8. Blue Range Trailheads (approximately 12 are needed) 6 are included in Blue Range Trailhead Project).</li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01, A07	ALL	<p data-bbox="618 268 992 300"><u>Off-Road Vehicle Management</u></p> <p data-bbox="618 338 1500 499">Off-Road Vehicle activities will be managed to minimize conflicts with other uses, to prevent interference with the management of other resources, to prevent general environmental degradation, while providing a range of ORV opportunities. The three wilderness areas and the Blue Range Primitive Area are closed to ORV use.</p> <p data-bbox="618 537 1520 699">The Resource Access and Travel Management (RATM) process will be used to determine the management strategies for all existing roads, trails, and areas. RATM will also consider the management of off-road and off-trail use by motorized vehicles with the objective of resolving user conflicts, eliminating wildlife harassment and resource damage.</p>
A2	A01, A07	ALL	<p data-bbox="618 741 1214 772">Trails are closed to vehicle use unless signed open.</p>
			<p data-bbox="618 810 1287 842">Make maps of ORV closure areas available to the public.</p>
A2	A01	ALL	<p data-bbox="618 877 1503 1003">The RATM process initiated in 1987 will be an ongoing process which will be used to evaluate future road, trail, and area travel management. The process will include NEPA disclosure and public involvement. Road, trail, and ORV prescriptions will be annually reviewed using the RATM process.</p>
	A01, A07	ALL	<p data-bbox="618 1045 1495 1140">Existing, as well as additional ORV closures are implemented when one or more of the following situations or areas exist, and ORV use is likely to occur that would result in significant adverse effects:</p>
			<ol data-bbox="667 1178 1523 1839" style="list-style-type: none"> <li data-bbox="667 1178 1500 1241">1. Soil groups having a high sensitivity rating; slope, erosion hazards, and run-off potential.</li> <li data-bbox="667 1276 1523 1339">2. Soils with surface textures of clay, clay loam, and heavy silt loam, or soils where such textures are within 6” to 8” of the surface.</li> <li data-bbox="667 1375 1479 1472">3. Effects of water quality such as increased sediment and turbidity. Also, bacteriological and chemical problems due to heavy concentration of users.</li> <li data-bbox="667 1507 1382 1539">4. Areas receiving concentrated wildlife breeding activities.</li> <li data-bbox="667 1575 1000 1606">5. Big game winter ranges.</li> <li data-bbox="667 1642 1500 1705">6. Acres utilized for other recreation activities that are not compatible with ORV activities.</li> <li data-bbox="667 1740 1365 1772">7. Open parks or meadows classified as key wildlife areas.</li> <li data-bbox="667 1808 1403 1839">8. Areas which provide essential wildlife water requirements.</li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01, A07		<p>Forest Recreation and administrative areas.</p> <p>Research Natural Areas.</p> <p>Areas of cultural or religious significance with proven historical significance to Native Americans.</p> <p>All critical areas as defined in Section 2(b) of the Rare and Endangered Species Act of 1973.</p> <p>Areas inhabited by unique wildlife when ORV travel will be detrimental to the well-being of the wildlife group.</p> <p>Areas where there is agreement with the Arizona Game &amp; Fish Department to maintain a quality hunting and fishing experience.</p> <p>High yield forage producing areas, and areas with unique or rare plants.</p> <p>Recent reseeded areas.</p> <p>Areas where the forest has plantations with trees less than 4" diameter breast height.</p> <p>Water courses and wetlands permanently or intermittently wet.</p> <p>Municipal watersheds.</p> <p>Watershed restoration projects.</p> <p>High scenic areas where ORV use may cause changes in line, form, color, and texture of the landscape.</p> <p>Areas of geological significance including those valuable for scientific and educational purposes.</p> <p>Areas with a high concentration of archeological and historical sites, or areas with especially significant sites.</p> <p>Areas damaged due to ORV use are closed and restoration projects initiated if funding is available.</p>
	A01, A09		<p><u>Visual Resource Inventory and Planning</u></p> <p>Revise as needed the visual resource inventory. Inventory the visual absorption capability and the existing visual condition of the Forest in the first decade. Projects are planned to meet visual quality objectives.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01	ALL	<p>To meet specific resource management objectives the following visual quality objectives variations are allowed for a management area:</p> <p>Preservation: No Change  Retention: <math>\pm 2\%</math> foreground, <math>\pm 5\%</math> background, midground.  Partial Retention: <math>\pm 5\%</math> foreground, <math>\pm 10\%</math> back and midground  Modification/maximum modification: <math>\pm 10\%</math> in all zones</p> <p>One classification movement downward is all that will be allowed.</p> <p>Even acceptable variations must be coordinated through the Forest Landscape Architect to mitigate the variation when possible.</p> <p>Prepare viewshed corridor implementation plans before the end of the second decade. Emphasize priority foreground areas.</p> <p>Priority List:  -Scenic highways and developed sites  -Major U.S. highways  -Major State highways  -Vista areas</p>
	A03, A04, A01		<p>The Forest seeks special funding such as S.E.A.M. or donations for such visual resource improvement projects as abandoned mining claims and borrow pits. Improve visual resources through borrow pit rehabilitation in conjunction with other pit uses such as timber sales and mineral sales, and use borrow pits as burial areas for compatible materials such as rock, soil, and slash.</p>
	A01	ALL	<p>Aspen stands which contribute significantly to an areas visual classification will be managed to not affect that classification over the long term.</p> <p>Highly scenic areas on or near highways or recreation sites are managed as foreground retention without any variation.</p> <p>Slight deviations from acceptable variations in visual quality objectives can only be considered on a case-by-case basis and only authorized by the Forest Supervisor.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2	A01	01	<p><u>Proposed General Crook National Historic Trail</u>            Manage the 138 mile trail corridor on National Forest land from Fort Whipple to Fort Apache and associated historic sites and side trails for potential Congressional designation as a National Historic Trail. Management requirements for the currently designated National Recreation Trail are integrated and expanded by the Historic Trail designation. These standards also apply to those portions of the trail on the Prescott and Coconino National Forests.</p>
	A02		<p>Evaluate and nominate qualified historic sites to the National Register of Historic Places by preparing and submitting the proper forms.</p>
	A01		<p>Use of motorized vehicles on any portion of the route not specifically designated and designed for motorized vehicle travel is prohibited. Emphasize foot or horse travel recreation activities. Provide adequate signing to advise the public of motorized restrictions.</p>
	A03		<p>Manage all resource activities to meet VQO Retention foreground requirements, considering the historic qualities of the characteristic landscape.</p>
A2	A01	ALL	<p>Within two years of Congressional designation as a National Historic Trail, formulate a comprehensive trail management plan to promote the historic and cultural significance of the trail, incorporating the direction outlined in this plan. Recognize the needs of the disabled and those with limited mobility in developing access facilities for the trail. Propose recreational facilities for the trails which are related to significant interpretive and recreational points of interest on, or adjacent to the trail. Emphasize protection for the historic value of the trail route. Develop 1 representative visual logo for the entire trail. Revise and expand current publications in cooperation with local sponsors.</p>

Following is management direction for each section of the trail:

1. Fort Whipple Site – Coordinate construction of historic/interpretive marker (use logo) with local support to mark the western terminus of the trail – no trail corridor developed.
2. Dewey – Coordinate with Arizona State Parks and Transportation Department to construct roadside marker. All subsequent markers to follow similar coordination, using the trail logo.
3. Junction Cherry Road/F, R, 372 to Camp Verde Township – Manage 200 foot corridor to preserve evidences of historic roadway and landscape character, including related historic markers and water holes. Maintain and/or construct mile markers (marked with a “P”) and intervisible rock cairns in cooperation with Adopt-A-Trail volunteer groups.
4. Camp Verde Township – Forest Highway 9 – Clear Creek Campground – Provide roadside markers (use trail logo) in cooperation with local support. Continue and expand cooperative interpretive programs at Fort Verde State Park.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines

A2

A01

ALL

5. Clear Creek Campground – Long Valley Ranger District Boundary – Manage 200 foot corridor to preserve evidences of historic roadway and landscape character, including related historic markers, trees, and water holes. Maintain and/or construct mile markers (marked with a “Y” symbol on founded posts) and intervisible rock cairns in cooperation with Adopt-A-Trail volunteer groups. Maintain cooperative agreement with Arizona State Parks for the maintenance of roadside marker at “Thirteen Mile Rock” and affiliated trail-head parking. Seek cooperative support from State and volunteer sources to expand this site as a developed interpretive loop trail route, utilizing the parallel mule and wagon routes. Together with State and volunteer groups, jointly sponsor special trail brochure for self-guiding use as a special ¼ day hiking recreation experience for interested motorists. Design and install interpretive signs at Clear Creek Campground which relate to the local historic value of the trail. Study development potential for a handicap trail section near Clear Creek Campground.
  
6. Long Valley Ranger District Boundary – Baker Butte – Rim Road past Woods Canyon Lake t-junction with Highway 260- Manage 200 foot corridor to preserve evidences of historic roadway and landscape character, including related historic trees, markers, gravesites, and water holes. Within the corridor regulated overnight camping prohibit if warranted, in order to preserve the evidences of the historic roadway, its surrounding character, as well as to protect historic trees, markers, gravesites, and watering holes. Manage overnight camping within ¼ mile of water holes and water sources to comply with State Law.  
  
Maintain and/or install intervisible cream painted aluminum chevron markers in cooperation with Adopt-A-Trail volunteer groups. Maintain markers throughout entire corridor including sections routed along existing roads. Provide junction signs (using the trail logo) for side connecting trails to the Highline National Recreation Trail on the Tonto National Forest. Jointly publish with the Tonto, in cooperation with local sponsors and interested groups, a Mogollon Rim Trail Guide, highlighting the historic/cultural significance of the General Crook route and other recreational opportunities of the Highline and side connecting trails. In cooperation with Arizona State Parks and Adopt-A-Trail groups, develop special interpretive trail and handicap access section adjacent to Highway 87. Study development of interpretive facilities at significant historic sites.
  
7. Junction of Highway 260 and F, R, 139 (near Clay Springs) to terminus at Fort Apache – In cooperation with Arizona State Parks and Transportation Department, construct roadside markers at known key points along this section. Seek cooperation of the White Mountain Apache Tribe for placement of a historic marker to indicate the eastern terminus of the trail.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	A03, A04 A01, A02	ALL	<u>Cultural Resources</u>
			Consult with Native Americans when excavation projects and activities are planned in sites or areas of known religious or cultural importance.
	A02		Complete 10,000 acres of cultural resource inventory backlog by end of second decade.
			For ground disturbing projects, inventory cultural resources and locations of Native American religious use.
A2	A02	ALL	<p>The Forest will comply with the National Historic Preservation Act (NHPA) and with Executive Order (EO) 11593 in decisions involving interactions among cultural and other resources. Cultural resources will be managed in consultation with the State Historic Preservation Officer and in coordination with the planning activities of the State Historic Preservation Office. The preferred management of sites eligible, or potentially eligible, for the National Register of Historic Places (NRHP) will be avoidance and protection.</p>
			<p>Projects with impact potential will be inventoried for cultural resources and areas of Native American religious use. Inventory intensity will comply with regional Policy and will be determined in consultation with the State Historic Preservations Officer (SHPO). Inventory standards are:</p>
			100% ground survey of all known surface disturbance areas:
			Minimum 10% ground survey for dispersed impact projects (e.g., timber sales), higher survey fraction if conditions such as ground cover, or cultural site density or type warrant;
			Consultation with the SHPO, and if necessary, the Advisory Council on Historic Preservation (ACHP), before project implementation.
			Significant or potentially significant inventoried sites will be managed to achieve a “No Effect” finding, in consultation with the SHPO and ACHP (36 CFR 800). Where resource conflicts make this impossible, management will achieve a “No Adverse Effect” finding. Monitoring during and after project implementation will ensure sites are protected.
			Areas not surveyed at the 100% level for project clearances will be surveyed based on priorities established by management objectives.
			Identified sites will be evaluated for eligibility for the NRHP. Sites currently eligible will be nominated. Sites not yet nominated will be managed as if eligible, unless consultation with the SHPO indicates otherwise. Nominating criteria are in 36 CFR 60.4. Nominations will be coordinated with the SHPO.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A02	ALL	<p>Priorities for nomination will be determined by the Forest Archeologist in coordination with the Forest Cultural Resources Management Program and planning activities of the State Historic Preservation Office.</p> <p>Inventoried sites, eligible or potentially eligible for the NRHP will be systematically revisited by non-specialists through regularly scheduled patrols, and by specialists to assess deterioration, vandalism or pilfering. Sites susceptible to deterioration, and/or human disturbance will be monitored frequently. Rapid deterioration, or susceptibility to such, will require stabilization, restoration, or data recovery. Vandalism or pilfering will require protective measures such as signing, remote sensing, increased patrolling, investigations, stabilization, restoration, and/or data recovery. Specific sites or areas may be closed to ORV use and withdrawn from mineral entry.</p> <p>A cultural resource overview has been prepared and is available for public inspection. It will be updated as required by the data base, management situation, or scientific research.</p> <p>Opportunities for interpreting cultural resources will be identified, and may include lectures, tours, papers, reports, publications, brochures, displays, films, trails, and signs:</p>
A3	A05	ALL	<p><u>Recreation or VIS Site Construction/Expansion</u></p> <p>Prepare design narrative for the Forest’s Recreation Capital Investment proposals. The following lists serves as a management guideline. The Forest’s site priorities may change as funding dictates or management needs change.</p>
	A06		<p>Prepare site plans and complete NEPA requirements for capital investment projects where funding is anticipated within 5 years. See listing of projects in Table 7, page 232.</p>
A3	A07		<p>Maintain cross-country ski and snowmobile trails for public health and safety, using volunteers and concessionaires.</p>
	A08		<p><u>Visitor Information Services</u></p> <p>Develop a fully operational interpretive program on all Districts concentrating at existing high use sites with interpretive facilities.</p> <p>Develop a cadre of seasonal and fulltime personnel to administer a professional interpretive program with the following primary objectives:</p> <ol style="list-style-type: none"> <li>1. Enhance the visitors’ knowledge and enjoyment of the National Forests’ cultural and natural history.</li> <li>2. Inform visitors, permittees, commercial operators, and other employees, and adjacent landowners of the mission of the Forest Service.</li> </ol>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A3	A08	ALL	<p>3. Inform and educate in order to assist in the solution of National Forest resource management problems.</p> <p>Utilize volunteers, natural history associations, and the private sector to assist in implementing a viable interpretive program planned and orchestrated by the Forest Service.</p> <p>Develop Interpretive Plans for each Ranger District and update as needed.</p> <p>Provide timely reprints of major brochures and guides. Write and develop new information as needed to ensure public safety through public awareness of recreation opportunities and hazards. Review printed information annually to determine needed updates.</p> <p>Look for opportunities to convey National Forest management through appropriate signing.</p> <p>Encourage the development of a Forest Interpretive Association. Set up interpretive material sales outlets at appropriate locations.</p>
	A11	ALL	<p><u>Trail Inventory and Planning</u></p> <p>Construct, as a minimum, 25 miles of new trail for the first decade of the Plan. Trails along the Rim, in the Pinetop/Lakeside area, near Big Lake, and near other high use or urban interface areas will receive the highest priority. Reconstruct approximately 75 miles of trail concentrating on trails where current conditions pose unsafe hiking situations or are creating significant resource damage.</p> <p>A12</p> <p>Biannually update the RIMTRAILS data base.</p> <p>Assess and allow development of interconnecting trail system with cities of Show Low, Pinetop, Lakeside, and Navajo County Parks (i.e., Scotts Reservoir to Blue Ridge).</p>
A3			<p><u>Trail System Management</u></p>
	A12	ALL	<p>Using volunteers where possible, conduct trail condition surveys, prepare trail maintenance plans, and sign trails on a “safety first” basis. Promote Adopt-A-Trail Program.</p>
		01	<p>The General Crook Trail will be properly signed and where feasible, tied into other nearby “Rim” trails.</p>
	A12	ALL	<p>Trail maintenance set at level reflecting ROS Class, type of trail, and amount of use. Trail maintenance priority at each District based first on preventing unacceptable levels of erosion and of user safety, second to provide for appropriate recreation opportunities if dictated by use, and third to accommodate administrative needs.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A08

ROS CLASS

MAINTENANCE LEVEL

P	I or II
SP	I or II
SPM	II or III
RNA	III or IV
R	IV or V
U	V

Wilderness

B2	B03, 01	07, 08, 12, 13	Administer to maintain the current wilderness character. In most issues between the biological wilderness resource and human preferences, the resource and its preservation will be given priority.
	B03, 01	07, 12, 13	Visual Quality Objective is preservation.
	B03		Organized recreation events such as runs, games, trail rides, endurance rides, etc., whether or not competitive will not be permitted.
		08, 12, 13	Maximum group size will be limited to 25 persons and/or 35 head of pack and saddle stock. The responsible District has the option to further restrict group size if it is felt wilderness experience levels or values would be adversely impacted.
			Monitor and document recreation use.
			Maintain a viable volunteer program to assist in routine O&M projects and a limit of acceptable change inventory.
			Encourage no trace camping ethics with user contacts commensurate with degree of use and implement similar awareness efforts within local communities and schools.
			Annually maintain needed public safety, regulatory, and directional signing.
	B03, A08	07, 08, 12, 13	Manage all Outfitter/Guide operations.
	B03, B01		Outfitter/Guide permits will be issued on a case-by-case basis, according to public demand and demonstrated length of satisfactory service, until wilderness use capacities are established.
			Where institutional objectives can be met outside of designated wilderness or primitive areas, outfitter/guide permits will not be issued.
	B03, A08		Campsite reservations for Outfitter/Guides will not be made.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	B03		<p>No grazing of pack stock. Exceptions may be permitted on a case-by-case basis by the District Ranger.</p> <p>Manage Wilderness Area boundaries.</p> <p>All wilderness boundaries will be posted except along inaccessible areas.</p> <p>Monitor and report insect and disease conditions on a continuous basis.</p> <p>For epidemic insect populations, implement chemical or biological control if wilderness values are directly threatened, or if resource values adjacent to wilderness will be severely impacted.</p>
B2	B03	07, 08, 12, 13	<p>New trail construction considered only if its objective is the enhancement of the wilderness character. (Control over use or resource degradation).</p>
	A01, A10, B03		<p>Trails maintained at Level I or II.</p> <p>Coordinate any trail work around anticipated high use periods to minimize effects on recognized experience levels.</p> <p>Obliterate administrative trails that are little used and detract from the wilderness character.</p>
	B03		<p>Encourage volunteers to adopt trails for maintenance and to assist in reconstruction projects.</p>
	B03, A10		<p>Priority for trail reconstruction based 1<sup>st</sup> – on potential for loss of wilderness values, 2<sup>nd</sup> – impacts to wilderness recreation experience levels, 3<sup>rd</sup> – trails which receive the greatest use.</p>
	B03		<p>Management of the recreation resource will emphasize maintenance of the existing opportunities for solitude or a primitive and unconfined type of recreation.</p>
	B01, 03		<p>Develop Wilderness Management Implementation Plans that ensure maintenance of opportunities where ranges of human contact normally prevailing remains low. Continually monitor and evaluate human interaction levels.</p> <p>Operate and maintain the wilderness areas by R-3 Operation and Maintenance Standards. Update operation and administration plans annually to reflect these standards. Indirect management techniques will be favored over regulatory techniques.</p>
	B03, P24		<p>Enhance provisions for 36 CFR, part 261 and Title 18 U.S.C. regarding prohibitions in wilderness.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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B2            B03, B01    07, 08, 12,  
                  P12            13

Two types of prescribed fire may be approved for use within wilderness: Those ignited by lightning and allowed to burn under prescribed conditions (wildland fire use), and those ignited by qualified Forest Service officers (prescribed fire). The use of prescribed fire in wilderness is subject to pre-planned, specified conditions as documented in an approved Wilderness Management Implementation Plan.

Decisions to use prescribed fire in wilderness will be based on one or more of the following objectives:

1. Permit lightning caused fires to play, as nearly as possible, their natural ecological role.
2. Reduce the risk from wildfires, or its consequences to life and property within wilderness or to resources, life, or property outside wilderness.
3. Maintain fire-dependent communities if the act establishing the wilderness specifically directs their maintenance.

In addition to the above 3 objectives, all of the following criteria must be met before qualified Forest Service managers may ignite a prescribed fire within a wilderness:

1. It is not possible to allow lightning fires to burn freely without unacceptable risk.
2. It is not possible to achieve wilderness fire objectives by using prescribed fire or other fuel treatment measures outside the wilderness.
3. An interdisciplinary team has evaluated and recommended the proposed use.
4. Interested public is appropriately involved in the decision process.

A decision to use prescribed fire in wilderness shall not be based on benefits to wildlife, maintenance of vegetative types, improvement in forage production, or enhancement of other resource values. These can be additional benefits to prescriptions for meeting one of the 3 authorized wilderness objectives.

Management ignited fires will not be used to achieve wilderness fire management objectives where lightning caused fires can achieve them.

Suppress all wildfires within wilderness in accordance with the direction in FSM 5130.

Suppression efforts during moderate to extreme fire danger can utilize helicopters and power saws when authorized by the Forest Supervisor, his/her acting, or District Rangers, and only when conditions warrant the use.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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B2

B03

07, 08, 12, 13

Conduct all fire management activities within wilderness in a manner compatible with the overall wilderness management objectives.

In fire management activities, give preference to using methods and equipment that causes the least:

1. Alteration of the wilderness landscape;
2. Disturbance of the land surface;
3. Disturbance to visitor solitude;
4. Reduction of visibility during periods of visitor use;
5. Adverse effect on other air quality related values.

If suitable alternatives exist, do not construct fire lines adjacent to popular trails nor located fire camps at popular user camp areas.

Locate fire camps, helispots, and other temporary facilities or improvements outside of the wilderness boundary whenever possible.

B01, 03

Rehabilitate disturbed areas within wilderness to as natural an appearance as possible, utilizing grass, forb, or tree species natural to the area. Use of heavy equipment to maintain range structural improvements can only occur under Regional Forester's direction.

Range management activities that fall within the parameters of the other wilderness standards and guidelines, are allowed if determined necessary to maintain proper range stocking levels.

Construction of new structural range improvements will be accomplished if determined to be necessary for the purpose of resource protection rather than to accommodate increased number of livestock, and then only if compatible with documented Regional Forester's position on an acceptable wilderness ethic.

Fences should be located and constructed so as not to be visible except at trail crossings. Fencing across trails will be minimized. Range water developments should be located out of view of trails.

Purpose and need and criteria will be approved by Regional Forester. Implementation and allotment plans by Forest Supervisor.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08 B01, B03 C01, C02 D01, E06 F01, F02 G03, G04 G06, G10 G11, J01 J02, J04 P01, P10 P11, P27		<p data-bbox="618 268 878 300"><u>Wildlife Management</u></p>
			<p data-bbox="618 604 1520 701">Manage threatened and endangered animal, fish, and plant habitat to achieve declassifying in a manner consistent with the goals established by the U.S. Fish and Wildlife Service and the Arizona Game and Fish Department.</p> <p data-bbox="618 737 1495 869">Habitat management for Federally listed species will take precedence over unlisted species. Habitat management for endangered species will take precedence over threatened species. Habitat management for sensitive species will take precedence over non-sensitive species.</p> <p data-bbox="618 905 1344 936">Implement threatened and endangered species recovery plans.</p> <p data-bbox="618 972 1484 1037">Carry out the appropriate management activities outlined in the Rocky Mountain Southwest Peregrine Falcon and Apache Trout Recovery Plans.</p>
	C12	ALL	<p data-bbox="618 1073 1511 1169">Cooperate with the Arizona Game and Fish Department determining the need and identifying sites for transplant of Rocky Mountain Bighorn Sheep, Desert Bighorn Sheep, and small game species.</p> <p data-bbox="618 1205 1523 1270">Evaluate transplant sites. Transplants will be approved by the Forest Service and Arizona Game and Fish Department.</p> <p data-bbox="618 1306 1523 1438">Manage animal damage in cooperation with the Arizona Game and Fish Department and cooperators to prevent or reduce damage to other resources and direct control toward preventing damage or removing only the offending animal.</p> <p data-bbox="618 1474 1495 1575">Control problem animals on a case-by-case basis in cooperation with other agencies (FMS 2610) using methods directed at the offending animal, but which present the least risk to other wildlife and/or Forest visitors.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08 B01, B03 C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<u>Threatened, Endangered, and Sensitive Species.</u>

Activities likely to cause disturbance will be prohibited in the vicinity of essential peregrine falcon nesting habitat between March 1 and August 15. Should peregrines remain strongly attached to nest sites after August 15; this period may be extended, or should peregrines disperse earlier than August 15 this period may be shortened. If peregrines are within their nest territories prior to March 1, prohibit disturbing activities. If there are no peregrines on a territory by May 15, this protection may be released. Seasonal restrictions may apply unless the Forest wildlife biologist determines that the breeding pair is unproductive by June 1 will then be rescinded. Winter Bald Eagle roosts will be identified and protected during management activities. Prohibit development in Bald Eagle winter roosts and buffer zones.

Continue to identify existing and potential habitat for peregrine falcons and Apache Trout as outlined in the Species Recovery Plans.

Monitor management practices within occupied and potential peregrine falcon, Apache Trout, bald eagle, loach minnow, and Little Colorado River spinedace habitat, and evaluate impacts.

Monitor management practices within occupied and potential habitat of plants listed as threatened, endangered, state sensitive animals, or on the Regional Forester's Sensitive Plant List. Manage sensitive species to sustain viability and prevent the need for listing as threatened or endangered.

MEXICAN SPOTTED OWL

Standards: Provide three levels of habitat management - protected, restricted, and other forest and woodland types to achieve a diversity of habitat conditions across the landscape.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08 B01, B03 C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<p>Protected areas include delineated protected activity centers (PACs): mixed conifer and pine-oak forests with slopes greater than 40% where timber harvest has not occurred in the last 20 years: and reserved lands which include wilderness, primitive areas, research natural areas, wild and scenic rivers, and congressionally recognized wilderness study areas.</p> <p>Restricted areas include all mixed-conifer, pine-oak, and riparian forests outside of protected areas.</p> <p>Other forest and woodland types include all ponderosa pine, spruce-fir, woodland, and aspen forests outside protected and restricted areas.</p> <p>Survey all potential spotted owl areas including protected, restricted, and other forest and woodland types within an analysis area plus the area ½ mile beyond the perimeter of the proposed treatment area.</p> <p>Establish a PAC at all Mexican spotted owl sites located during surveys and all management territories established since 1989.</p> <p>Allow no timber harvest except for fuelwood and fire risk abatement in established protected activity centers. For PACs destroyed by fire, windstorm, or other natural disaster, salvage timber harvest or declassification may be allowed after evaluations on a case-by-case basis in consultation with the US Fish and Wildlife Service.</p> <p>Allow no timber harvest except for fire risk abatement in mixed conifer and pine-oak forests on slopes greater than 40% where timber harvest has not occurred in the last 20 years.</p> <p>Limit human activity in protected activity centers during the breeding season.</p> <p>In protected and restricted areas, when activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans or conservation agreements; consult with US Fish and Wildlife Service to resolve the conflict.</p> <p>Monitor changes in owl populations and habitat needed for delisting.</p>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C2  
A01,  
A08  
B01, B03  
C01,  
D01,  
E06, F01,  
F02,  
G03,  
G04,  
G06,  
G10,  
G11, J01,  
J02, J04,  
P01, P10,  
P11, P27

ALL

Guidelines

A. General

Conduct surveys following Region 3 survey protocol.

Breeding Season is March 1 to August 31.

B. Protected Areas

Protected Activity Centers: Delineate an area of not less than 600 acres around the activity center using boundaries of known habitat polygons and/or topographic features. Written justification for boundary delineation should be provided

The PAC boundary should enclose the best possible owl habitat configured in as compact a unit as possible, with the nest or activity center located near the center.

The activity center is defined as the nest site. In the absence of a known nest, the activity center should be defined as a roost grove commonly used during breeding. In the absence of a known nest or roost, the activity center should be defined as the best nest/roost habitat.

PAC boundaries should not overlap.

Submit PAC maps and descriptions to the recovery unit working group for comment as soon as possible after completion of surveys.

Road or trail building in PACs should be avoided but may be permitted on a case-by-case basis for pressing management reasons.

Generally allow continuation of the level of recreation activities that was occurring prior to listing.

Require bird guides to apply for and obtain a special use permit. A condition of the permit shall be that they obtain a subpermit under the U.S. Fish and Wildlife Service Master endangered species permit. The permit should stipulate the sites, dates, number of visits and maximum group size permissible.

Harvest fuelwood when it can be done in such a way that effects on the owl are minimized. Manage within the following limitations to minimize effects on the owl:

- Retain key forest species such as oak.
- Retain key habitat components such as snags and large downed logs.
- Harvest conifers less than 9 inches in diameter only within those protected activity centers treated to abate fire risk as described below.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C2

A01,  
A08  
B01, B03  
C01,  
D01,  
E06, F01,  
F02,  
G03,  
G04,  
G06,  
G10,  
G11, J01,  
J02, J04,  
P01, P10,  
P11, P27

ALL

Treat fuel accumulations to abate fire risk:

- Select for treatment 10% of the PACs where nest sites are known in each recovery unit having high fire risk conditions. Also select another 10% of the PACs where nest sites are known as a paired sample to serve as control areas.
- Designate a 100-acre “no treatment” area around the known nest site of each selected PAC. Habitat in the no treatment area should be as similar as possible in structure and composition as that found in the activity center.
- Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel treatment and prescribed fire to abate fire risk in the remainder of the selected PAC outside the 100 acre “no treatment” area.
- Select and treat additional PACs in 10% increments if monitoring of the initial sample shows there were no negative impacts or there were negative impacts which can be mitigated by modifying treatment methods.
- Use light prescribed burns in nonselected PACs on a case-by-case basis. Burning should avoid a 100-acre “no treatment” area around the activity center. Large woody debris, snags, clumps of broad-leafed wood vegetation should be retained and hardwood trees larger than 10 inches diameter at the root collar.
- Pre- and post-treatment monitoring should be conducted in all PACs treated for fire risk abatement (See monitoring guidelines).

Steep Slopes (Mixed conifer and pine-oak forests outside PACs with slopes greater than 40% that have not been logged within the past 20 years):

No seasonal restrictions apply.

Treat fuel accumulations to abate fire risk:

- Use combinations of thinning trees less than 9 inches in diameter, mechanical fuel removal, and prescribed fire.
- Retain woody debris larger than 12 inches in diameter, snags, clumps of broad-leafed woody vegetation, and hardwood trees larger than 10 inches in diameter at the root collar.
- Pre- and post-treatment monitoring should occur within all steep slopes treated for fire risk abatement. (See monitoring guidelines)

<b>Program Components</b>	<b>Activities</b>	<b>Applicable Management Areas</b>	<b>Standards and Guidelines</b>
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Reserved land (Wilderness, Primitive Areas, Research Natural Areas, Wild and Scenic Rivers, and Congressionally Recognized Wilderness Study Areas):

Allow prescribed fire or wildland fire use where appropriate.

**C. RESTRICTED AREAS**

(Mixed conifer, pine-oak, and riparian forests)

Mixed Conifer and Pine-oak Forests (See glossary definition): Manage to ensure a sustained level of owl nest/roost habitat well distributed across the landscape. Create replacement owl nest/roost habitat where appropriate while providing a diversity of stand conditions across the landscape to ensure habitat for a diversity of prey species.

The following table displays the minimum percentage of restricted area which should be managed to have nest/roost characteristics. The minimum mixed conifer restricted area includes 10% at 170 basal areas and an additional amount of the area at 150 basal areas. The additional area of 150 basal area is +10% in BR-E and +15% in all other recovery units. The variables are for stand averages and are minimum threshold values and must be met simultaneously. In project design, no stand simultaneously meeting or exceeding the minimum threshold values should be reduced below the threshold values unless a district-wide or larger landscape analysis of restricted areas shows that there is a surplus of restricted area across simultaneously meeting the threshold values. Management should be designed to create minimum threshold conditions on project areas where there is a deficit of stands simultaneously meeting minimum threshold conditions unless the district-wide or larger landscape analysis shows there is a surplus.

<b>VARIABLE</b>	<b>MC /1 ALL RU /2</b>	<b>MC BR-E RU /3</b>	<b>MC OTHER RU</b>	<b>PINE-OAK</b>
Restricted Area %	10%	10%	15%	10%
Stand Averages for:				
Basal Area	170	150	150	150
18 inch + trees/ac	20	20	20	20
Oak basal area	NA	NA	NA	20
% total existing stand density index by size class				
12-18"	10	10	10	15
18-24"	10	10	10	15
24"+	10	10	10	15

/1 – Mixed Conifer

/2 – Recovery Unit

/3 – Basin and Range – East

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08, B01, B03, C01, D01, E06, F01, F02, G03, G04, G06, G10, J11, J01, J02, J04, P01, P10, P11, P27	ALL	<p>Attempt to mimic natural disturbance patterns by incorporating natural variation, such as irregular tree spacing and various patch sizes, into management prescriptions.</p> <p>Maintain all species of native trees in the landscape including early seral species.</p> <p>Allow natural canopy gap processes to occur, thus producing horizontal variation in stand structure.</p> <p>Emphasize uneven-aged management systems. However, both even-aged and uneven-aged systems may be used where appropriate to provide variation in existing stand structure and species diversity. Existing stand conditions will determine which system is appropriate.</p> <p>Extend rotation ages for even-aged stands to greater than 200 years. Silvicultural prescriptions should explicitly state when vegetative manipulation will cease until rotation age is reached.</p> <p>Save all trees greater than 24 inches dbh.</p> <p>In pine-oak forests, retain existing large oaks and promote growth of additional large oaks.</p> <p>Encourage prescribed and wildland fire use to reduce hazardous fuel accumulation. Thinning from below may be desirable or necessary before burning to reduce ladder fuels and the risk of crown fire.</p> <p>Retain substantive amounts of key habitat components:</p> <ul style="list-style-type: none"> <li>- Snags 18 inches in diameter and larger.</li> <li>- Down logs over 12 inches midpoint diameter.</li> <li>- Hardwoods for retention, recruitment, and replacement of large hardwoods.</li> </ul> <p>Riparian Areas: Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should move degraded riparian vegetation toward good condition as soon as possible. Damage to riparian vegetation, stream banks, and channels should be prevented.</p> <p>Domestic Livestock Grazing: Implement forest plan forage utilization standards and guidelines to maintain owl prey availability, maintain potential for beneficial fire while inhabiting potential destructive fire, maintain and restore riparian ecosystems, and promote development of owl habitat. Strive to attain good to excellent range conditions.</p> <p>Old Growth: Except where other wise noted, implement forest plan old growth standards and guidelines to maintain and promote development of owl habitat.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08 B01, B03 C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<p data-bbox="667 268 1273 296"><b>D. OTHER FOREST AND WOODLAND TYPES</b></p> <p data-bbox="618 338 1520 499">Apply ecosystem approaches to manage for landscape diversity mimicking natural disturbance patterns, incorporating natural variation in stand conditions and retaining special features such as snags and large trees, utilizing appropriate fires, and retention of existing old growth in accordance with forest plan old growth standards and guidelines.</p> <p data-bbox="667 537 1341 564"><b>E. GUIDELINES FOR SPECIFIC RECOVERY UNITS</b></p> <p data-bbox="618 604 1357 632">Upper Gila Mountains: No special additional guidelines apply.</p> <p data-bbox="618 672 1422 732">Basin and Range – West: Emphasize restoration of lowland riparian habitats.</p> <p data-bbox="667 772 1081 800"><b>F. MONITORING GUIDELINES</b></p> <p data-bbox="618 840 1520 1001">Monitoring and evaluation should be collaboratively planned and coordinated with involvement from each national forest, USFWS Ecological Services Field Office, USFWS Regional Office, USDA Forest Service Regional Office, Rocky Mountain Research Station, recovery team, and recovery unit working groups.</p> <p data-bbox="618 1041 1503 1102">Population monitoring should be a collaborative effort with participation of all appropriate resource agencies.</p> <p data-bbox="618 1142 1503 1203">Habitat monitoring of gross habitat changes should be a collaborative effort of all appropriate resource agencies.</p> <p data-bbox="618 1243 1503 1304">Habitat monitoring of treatment effects (pre- and post-treatment) should be done by the agency conducting the treatment.</p> <p data-bbox="618 1344 1520 1505">Prepare an annual monitoring and evaluation report covering all levels of monitoring done in the previous year. The annual report should be forwarded to the Regional Forester with copies provided to the recovery unit working groups, USFWS Ecological Services field offices, and the USFWS Regional Office.</p> <p data-bbox="618 1545 1487 1707">Rangewide: Track gross changes in acres of owl habitat resulting from natural and human caused disturbances. Acreages changes in vegetation composition, structure, and density should be tracked, evaluated, and reported. Remote sensing techniques should provide an adequate level of accuracy.</p> <p data-bbox="618 1747 1520 1908">In protected and restricted areas where silvicultural or fire abatement treatments are planned, monitor treated stand pre- and post-treatment to determine changes and trajectories in fuel levels; snag basal areas; live tree basal areas; volume of down logs over 12 inches in diameter; and basal area of hardwood trees over 10 inches in diameter at the root crown.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C2  
A01,  
A08  
B01, B03  
C01,  
D01,  
E06, F01,  
F02,  
G03,  
G04,  
G06,  
G10,  
G11, J01,  
J02, J04,  
P01, P10,  
P11, P27

ALL

Upper Gila Mountain, Basin and Range East, and Basin and Range West Recovery Units: Assist the recovery team and recovery unit working groups to establish sampling units consisting of 19 to 39 square mile quadrants randomly allocated to habitat strata. Quadrants should be defined based on ecological boundaries such as ridge lines and watersheds. Quadrant boundaries should not traverse owl territories. Twenty percent of the quadrants will be replaced each year at random.

Using the sample quadrants, monitor the number of territorial individuals and pairs per quadrant; reproduction; apparent survival; recruitment; and age structure. Track population density both per quadrant and habitat stratum.

ECOSYSTEM MANAGEMENT IN NORTHERN GOSHAWK HABITATS

Applicability

The northern goshawk standards and guidelines apply to the forest and woodland communities described below that are outside of Mexican spotted owl protected and restricted areas. Within Mexican spotted owl protected and restricted areas, the Mexican spotted owl standards and guidelines take precedence over the northern goshawk standards and guidelines. One or the other set of standards and guidelines apply to all forest and woodland communities but the Mexican spotted owl standards always take precedence in areas of overlap.

Standards

Survey the management analysis area prior to habitat modifying activities including ½ mile beyond the boundary.

Establish, and delineate on a map, a post-fledgling family area (PFA) that includes 6 nesting areas per pair of nesting goshawks for known next sites, old nest sites, areas where historical data indicates goshawks have nested in the past, and where goshawks have been repeatedly sighted over a 2 year or greater time period but no nest sites have been located. Manage for uneven-age stand conditions for live trees and retain live reserve trees, snags, downed logs, and woody debris levels throughout woodland, ponderosa pine, mixed conifer and spruce-fir forest cover types. Manage for old age trees such that as much old forest structure as possible is sustained over time across the landscape. Sustain a mosaic of vegetation densities (overstory and understory), age classes and species composition across the landscape. Provide foods and cover for goshawk prey.

Limit human activity in nesting areas during the breeding season.

Manage the ground surface layer to maintain satisfactory soil conditions i.e. to minimize soil compaction; and to maintain hydrologic and nutrient cycles.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08 B01, B03 C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<p>When activities conducted in conformance with these standards and guidelines may adversely affect other threatened, endangered, or sensitive species or may conflict with other established recovery plans of conservation agreements; consult with US Fish and Wildlife Service to resolve the conflict.</p> <p>Within the ranges of the Kaibab pincushion cactus. <i>Pediocactus paradinei</i>, and the Arizona leatherflower, <i>Clematis hirsutissima arizonica</i>, management activities needed for the conservation of these two species that may conflict with northern goshawk standards and guidelines will be exempt from the conflicting northern goshawk standards and guidelines until conservation strategies or recovery plans (if listed) are developed for the two species.</p> <p><u>Guidelines</u></p> <p><u>General</u> Emphasize maintenance and restoration of healthy riparian ecosystems through conformance with forest plan riparian standards and guidelines. Management strategies should restore degraded riparian areas to good condition as soon as possible. Damage to riparian vegetation, streambanks and channels should be prevented.</p> <p>Refer to USDA Forest Service General Technical Report RM-217 entitled “Management Recommendations for the Northern Goshawk in the Southwestern United States” for scientific information on goshawk ecology and management which provide the basis for the management guidelines. Supplemental information on goshawk ecology and management may be found in “The Northern Goshawk: Ecology and Management” published by the Cooper Ornithological Society as Studies in Avian Biology No. 16. In woodland forest cover types, use empirical data to determine desired habitat conditions.</p> <p><u>Inventory</u> Use the R3 survey protocol to get complete coverage of the management analysis area (Kennedy and Stahlecker 1993, as modified by Joy, Reynolds, and Leslie 1994). Management analysis areas should be entire ecosystem management areas if possible.</p> <p>Complete at least 1 year of survey, but 2 years of survey should be done to verify questionable sightings, unconfirmed nest sites, etc. If nesting goshawks are found during the first year of inventory, a second year of inventory is not needed in the territory.</p> <p>For areas where complete inventories cannot be done, use aerial photographs to locate vegetative structural stages (VSS) 4-6 within the project area and inventory just those sites for goshawk nest areas using R3 inventory protocol. All uninventoried areas (VSS 1-3) will be managed to FFA specifications while in the stage. If while using this inventory option, evidence suggests goshawks are present (such as finding plucking perches or molted goshawk feathers), conduct a complete inventory as outlined above.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08 B01, B03 C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<p>If forests have goshawks commonly nesting in stands classified as VSS 1-3, use the complete inventory methods for those areas. There may be situations where an area is classified as VSS 3, based on the predominant VSS class, but in actuality a combination of VSS 4 &amp; 5 predominate the area. For those situations, use the complete inventory methods.</p> <p><u>Home Range Establishment</u> PFA's will be approximately 600 acres in size. PFA's will include the nest sites and consist of the habitat most likely to be used by the fledglings during their early development.</p> <p>Establish a minimum of 3 nest areas and 3 replacement nest areas per PFA. The nest areas and replacement nest areas should be approximately 30 acres in size. A minimum total of 180 acres of nest areas should be identified within each PFA.</p> <p>Nest site selection will be based first on using active nest sites followed by the most recently used historical nest areas. When possible, all historical nest areas should be maintained.</p> <p>Manage for nest replacement sites to attain sufficient quality and size to replace the three suitable nest sites.</p> <p><u>Management Scale</u> Distribution of habitat structures (tree size and age classes, tree groups of different densities, snags, dead and down woody material, etc.) should be evaluated at the ecosystem management area level, at the mid-scale such as drainage, and at the small scale of site. Where VSS 6 is deficit within the ecosystem management area, all VSS 6 will be maintained regardless of location. However, over time, the intent is to sustain a relatively even distribution (again, based on site quality) of VSS 6 across the ecosystem management area.</p> <p><u>Vegetation Management</u></p> <p><u>Landscapes Outside Goshawk Post-Fledgling Family Areas</u></p> <p>General: The distribution of vegetation structural stages for ponderosa pine, mixed conifer and spruce-fir forests is 10% grass/forb/shrub (VSS 1), 10% seedling-sapling (VSS 2), 20% young forest (VSS 3), 20% mid-aged forest (VSS 4), 20% mature forest (VSS 5), 20% old forest (VSS 6). NOTE: The specified percentages are a guide and actual percentages are expected to vary + or - up to 3%.</p> <p>The distribution of VSS, tree density, and tree age are a product of site quality in the ecosystem management area. Use site quality to guide in the distribution of VSS, tree density and tree ages. Use site quality to identify and manage dispersal PFA and nest habitat at 2 to 2.5 mile spacing across the landscape.</p>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C2  
A01, A08  
B01, B03  
C01, D01,  
E06, F01,  
F02, G03,  
G04, G06,  
G10, G11,  
J01, J02,  
J04, P01,  
P10, P11,  
P27

ALL

Snags are 18” or larger dbh and 30 feet or larger in height, downed logs are 12 inches in diameter and at least 8 feet long, woody debris is 3 inches or larger on the forest floor, canopy cover is measured with vertical crown projection on average across the landscape.

The order of preferred treatment for woody debris is: 1) prescribed burning, 2) lopping & scattering, 3) hand piling or machine grapple piling, 4) dozer piling.

Canopy Cover: Canopy cover guidelines apply only to mid-aged to old forest structural stages (VSS 4, VSS 5, and VSS 6) and not to grass/forb/shrub to young forest structural stages (VSS 1, VSS 2, and VSS 3).

Spruce-Fir: Canopy cover for mid-aged forest (VSS 4) should average 1/3 60% and 2/3 40%, mature forest (VSS 5) should average 60+%, and old forest (VSS 6) should average 60+%. Maximum opening size is 1 acre with a maximum width of 125 feet. Provide 2 groups of reserve trees per acre with 6 trees per group when opening size exceeds 0.5. Leave at least 3 snags, 5 downed logs, and 10-15 tons of woody debris per acre.

Mixed Conifer: Canopy cover for mid-aged forest (VSS 4) should average 1/3 60+% and 2/3 40+%, mature forest (VSS 5) should average 50+%, and old forest (VSS 6) should average 60+%. Maximum opening size is up to 4 acres with a maximum width of up to 200 feet. Retain 1 group of reserve trees per acre of 3-5 trees per group for openings greater than 1 acre in size. Leave at least 3 snags, 5 downed logs, and 10-15 tons of woody debris per acre.

Ponderosa Pine: Canopy cover for mid-aged forest (VSS 4) should average 40+%, mature forest (VSS 5) should average 40+%, and old forest (VSS 6) should average 40+%. Opening size is up to 4 acres with a maximum width of up to 200 feet. 1 group of reserve trees, 3-5 trees per group, will be left if the opening is greater than an acre in size. Leave at least 2 snags, 3 downed logs, and 5-7 tons of woody debris per acre.

Woodland: manage for uneven age conditions to sustain a mosaic of vegetation densities (overstory and understory), age classes, and species composition well distributed across the landscape. Provide for reserve trees, snags, and down woody debris.

Within Post-Fledgling Family Areas

General: Provide for healthy sustainable forest environment for the post-fledgling family needs of goshawks. The principle difference between “within the PFA” and “outside the PFA” is the higher canopy cover within the PFA and smaller opening size within the post fledgling family area. Vegetative Structural stage distribution and structural conditions are the same within and outside the PFA.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08 B01, B03 C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<p>Spruce-Fir: Canopy Cover for mid-aged forest (VSS 4) should average 60+% and for mature (VSS 5) and old forest (VSS 6) should average 70+%.</p> <p>Mixed Conifer: Canopy cover for mid-aged (VSS 4) to old forest (VSS 6) should average 60+%.</p> <p>Ponderosa Pine: Canopy Cover for mid-aged forest (VSS 4) should average 1/3 60+% and 2/3 50+%. Mature (VSS 5) and old forest (VSS 6) should average 50+%.</p> <p>Woodland: Maintain existing canopy cover levels.</p> <p><u>Within Nesting Areas</u></p> <p>General: Provide unique nesting habitat conditions for goshawks. Important features include trees of mature to old age with high canopy cover.</p> <p>The structure of the vegetation within nest areas is associated with the forest type, and tree age, size, and density, and the developmental history of the stand. Table 5 of RM-217 presents attributes required for goshawks on locations with “low” and “high” site productivity.</p> <p>Preferred treatments to maintain the desired structure are to thin from below with non-uniform spacing and use of hand tools and fire to reduce fuel loads. Lopping and scattering of thinning debris is preferred if prescribed fire cannot be used. Piling of debris should be limited. When necessary, hand piling should be used to minimize compaction within piles and to minimize displacement and destruction of the forest floor and the herbaceous layer. Do not grapple or Dozer pile debris. Manage road densities at the lowest level possible to minimize disturbance in the nest area. Use small, permanent skid trails in lieu of roads for timber harvesting.</p> <p>Spruce-Fir, Mixed Conifer and Ponderosa Pine Cover Types: The nesting area contains only mature to old forest (VSS 5 &amp; 6) having a canopy cover (measured vertically) between 50-70% with mid-aged (VSS 6) trees 200-300 years old. Non-uniform spacing of trees and clumpiness is desirable.</p> <p>Woodland: Maintain existing canopy cover levels.</p> <p><u>Human Disturbance</u></p> <p>Limit human activities in or near nest sites and PFA during the breeding season so that goshawk reproductive success is not affected by human activities.</p> <p>The breeding season extends from March 1 through September 30.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	A01, A08, B01, B03, C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<p>Low severity ground fires are allowed at any time in all forested cover types, but high severity crown fires are not acceptable in the post-fledgling family area or nest areas. Avoid burning the entire home range of a goshawk pair in a single year. For fires planned in the occupied nest area, a fire management plan should be prepared. The fire management plan should minimize the risk of goshawk abandonment while low severity ground fire burns in the nesting area. Prescribed fire within nesting areas should be planned to move with prevailing winds away from the nest tree to minimize smoke and risk of crown fire developing and driving the adults off or consuming the nest tree.</p> <p><u>Ground Surface Layer</u></p> <p><u>(All forested cover types)</u></p> <p>Manage road densities at the lowest level possible. Where timber harvesting has been prescribed to achieve desired forest condition, use small, skid trails in lieu of roads.</p> <p>Piling of debris should be limited. When necessary, hand or grapple piling should be used to minimize soil compaction within piles and to minimize forest floor and herbaceous layer displacement and destruction.</p> <p>Limit dozer use for piling or scattering of logging debris so that the forest floor and herbaceous layer is not displaced or destroyed.</p> <p>Habitat locations will remain confidential to prevent unauthorized removal of specimens.</p> <p>Recovery activities will be pursued where pertinent.</p> <p>Monitor actions to determine effect of management practices on T&amp;E species habitat and the need for a consultation with the U.S. Fish and Wildlife Service.</p> <p>Monitor status of federal listings. If elevated to threatened or endangered status. Consult with U.S. Fish and Wildlife Service as needed.</p> <p>All vegetation manipulations will be coordinated with threatened and endangered species requirements.</p> <p>Studies by appropriate, qualified personnel will be conducted to ascertain suitability of reintroduction of endangered, threatened, proposed, and State listed native species to suitable habitat where not presently occupied.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C2	A01, A08 B01, B03 C01, D01, E06, F01, F02, G03, G04, G06, G10, G11, J01, J02, J04, P01, P10, P11, P27	ALL	<p>The Forest Wildlife Biologist will be consulted on all proposed activities, modifications, and other commitments of lands within known habitats of pregrine falcon, bald eagle, spotted owl, loach minnow, Little Colorado spinedace, and Apache Trout, threatened, endangered or sensitive plants.</p> <p>When management practices are proposed in listed or proposed species habitats, the Forest Wildlife Biologist will evaluate the need for consultation of conference with the Fish and Wildlife Service and Arizona Game and Fish Department.</p> <p>Allow area closures to protect habitat of listed, sensitive, or proposed T&amp;E species.</p>
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C2	C12	ALL	<p><u>Wildlife Management</u></p> <p>Incorporate Sikes Act projects in the 5-year implementation schedule in the Forest Plan. Incorporate these plans into Forest Plan's within 5 years of approval of the Forest Plan's. Inform State of progress toward accomplishment of the Sikes Act schedules.</p> <p>Update Sikes Act operating plans annually in cooperation with each state to insure their consistency with the preferred alternative in the Forest Plan.</p> <p>Consult and cooperate with Arizona Game and Fish Department to achieve management goals and objectives specified in the Arizona Wildlife and Fisheries Comprehensive Plan and State-wide Strategic Plans. Cooperate with the Fish and Wildlife Service and other agencies and organizations as the need arises.</p> <p>Consult and cooperate with the Arizona Game and Fish Department to analyze antelope habitat conditions and habitat management. Antelope habitat projects will be incorporated into the 10 year implementation schedule by 1990.</p> <p>Consult and cooperate with Arizona Game and Fish Department to evaluate opportunities to establish a Sikes Act user fee program by 1990.</p> <p>Cooperate with Arizona Game and Fish Department in evaluating proposals for reintroducing extirpated species into suitable habitat and on fish stocking and public access for fishing.</p> <p>Provide timely public information about closures, fire danger, and other needed information to the Arizona Game and Fish Department.</p>
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Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C01, C03 C04, D03 F02		Develop structural wildlife improvements. <ul style="list-style-type: none"> <li>a) Build all new fences in accordance with wildlife standards. (FSH 2609.11)</li> <li>b) Make livestock water available to wildlife.</li> <li>c) Develop one permanent water source to service every 2,000 acres.</li> </ul>
	C01, C03 F02, E06		Maintain habitat capability through direct treatments of vegetation, soil, and water. <ul style="list-style-type: none"> <li>a) Reseed wildfire areas that are not expected to stabilize within 2 years with a mixture of grass forbs and browse species appropriate for the site. Manage livestock to ensure establishment.</li> <li>b) Include wildlife forage species where appropriate in seed mixtures to be provided by the Forest Service.</li> <li>c) Retain vegetation screening at known game crossings.</li> <li>d) Avoid placement of roads in meadows whenever feasible and obliterate or relocate roads in key meadows presenting conflicts.</li> </ul>
C3	C01, C03 C04, D03 F02	All	<ul style="list-style-type: none"> <li>e) Use integrated stand <b>resource</b> management in design of timber harvests to create habitat conditions needed by a variety of wildlife species in a cost effective manner.</li> </ul>
	C01		Where present, the following species are Management Indicator Species: <ul style="list-style-type: none"> <li>Aberts Squirrel</li> <li>Elk</li> <li>Aquatic Macroinvertebrates</li> <li>Mule Deer</li> <li>Antelope</li> <li>Goshawk</li> <li>Pygmy Nuthatch</li> <li>Turkey</li> <li>Red Squirrel</li> <li>Spotted Owl</li> <li>Yellow-Bellied Sapsucker</li> <li>Plain Titmouse</li> <li>Hairy Woodpecker</li> <li>Lincoln's Sparrow</li> <li>Lucy's Warbler</li> <li>Yellow-Breasted Chat</li> <li>Cinnamon Teal</li> </ul>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C01, C02

Maintain habitat for viable populations of all existing vertebrate wildlife species.

Within each diversity unit maintain or achieve at least 40% of the potential habitat capability for the management indicator species selected for each vegetation type.

Where appropriate, apply prescribed fire to improve big game forage.

RANGE

D2 D01, D02

Wildernesses and Primitive Areas are open to grazing.

D01, D02 011, 012, 013

Grazing management in wilderness is in accordance with FSM 2300 and Conference Report S.2009 H.R. No. 96-1126).

D2 D01 ALL

Inventory transitory range, resulting from timber harvest and firewood cutting during the allotment management planning process, and assign potential capacity where appropriate.

Survey and evaluate insect, disease, and pest infestations on National Forest rangelands. Coordinate with other agencies for methodology to control problems.

Unauthorized livestock on National Forest System lands may be impounded and disposed of by Forest Officers. Enforce the grazing regulations, 36 CFR, and Title 18 USC dealing with livestock management.

Continue livestock grazing with increased emphasis on recreation, wildlife, and fishery resources, while maintaining basic soil and water values. The needs of wildlife will be considered when establishing livestock grazing capacity. Cost effective, state-of-the-art management systems and techniques will be used to integrate other resource objectives with livestock management objectives and improve rangeland condition.

To improve rangeland condition and resolve conflicts with other resource objectives, improved allotment management plans will be developed using the Integrated Resource Management process. Allotment management plans will implement Forest Plan objectives. Improved allotment management plans will give equal consideration of innovative practices and techniques, structural and non-structural range improvements, non-use agreements, and stocking rate adjustment to achieve integrated resource objectives.

Allotment management plans will recognize that domestic livestock may compete with big game animals (e.g. elk, deer, antelope) for available forage on some rangelands.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D2	D01	ALL	<p>On rangelands where available forage has been determined to be a limiting factor in achieving big game objectives, improved allotment management plans will be developed as described above. Allow sufficient forage to accommodate wildlife, unless doing so would be inconsistent with multiple-use principles or with the Forest Plan. Big game habitat objectives are described in each management area and the Arizona Wildlife and Fisheries Comprehensive and Statewide Strategic Plans.</p> <p>Special consideration will be given to critical big game winter ranges in areas where big game winter range has been determined to be a limiting factor in achieving big game objectives. In those areas, no new year round grazing or new winter grazing by domestic livestock will be allowed unless their inclusion in a grazing system better meets big game objectives.</p> <p>New land acquisitions in these critical winter range areas will not be used for domestic livestock grazing unless their inclusion in a grazing system better meets big game objectives.</p> <p>Full capacity rangeland in unsatisfactory range condition will be treated through continued development of improved allotment management plans as well as structural and non-structural range improvements and pasture stocking rate adjustments.</p> <p>Some private and non-Forest Service lands in the boundaries of the Forest may be excluded from grazing, while other lands are grazed under private agreement, and/or waived to the Forest Service for management (FSM 2230).</p> <p>Timing of early spring grazing will be determined by the District Ranger after a joint inspection with the permittee, and will be based on the appropriate stage of growth (plant phenology, see glossary) and amount of forage available.</p>
D2	D01	ALL	<p>Cooperative and technical assistance for forage production activities on State and private lands are provided to increase yield or quality of forage for domestic livestock use in accordance with established standards and guidelines in FSH 2209.22 and 2209.23.</p>
	D02		<p>Range cooperation with agencies and groups is encouraged. Coordinate range activities with outside, Local, State, and Federal agencies, and groups.</p> <p>Range Administration – Receive applications for grazing permits, issue and validate permits, and prepare annual permittee plans as per FSM 2230.</p> <p>Water lots are left open to wildlife for free access except when controlling livestock distribution through water accessibility and soil moisture conditions adversely affect fence stability. Provide fence modifications as needed for wildlife access.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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D02

Salt is used to help achieve proper livestock grazing distribution. Salt is not placed within ¼ mile of any riparian area or water.

When needed during summer months, leave water in livestock troughs for wildlife use after domestic animals have been removed from the grazing unit. In winter months in key wildlife winter ranges, provide water where freezing will not damage existing facilities. Freezing can be prevented by using bubblers.

D2

D05

ALL

Place cattleguards where problem gates exist. Priority for cattle guard placement is in the following order: National Forest boundary; allotment boundary; and interior allotment division fences.

D05,  
D07  
D06, B01  
B03, D02

Standards: forage use by grazing ungulates will be maintained at or above a condition which assures recovery and continued existence of threatened and endangered species.

Guidelines: Identify key ungulate forage monitoring areas. These key areas will normally be ¼ to 1 mile from water, located on productive soils on level to intermediate slopes, and be readily accessible for grazing. Size of the key forage monitoring areas could be 20 to 500 acres. In some situations such as high mountain meadows with perennial streams, key areas may be closer than ¼ mile from water and less than 20 acres. Within key forage monitoring areas, select appropriate key species to monitor average allowable use.

**Allowable Use Guide (Percent) By Range Condition And Management Strategy \***

Range Condition **	Continuous Season-long Use	Defer 1 yr. in 2	Defer 1 yr. in 3	Defer 2 yr. in 3	Rest 1 yr. in 2	Rest 1 yr. in 2	Rest 2 yr. in 3	Rest over 2 yr. in 3
Very Poor	0	10	5	15	15	10	20	25
Poor	10	20	15	20	20	15	30	35
Fair	20	25	20	30	30	25	40	45
Good	30	35	35	35	35	35	45	50
Excellent	30	35	35	35	35	35	45	50

\* Site-specific data may show that the numbers in this table are substantially high or low. These numbers are purposefully conservative to assure protection in the event that site-specific data is not available.

\*\* Range Condition as evaluated and ranked by the Forest Service is a subjective expression of the status of health of the vegetation and soil relative to their combined potential to produce a sound and stable biotic community. Soundness and stability are evaluated relative to a standard characteristic of the soil.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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D05,  
D07  
D06, B01  
B03, D02

In consultation with the U.S. Fish and Wildlife Service, develop site-specific forage use levels. In the event that site-specific information is not available, average key species forage utilization in key forage monitoring areas by domestic livestock and wildlife should not exceed levels in the above table during the forage growing season.

The above table is based on composition and climatic conditions typical of sites below the Mogollon Rim. On Sites with higher precipitation and vegetation similar to sites above the Mogollon Rim, allowable use for ranges in poor to excellent condition under deferment of rest strategies may be increased by 5%. The guidelines established in the above table are applicable only during the growing season for the identified key species within key areas. Allowable use for key forage species during the dormant season is not covered in the above table. These guidelines are to be applied in the absence of more specific guidelines currently established through site specific NEPA analysis for individual allotments.

Guidelines for allowable use for specific allotment(s) management or for grazing strategies not covered in the above table will vary on a site-specific basis when determined through the Integrated Resource Management (IRM) process.

Allowable use guidelines may be adjusted through the land management planning revision or amendment process. Guidelines established through this process to meet specific ecosystem objectives, will also employ the key species and key area concept and will be monitored in this manner.

D06

Permittee maintenance of structural improvements is as defined in the management plan or the annual operating plan. Maintenance continues until replacement is implemented.

**RANGE MANAGEMENT**

D07,  
D02

Provide range administration and analysis.

- a) Review and list all grazing allotments using the following criteria by October 1989
  1. Allotments with Threatened and Endangered species.
  2. Allotments having coldwater fisheries.
  3. Allotments with no allotment management plans (AMPs).
  4. Allotments with approved AMPs that meet Forest Plan S&Gs and multiple-use resource management objectives, but are not yet being implemented.
  5. Allotments with approved AMPs that meet Forest Plan S&Gs and multiple-use resource management objectives and implementation is progressing towards Forest Plan resource objectives.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	D07, D02		<p>6. Allotments with approved AMPs that meet Forest Plan S&amp;Gs and that have reached all Forest Plan multiple-use resource objectives.</p> <p>7. Allotments with approved AMPs that meet Forest Plan S&amp;Gs and that have reached all Forest Plan multiple-use resource objectives.</p> <p>b) Perform basic allotment analysis at least every 10 years and review, revise, or modify allotment management plans. Allotments meeting criteria 1 through 4 (see p. 77-2) will have a high priority for basic analysis and management planning. Allotments meeting criteria 1 through 5 will be reviewed at least every 5 years to monitor progress in meeting management plan objectives.</p> <p>c) Basic allotment analysis will evaluate grazing capability. Determine and map which lands are suitable and unsuitable for livestock grazing. Benchmark transects for range condition trends will be maintained. Amend the Forest Plan, as appropriate, to reflect changes as new data becomes available.</p> <p>d) Watershed condition will be updated and periodically mapped. Amend the Forest Plan, as appropriate, to reflect changes as new data becomes available.</p> <p>e) No grazing capacity will be assigned to lands determined to be unsuitable for grazing. Where appropriate grazing will be eliminated from unsuitable lands.</p> <p>f) Balance grazing capacity and permitted use as soon as possible but no later than 1995.</p> <p>g) Perform utilization studies, including rest pastures, as needed to monitor accomplishment of stated multiple-use objectives.</p> <p>h) Priority order for range administration tasks are permit administration, allotment examination, production/utilization studies, and basic allotment analysis.</p> <p>i) Utilize the Forest's Geographic Information System and Terrestrial Ecosystem Survey information as one tool to evaluate grazing capability based upon watershed condition, vegetation, and other appropriate factors at least by March 1990.</p> <p>j) When problems are evident, corrective action will be prioritized annually. Affected parties will be consulted to establish priorities for providing corrective action, where opportunities exist. The Forest Service will follow up on the effectiveness of the treatment.</p> <p>k) Inspect 30% of allotments per year.</p> <p>l) The Forest will visit (not inspect) all allotments each year.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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D3

D02

ALL

HRM (Holistic Resource Management) is being practiced on a “trial” basis on the Dodson Allotment, Lakeside R.D. No other HRM allotments will be allowed until the trial period is completed and results are evaluated.

D05

Analyze range structural improvements to determine whether they are needed. Reconstruct only those improvements that are needed to meet management level needs.

Reconstruct range structural improvements to original construction standards or better according to FSM 2244, and FSH 2209.22. Permittees will maintain range structural improvements operable condition according to FSM 2224, FSH 2209, and FSM 2320.

Existing allotment boundary, Forest boundary, and water lot fences needing reconstruction or where new fences are built, they will be in accordance with wildlife standards.

Interior fences in an allotment are generally three wire fences and conform to the above restrictions.

Install antelope passes, let down fences, electric fences, or elk jumps wherever necessary to reduce wildlife/fence conflicts.

On open storage tanks and drinkers provide entry and escape ramps for wildlife.

Range Structural Improvement

Improve livestock handling and water facilities for optimum production, while maintaining cost effective management systems and techniques. Construct structural range improvements necessary to implement and maintain range resource management in accordance with an approved allotment management plan and to construction standards set in FSM 2240, 2320, and FSH 2209.22.

Survey proposed earthen stock tank sites for location accuracy, soil suitability, and legal requirements. Design structures built in drainages to meet appropriate flood occurrence intervals. Assure that on new stock tanks appropriate documents for construction and water rights application are filed in a timely manner and according to state law.

Maximize use of road pit tanks to meet livestock water needs.

E8

E03

ALL

Timber Management

Carry out silvicultural examinations to keep track of site specific forest conditions and treatment needs.

Accomplish silvicultural examinations of all suitable land every 10 years (1/10 of area each year).

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	E06	ALL	<p>Integrate dwarf mistletoe surveys into compartment examinations.</p> <p>Use integrated stand <u>resource</u> management to ensure coordination of resource objectives in timber harvest projects, and to provide a diversity of stand conditions.</p> <p>Riparian areas will be mapped as separate areas when they are at least 10 acres; otherwise, they will be considered as areas which require special consideration even though they are part of a larger stand.</p> <p>Public demand for miscellaneous forest products will be met within budget and manpower constraints.</p> <p>Harvest of miscellaneous forest products, like Christmas trees, posts, poles, etc., will be planned to meet integrated management goals.</p> <p>Seed behind intermediate timber harvests with mixes tailored to fit the site. Emphasize high production, shade tolerant, multi-growing season species. Preference will be given to use of native species and any seed that differs from the specified mix will be furnished by the Forest Service.</p>
	E07		<p>Require that all management activities be accomplished in accordance with existing laws and regulations.</p> <p>Administer all contracts and permits to insure compliance with all requirements. This includes free use permits, and contract forms 2400-2, 2400-3, 2400-4, and 2400-6, whether scaled or tree measurement.</p> <p>Slash created by timber harvest activities will be made available for fuelwood when feasible.</p>
			<u>Watershed</u>
F2	F01		<p><u>Inventory</u></p> <p>Determine forest watershed conditions using R-3 Hydrology Note No. 20 (water resources inventory).</p> <p>Conduct Terrestrial Ecosystem Survey to standards, policies, and guidelines as defined in 2550 TES Handbook and National Cooperative Soil Survey. This is accomplished by the Arizona TES Crew.</p>
F2	F02	ALL	<p><u>Planning</u></p> <p>Ensure compliance with Public Law 92-500 "Federal Water Pollution Control Act" and amendments including Clear Water Act of 1977. Implement best management practices to prevent water quality degradation. Implement improvement action where water quality degradation does occur, except for special cases where temporary or short term degradation is occurring from road crossing construction or similar situations.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
F2	F02	ALL	<p>Provide adequate drainage to prevent concentrated flow and sediment laden runoff from entering water courses.</p> <p>Designate stream courses to receive protection during projects (e.g., timber sales, road work). Those streams shown on 7.5 minute quads as a streamcourse should be considered for designated stream courses.</p> <p>Roads will be located away from stream bottoms to minimize sediment delivery to the streamcourse whenever possible.</p> <p>Sediment Production from roads may be minimized by methods such as:</p> <ol style="list-style-type: none"> <li>a. Outsloping of road.</li> <li>b. Leadout ditches.</li> <li>c. Energy dissipaters on culverts.</li> <li>d. Grass seeding</li> <li>e. Rock riprap.</li> </ol> <p>Evaluate projects to determine if detailed soil survey (order 2) and hydrologic survey is needed.</p>
	D03, F02, F03	ALL	<p>Conserve soil and water resources; avoid permanent impairment of site productivity and ensure conservation of soil and water resources. The minimum soil and resource management requirement is to control surface water runoff and erosion at not less than tolerance conditions. 36 CFR 218.23 and 27.</p>
F2	A02, A03 E06, F02 E07, F02	ALL	<p>Soil disturbing activities, being planned on cinder cones and datil soils requires input from the forest soil scientist.</p> <p>Skidding and hauling should be restricted to soil moisture conditions which do not cause excessive soil compaction, displacement or puddling. These soils are included within TES units – 181, 182, 183, 191, 192, 193, 194, 201, 202, 532, 561, 562, 595, 942, 943, and 944. When possible limit logging activities (skidding, machine piling, etc.) on those soils to dry or frozen conditions.</p>
	F02, (258) F03, (265) A02, A03 A08, D03 L04, L12 L19		<p>Plan/accomplish erosion reduction projects on areas disturbed by project activities where the site is not expected to stabilize within 2 years or when water quality degradation will occur.</p>
	C02, D03 F02, P01		<p>Plan/carry out fire rehabilitation where necessary to protect water and soil resources or to prevent unacceptable downstream damage.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	D05, F02 J01 A07, A08 C01, C02 F02, G05 G06, J13 L02, L06 L10, L19		Conserve and encourage efficient use (conservation) of water through project design and recommendations. Ensure compliance with executive order 11990 "Protection of Wetlands", executive order 11988 "Floodplain Management".
	A01, A02 A03, C03 D05, F02 L02, L06 L10 A01, A02		Design structures to be built/reconstructed in drainages to meet appropriate flood recurrence intervals.
	A03, F02		Design facilities to avoid situations that entrap users during flood events.
F2	F02	ALL	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 or groundwater has a low probability of occurrence.
	A01, A02 A03, F02		Limit the use of certain facilities in floodplains to non-flood seasons or daylight hours only.
			Accomplish flood hazard analysis and wetland evaluation on all proposed land exchanges.
			Provide identified escape routes from high hazard floodplains.
	F02, (258) A08, C01 C02, E02 E06, L01 L02, L10		Maintain suitable filter/buffer strips between stream courses and disturbed areas and/or road locations to: <ul style="list-style-type: none"> <li>a. Maintain Suitable Stream Temperature</li> <li>b. Maintain Water Quality Standards</li> </ul>
	F02, (258) A08, G05 J01, L02 L06, L10		Protect surface resource conditions to maintain water quality of domestic water supplies.
	F02		Evaluate soils information to predict areas where vegetation type conversion is likely to occur as a result of management activity. Determine the reforestation/revegetation potential prior to project initiation. (Ref. TE Handbook).

		Applicable	
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Program Components	Activities	Management Areas	Standards and Guidelines
	F03	ALL	<u>Improvements</u>
	C01, C02 F03		Maintain and enhance riparian vegetation along streams to maintain suitable water temperature and other conditions for stream flow.
	F03, (265) A08, L19		Effectively close or obliterate roads causing intolerable resource damage (relocate roads as needed).
F2	F03	ALL	Soil resource improvement will be accomplished on an opportunity basis.
	A02, A03 C02, D03 F03		Develop/carry out water resource improvement plan per A/S NF's watershed improvement needs inventory within the first 2 periods.
	A08, C02 C03, D03 D05, E06 F02 F04		Utilize sale area improvement plans as an opportunity to accomplish resource improvements within the timber sale area.
			<u>Administration and Management</u>
			In the Class 1 air quality area (Mt. Baldy) maintain high quality visual conditions. The form, line, texture, and color characteristic landscape will be clearly distinguishable when viewed as middle ground.
			Review Prevention of Significant Deterioration (PSD) Permit applications to determine the potential effect increased emissions from major stationary sources will have on air quality related values in the Mt. Baldy Class 1 area. Predict the impacts of air pollution generating activities with current modeling techniques.
	F05		<u>Resource Inventory Reports</u>
			Write Terrestrial Ecosystem Survey Reports.
<u>Water Uses Management</u>			
	A07, C01 F07, P01		Ensure compliance with State of Arizona Water Law "Arizona revised statutes sections 45-101 through 46". "Reserved Water Rights" may not fall under jurisdiction of State Statutes.
	A07, C01 D07, F02 P01		Participate in State adjudications on forest watersheds. Protest other uses in conflict with forest uses. Participate in State Water Right hearings to protect forest uses.
F2	A01, C01 D07, F07	ALL	File permits to appropriate water for range, recreation, wildlife, and administration developments.
			Secure water rights through purchase for additional water sources when needed.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	C01, D07 F07, P01		Insure new special use permittees utilizing water from the A/S have acquired a right to appropriate from the State.
	F07		Maintain/update files for national water use inventory (WURR).
	A01, A02 A03, F02		Recognize valid water users and solicit their cooperation in lake management.
			<u>Water Resource Improvement Maintenance</u>
	C04, D06 F08, L28		Maintain water resource improvement projects where improvement and downstream values will be jeopardized if work is not accomplished currently.
	D03, F08		Accomplish/maintain soil resource improvement projects to prevent loss of soil productivity.
	F09		<u>Monitoring</u>
			Monitor water quality and quantity in compliance with P.L. 95-200, Section 208.
			Monitor portable water systems in accordance with the Safe Drinking Water Act.
			Conduct water quality monitoring of primary contact recreation sites to standards of FSM 2540 and Arizona Water Quality Standards for full body contact waters (swimming and wading).
F2	F09	ALL	Monitor specific air pollutant and meteorological parameters necessary for the determination of air quality in the Mt. Baldy Class 1 area. Cooperate with the SCS on winter snow course monitoring and weather station activities. Monitor those activities that are a management concern or a public issue: (such as “Little Colorado Unique Water” or controversial timber sales). Maintain water quality within standards.
G1, G2	G01	ALL	<u>Mining Law Compliance and Administration</u>
			Administer compliance with 36 CFR 228 (Forest Service surface use regulations). Fulfill Forest’s responsibilities regarding the processing of contests, suits, hearing, and appeals under the terms of the 1872 Mining Law.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
G1, G2	G01	ALL	<p>36 CFR 228 regulations and appropriate environmental analysis are used to minimize potential adverse affects from mining activities. Review and administer Operating Plans to ensure that; 1) the proposed operations are reasonable methods of operations, 2) reclamation needs are properly addressed, 3) where appropriate, a bond to insure reclamation is secured, and 4) operations receive monitoring during operations.</p> <p>Seek withdrawal of special areas such as research natural areas, special scenic, botanic, recreation and geologic areas, and developed downhill ski areas. Identify areas within 2 years and seek their withdrawal with 4 years of approval of the Forest Plan.</p>
	G02		<p><b>Minerals Management – Oil and Gas</b></p> <p>Accept, evaluate (where appropriate), approve, and administer Forest Service preliminary prospecting permits for geophysical and geochemical and other prospecting operations.</p> <p>Conduct environmental analysis (tiered to Forest Plan/EIS) of oil and gas lease applications to evaluate consistency with the Forest Plan and to meet standards and guidelines required to protect environmental values and other resources.</p>
G1, G2	G03, G04	ALL	<p>Evaluate oil and gas applications per FSM 2822.41, R-3 Supplement 6, dated August 1983, and as amended, recommend special stipulations, if needed, to BLM.</p> <p>Recommend oil and gas leasing for areas having 0-15 percent slopes as part of standard lease surface resource protections.</p> <p>Recommend oil and gas leasing for areas having 16-40 percent slopes with the Information Notices [FSM 2822.41.3b(7)] to provide more stringent protection.</p> <p>Recommend unlimited surface use stipulations for oil and gas leasing for areas having slopes in excess of 41 percent and riparian areas. Surface occupancy may be allowed but will be limited to specific sites jointly agreed upon by Forest Service &amp; Leasee.</p> <p>Areas in which surface occupancy will be limited or prohibited will include those that are highly visible, that have erosive or unstable soils, critical wildlife habitat, managed community watersheds, etc.</p> <p>Recommend oil and gas leasing without surface occupancy for all developed recreation sites.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
G1, G2	G03, G04	ALL	<p>Recommend oil and gas leasing without surface occupancy for all electronic sites.</p> <p>Conduct environmental analysis of Applications for Permit to Drill (APD) received after a lease is issued. Recommend to BLM, reasonable requirements and protective measures to include in the APD.</p>
G1, G2	G03, G04, G05, G06	ALL	<p><u>Minerals Management Other Leaseables</u></p> <p>Conduct environmental analysis (tiered to Forest Plan/EIS) of lease applications and prospecting permits for other leaseable minerals to evaluate consistency with the Forest Plan and to meet standards and guidelines required to protect environmental values and other resources.</p> <p>Evaluate prospecting permits and applications for other leaseable minerals per FSM 2822.41, R-3 Supplement 6, dated August 1983 (and as amended) and recommend special stipulations, if needed, to BLM.</p> <p>Recommend the same standards and guidelines (including surface occupancy stipulations as shown for oil and gas leasing).</p> <p>Control surface uses in mineral operations through plans of operations and permits which provide for: preservation of water quality, protection of watershed values, monitoring activities, reclamation or retain contour for other uses (when practical and desirable), reforestation or revegetation with appropriate species to attain soil stability and protect threatened, endangered &amp; sensitive species.</p> <p>In the first decade, allow further USGS studies to determine whether a geothermal resource exists.</p> <p>Maintain maps of potential geothermal areas, and process prospecting permits and lease applications. Any lease issued must comply with pertinent regulations and policy guidelines.</p> <p>No surface occupancy of slopes greater than 40 percent or in areas where the Visual Quality Objective is Retention.</p> <p>Integrate any planning for coal exploration and leasing with appropriate BLM plans.</p>
G1, G2	G06	ALL	<p>Cooperate with State to inventory and mitigate hazardous abandoned mine workings.</p> <p>Cooperate with other agencies in inventory of mined area rehabilitation needs and mitigation work.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	G07		<p><u>Minerals Management – Common Minerals</u>  Designate source pits for sale/free use of common variety mineral materials. Receive, evaluate, and where appropriate, approve permits for sale/free use of mineral materials.</p> <p>Encourage new commercial common variety material sources if it can be located where significant adverse affects on other resources would not result, and where other adverse effects can be satisfactorily mitigated.</p> <p>Conduct geological inventory for project planning and implementation and for cinder surfacing material for road construction and maintenance when funds are available.</p> <p>Meet the demand for State, county, and city agencies for cinder material on a free use basis when they qualify under the requirements of 36 CFR 228, and when material is excess to future Forest Service needs.</p>
	G07, A03		<p>When possible, common variety mineral material sources are coordinated to provide other uses such as snow play areas. Allow new mineral material sources or re-open old ones only in areas where economic considerations are considered, and the visual quality objective can be met within prescribed variables. Minimize adverse visual impact. There is regular involvement of the Forest Landscape Architect in planning and review phases of pit use and development.</p>
GA, G2	G07	ALL	<p>No streambed alteration or removal of material is allowed if it significantly affects on riparian dependent resources, channel morphology, or streambank stability.</p> <p>In-service projects requiring mineral materials will consider economic costs and savings opportunities. Project-level analysis will consider potential new sources as well as existing sources. Project-level analysis will identify the most cost efficient material sites (whether existing or potential sites), based on geologic/geotechnical suitability, excavation/processing costs, and haul costs.</p> <p>If other sources are considered, the extra economic costs are identified and considered in the decision to select a material source.</p>
	G08		<p><u>Mineral Reservation and Outstanding Rights</u></p> <p>In sensitive resource areas, protect the resource by vigorous investigation of mineral rights. This includes title searches, BLM record searches, and Zone Geologist involvement.</p> <p>Evaluate and respond within 60 days after receipt of a complete operating plan for surface occupancy.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	G10		<p><u>Mineral Character of Potential Evaluation</u></p> <p>Maintain an inventory of Forest mineral potential. Obtain mineral report from Zone Geologist for land exchange cases.</p>
	G11		<p><u>Geological Planning and Inventory</u></p> <p>Prepare a mined area reclamation implementation plan if funding is available in the first decade. Implement if special funding such as S.E.A.M. can be obtained.</p>
J3	J01	ALL	<p><u>Lands &amp; Special Use Management</u></p> <p>Respond to special use applicants within 15 to 30 working days, informing applicant of expected process delays, needed support data, and anticipated decision if appropriate.</p> <p>Special uses associated with community expansion needs are evaluated through the NEPA process, and appropriate action taken to meet community needs on public lands where environmentally suitable to do so, and there are none or limited conflicts with other resource uses.</p> <p>Request for transmission corridors are evaluated based on public need, economics, and environmental impacts of the alternatives. Emphasis is to use existing corridors to their capacity with compatible utilities, including upgrade power lines, before evaluating new routes.</p> <p>New corridors through avoidance areas in the ponderosa pine and mixed Conifer vegetation types will be minimized and always avoided when feasible.</p> <p>New corridors are managed to maintain current resource protection and outputs to the degree possible.</p> <p>In period 1, determine those special uses and rights-of-way grants with potential to highly impact the environment or other resource management and administer them per FSM standards. Inspections of permitted uses will be made where potential for serious damage to the environment exists where public health and safety could be seriously affected and when permits are reissued or transferred.</p> <p>Maintain cooperation with Game and Fish Department to insure proper maintenance for all Administrative Class A, B, and C dams that are classified as moderate to high hazard potential. Inspect annually.</p> <p>Fees for new permits or adjustments of fees for existing authorizations will be calculated in accordance with the terms of the authorizations, Chief's policy, and Secretary of Agriculture's regulations, 36 CFR 251.57. Authorizations where fees have been waived in whole or in part will be reviewed at least once in the first period to determine if the waiver is in compliance with the Chief's policy and Secretary's regulations.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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J3

J01

ALL

Analysis of recreation residence areas will be made during the first period to determine whether continued use is justified.

Permits are terminated or suspended when permit conditions are not met and the permittee refuses to comply. Take appropriate trespass actions.

Examine existing special uses during the second decade to determine whether continued use is justified, and to insure fees reflect current fee policy.

Appropriate multiple special use permits of similar use categories to a person or organization are consolidated into master permits in the first decade.

There are cases where wildlife is entering upon and damaging adjacent private property. The Forest Service will work with Arizona Game and Fish Department, other state, federal and local agencies, and landowners to develop equitable solutions to existing and potential problems (see FSM 2650.3 Policy). As permitted by law, the Forest Service will share equitably with other parties in the funding of corrective measures with the expectation that lawful solutions will be implemented by January 1, 1999.

Electronic Sites

The following are approved electronic sites to be administered per FSM direction. Many sites are strictly for Forest Service Administration. Commercial use at these sites will be discouraged. Future development at all sites will adhere to the Standards and Guidelines of the Forest Plan.

(Adm – Administrative, Com – Commercial)

(LP – Low Power, HP – High Power)

SITGREAVES NATIONAL FOREST

- Chevelon Butte (Adm) (LP)
- Brookbank (Adm, Com) (LP)
- Chevelon Work Center (Adm) (LP)
- Promontory L.O. (Adm) (LP)
- O’Haco L.O. (Adm) (LP)
- Dutch Joe (Adm) (LP)
- Deer Springs L.O. (Adm) (LP)
- Juniper Ridge L.O. (Adm) (LP)
- Gentry (Adm) (LP)
- Porter Mountain (Adm, Com) (LP, HP)
- Heber Sub-Station (Adm) (LP)
- Heber Ranger Station (Adm) (LP)
- Long Hollow (Com) (LP)
- Pinedale Work Center (Adm) (LP)
- Springer Mountain L.O. (Adm) (LP)
- Lakeside Ranger Station (Adm) (LP)
- Lake Mountain L.O. (Adm) (LP)
- Ortega Mountain (Proposed) (Adm) (LP)

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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J3

J01

ALL

APACHE NATIONAL FOREST

Green's Peak (Adm, Com) (LP)

MCI (Com) (LP)

Big Lake Station (Adm) (LP)

Sizer Knoll (Com) (LP)

Gobbler Peak (Com) (LP)

Escudilla (Adm) (LP)

South Mountain (Adm, Com) (LP)

Rose Peak (Adm) (LP)

Alpine Ranger Station (Adm) (LP)

Reno L.O. (Adm) (LP)

Alpine Heliport (Adm) (LP)

P.S. Knoll (Adm) (LP)

Strayhorse (Adm) (LP)

Blue L.O. (Adm) (LP)

Bear L.O. (Adm) (LP)

Granville (Adm) (LP)

Big Lake L.O. (Adm) (LP)

Trail Cabin (Adm) (LP)

Hannagan (Adm) (LP)

Only the existing high power antenna/tower (currently owned by KRFM) can be used for high power uses.

Once KRFM's antenna/tower is utilized to capacity with high power equipment, no additional high power uses will be authorized.

Existing permittees with future proposals for additions to existing improvements will adhere to the following appropriate standards and guidelines to the extent feasible as determined by the District Ranger.

New permittees at existing sites must comply fully with the following criteria:

Maximize joint use of existing buildings. Lot plans as presently established will be eliminated. Sites are to be allocated on a total required facility basis.

Maintenance of individual site roads and trails will be carried out jointly through cooperative maintenance with proportionate payments to the amount of use.

Commercial broadcasting and constant carriers, will be allowed where compatible. These sites must be physically separated by at least one mile from sites designated for two-way use, i.e. land mobile and microwave. Any electromagnetic interference must be resolved before construction or operation can continue. Microwave corridors will be protected.

Clearing of vegetation will be limited to that which poses a hazard to facilities and operational efficiency.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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J3

J01

ALL

VHF transmitters will be permitted if frequencies are compatible with those of previous users. (Recommend only specified frequencies and not wide range bands).

All new and replacement towers must be self-supporting. Antennas and towers will meet FAA painting and lighting standards. Heights will be kept to a minimum. No interference with fire lookout towers will be authorized.

All utility lines serving the site will be placed underground for new sites where VQO would be degraded by conventional above ground construction. Above ground utilities within existing sites will be placed below ground at the earliest opportunity.

Any prospective permittee desiring a site shall furnish detailed plans of buildings and antenna support structure to the District Ranger for approval. Industries Association Standards RS-222-C, structural standards for steel antenna towers. These plans will show the relationship of the proposed structures to other facilities in the area, along with manufacturer's specifications.

Forest Service will dictate proper lightning protection and grounding requirements commensurate with the facility and its location.

All buildings will be designed and colored to minimize visual impacts.

Existing electronic site permittees at each electronic site (if more than 2) will form user improvement associations and sites will be administered in cooperation with the associations.

For small existing sites (2-5 permittees), District Ranger may elect not to push for formation of user associations if growth is not expected and current situation does not warrant change.

Evaluate locations for high powered broadcast electronic sites.

New electronic sites will be considered only after thorough analysis and if alternative locations on private or State lands are not feasible. Public demand for the proposed service must be demonstrated prior to formal consideration.

J02

Right-of-Way Grants for Roads & Trails

Respond to Rights-of-Way grant applicants within 15 working days informing applicant of expected process delays, needed support data, and anticipated decision.

Only one access road is approved to a parcel of private property whether there are one or many owners.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	J02		Encourage public road agencies to accept USDA Easements on roads they maintain and/or access private properties (provide legal descriptions). Convert special use permits issued to public road agencies to USDA Easements as the opportunity arises.
J3	J02	ALL	Easements for new or reconstructed State or County roads are applied for immediately upon completion of construction, at which time temporary special-use permits terminate.
	J04		<p><u>Withdrawals, Modifications, &amp; Revocations</u></p> <p>Seek withdrawal of Special Interest Administrative Areas such as Research Natural areas, special visual, botanic, and geologic areas, and the Alpine Village Ski area. Identify areas within 2 years and seek their withdrawal within 4 years of approval of the Forest Plan.</p> <p>Withdrawals are reviewed in accordance with FLPMA and when BLM schedules the review. Sensitive areas, those requiring special protection, are reviewed and recommended for withdrawal when appropriate. Examples of these areas are important cultural resource sites, recreation sites, special emphasis areas, and administrative sites and research natural areas. Unneeded or excessive withdrawals will be revoked.</p>
	J05	ALL	<p><u>Land Status Maintenance</u></p> <p>Maintain current Forest land status records.</p>
	J06		<p><u>Property Boundary Management</u></p> <p>Survey and post National Forest landline in conformance with national standards (approximately 5 miles per year). Priorities are:</p> <ul style="list-style-type: none"> <li>- Where proposed projects are adjacent to private land.</li> <li>- Areas of known and potential trespass.</li> <li>- Backlog</li> </ul>
J3	J6	ALL	Request BLM resurveys where section corners have not been brass-capped. Highest priority is in complex land patterns where section corners have not been brass-capped. Highest priority is in complex land patterns where development is taking place.
	J5		<p>Keep current of development plans for private property that share boundaries with National Forest land.</p> <p>Enter into cost/share agreements whenever possible.</p>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	J06		Search, locate, and record corners when the opportunity exists as a result of other resource projects.
	J07		Maintain 10 miles of property boundary posting and corner monumentation per year per District.  Protect and maintain land survey monuments during all project activities.
	J10		Document known unauthorized occupancies as they are discovered.  Use Small Tracts Act where appropriate to resolve encroachments.  Notify parties of known encroachments that use is unauthorized.
	J07	ALL	In decade 1, decide how to handle new cases as discovered. Prioritize for resolution, forest management activities, or those that can be easily resolved.  In decade 2, begin resolution action on all unauthorized trespass cases as they are discovered. Resolve all cases documented in period 1 within period 2.  Enforce provisions of 36 CFR (Part 261) and Title 18 USC (prohibitions).
J3	J11	ALL	<u>Landownership Adjustment/Planning &amp; Land Classification</u>  Involve the public when lands are reclassified. Lands may occasionally be reclassified as base-for-exchange on a case-by-case, if they meet the standard base-for-exchange criteria in the Forest Plan and if they meet the following additional criteria: <ul style="list-style-type: none"> <li>- A formal adjustment offer involving undesignated base has been negotiated or received and probabilities for consummating the exchange are favorable.</li> <li>- Lands offered to the Forest Service as part of the adjustment proposal are determined to be high priority for acquisition.</li> <li>- Lands to become base-for-exchange are suitable for the intended private use, and are in accordance with zoning, and are not necessary because of our authority to reserve access in the patents.</li> <li>- The benefits of acquiring lands offered for exchange are of greater benefit to the public than retaining lands selected for exchange.</li> </ul>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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J3

J11

ALL

A parcel of land originally designated as base-for-exchange in the Forest Plan may be deleted from base when:

- The character of the designated parcel or land adjacent to it has changed from its original character.
- Local or State zoning affecting the parcel has changed, altering potential uses and such uses being in conflict with Forest management objectives and practices.

Make available at all District offices, maps showing base-for-exchange lands and those desirable for acquisition.

The Land Exchange Program operates under several authorities and is the major land adjustment program that can be employed to acquire essentially all of the lands that meet the acquisition criteria. The lands offered by the United States in a land exchange are tentatively classified as base-for-exchange. Currently, the National Forest contains 12,060 acres that have been classified as base-for-exchange. Because local and physical conditions may change during the life of this plan, those lands classified in this plan and any other that may be considered will generally meet one or more of the following criteria:

1. Lands needed to meet the needs of expanding communities.
2. Isolated tracts or scattered parcels that cannot be efficiently managed.
3. Provide for consolidation of the public lands.
4. To improve management or benefit specific resources.
5. To meet overriding public needs.

To improve management and benefit the administration of the National Forest, certain private lands within or adjacent to the boundary of the Forest (hereinafter referred to as Public Land) have been classified as desirable for acquisition. Because local and physical conditions may change during the life of this plan, the lands classified in this plan and others that may be considered, will meet one or more of the following criteria:

1. Lands within designated wilderness areas and the Blue Primitive Area.
2. Lands that contain vital species habitat, or vital wildlife habitat (i.e., calving areas or critical winter range).
3. Lands needed for developed or dispersed recreation.
4. Wetlands, riparian areas, and other water oriented lands.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
J3	J11	ALL	<ol style="list-style-type: none"> <li>5. Lands that contain unique, natural, or cultural values.</li> <li>6. Lands that will improve public land management, meet specified administrative needs, or benefit other National Forest programs.</li> <li>7. Lands that provide needed access, or protect public lands from fire or trespass, or prevent damage to public land resources.</li> <li>8. Lands that need rehabilitation or stabilization to restore their productivity.</li> <li>9. Lands that are needed to block up public landownership or meet research needs.</li> <li>10. Lands that are needed to meet programs prescribed or endorsed by acts or reports of Congress, or the Department of Agriculture.</li> <li>11. Acquire inholdings that contain needed rights-of-way and will contribute to the Forest Resource Management Base.</li> </ol>
J3	J11	ALL	<p><u>Land Exchange</u></p> <p>Accept land exchange proposals on an opportunity basis and process by priorities agreed to by Forest Supervisor and Regional Forester.</p> <p>Prohibit encumbrance or activities on base-for-exchange lands that will reduce the fair market value or reduce the disposal opportunities. No major investments such as TSI or range betterment projects will be planned on base-for-exchange lands.</p> <p>Acknowledge receipt of land exchange proposals within 30 days and evaluate each proposal.</p> <p>Actively seek and encourage land exchanges that directly improve the management of any Forest resources.</p>
J3	J11	ALL	<p><u>Land Acquisition</u></p> <p>The acquisition program will be achieved through purchase, exchange, and donation authorities.</p> <p>Valuable properties are actively pursued.</p> <p>The Purchase Program centers about the Land and Water Conservation Fund Act that designates that lands within the following categories are eligible for acquisition with L&amp;WCFA funds:</p> <ol style="list-style-type: none"> <li>1. Congressionally designated areas.</li> <li>2. Wilderness</li> <li>3. Threatened &amp; endangered species habitat.</li> <li>4. Recreation acquisition composites &amp; inholdings.</li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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J3                      J11                      ALL

The basic goals of the composite program is to provide:

1. Lands needed for construction of public recreation facilities.
2. Lands needed for dispersed recreation & open space.
3. Protection of public recreation resources.
4. Prevention of private usurpation of public resources and facilities on nearby public land

The following table shows the approved and proposed L&WCF composite:

Forest	Composite	Date Approved	Acres Designated Desirable for Acq.
Apache	Greer	6/22/78	401
	Big Lake	Proposed	200
	Black River	“	1,526
	Blue Range	“	2,554
	Luna Lake	“	195
Sitgreaves	Fools Hollow Lake	7/25/77	396
	Scott Res.	1/17/77	1,233
	Sponsellar Lake	Proposed	

The donation authorities are applicable for any of the lands that meet the acquisition criteria.

Rights-of-Way Acquisition

Acquire rights-of-ways as needed to support management activities.

Rights-of-ways identified as necessary for completion of a specific project will be acquired.

Rights-of-ways needed to improve administration yet not critical for specific project completion, will also be acquired.

L2                      L25                      ALL

FA&O Facility Maintenance

Full maintenance of all facilities will be done annually.

Maintenance plans will be updated annually.

Correct health and safety problems. Perform condition surveys on a 3-year cycle. Perform cost effective energy conservation measures.

Meet State regulations in water sampling and testing on systems subject to jurisdiction of Arizona Department of Health Service.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	L25		Perform routine inspections of lagoons three times per year. Inspect landfills one to two times per year.
	L26		Telecommunication systems will be maintained at 100% efficiency level.
	L27		Radio system replacement to state-of-art systems at 100% efficiency level.
	L28		Maintain dam inventory annually. Conduct inspections in conjunction with State Department of Water Resources and Arizona Game and Fish annually. Identify hazards and/or deficiencies in first decade.
L2	L01	ALL	<p><u>Road Maintenance &amp; Management</u> Review and update the road, trail, and ORV management plan annually using the Resource Access Travel Management Process. Ensure the management intent of each management area is met.</p> <p>Complete Road Management Information System and Transportation Inventory System. Complete condition surveys of all roads, to be accomplished in 1<sup>st</sup> decade. Update transportation maps annually.</p> <p>Erosion control measures will be included in road plans. Construct roads to keep sediment out of riparian and aquatic habitats. Minimize clearing widths and vegetative clearing. Allow roads within critical wildlife habitat areas that have specific big game winter range objectives are needed to meet priority goals of the forest. Permanent roads constructed/reconstructed in the critical wildlife habitat areas must meet the following criteria:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2) Planned management of road use during winter will prevent or minimize disturbance of wintering big game animals.</li> <li>3) Roads are constructed/reconstructed to the minimum standards necessary to provide safety for the road use purpose.</li> <li>4) Roads cross the winter range in the minimum distance feasible to facilitate the necessary use.</li> <li>5) The Forest Biologist should be consulted prior to road location, planning, and alternative evaluation.</li> </ol>
	L19, J01		Clearing of vegetation along rights-of-way, facilities and special uses sites will be limited to that which poses a hazard to the facility and operational efficiency. Method will include mechanical, hand, and herbicide criteria in F03.
	L19		Incorporate road management into annual roads maintenance plans. Implement by middle of first decade.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
L2	L19	ALL	<p>Perform traffic engineering studies to determine hazard areas. Take action to remove, reduce, or warn of hazards.</p> <p>Complete road maintenance plans annually for each District. Maintain roads to the maintenance level prescribed in the maintenance plans.</p> <p>Complete sign inventories and plans by end of first decade.</p> <p>Seasonally or permanently close existing roads, prohibit off-road vehicle use or manage use when conflicts occur with wildlife and soil resource objectives. Generally limit closures to local roads in erosive soil areas, riparian areas, or wildlife areas that require specific management practices.</p> <p>Roads not needed for industry, public, and/or administrative use which are uneconomical to maintain or which are causing significant resource conflicts will be obliterated. Obliteration of unneeded roads and trails is a means of implementing Resource Access/Travel Management (RATM) decisions. Obliteration will be accomplished by mechanically destroying the facility or by implementing management strategies to discourage, eliminate, or prohibit traffic to allow natural vegetation to return to the site. The road or trail shall be removed from the inventory when obliteration is complete.</p> <p>Timber sales and/or public works roads contracts will have an inventory of existing roads prepared detailing roads not needed and planned for obliteration. Require obliteration where feasible and resources are available.</p> <p>Emphasize road management in areas where resource/wildlife protection is dominant Forest policy.</p> <p>Total road densities should average 3.5 miles/square mile or less. Open road densities should average 2.0 miles/square mile or less.</p>
L3	L01	ALL	<p>Prepare project Transportation Plan to determine economic standard to meet resource objectives. Incorporate road management plans into the Transportation Plan. Road objectives and design criteria should be documented for each project in the Transportation Plan.</p>
L2	L01, L29  L02-L15 A02-A04 E06		<p>Construction/Reconstruction of roads will be planned annually.</p> <p>Road survey design and construction engineering efforts will be commensurate with the value of the road(s) being constructed. Construct roads to minimum economical standards. Revegetate cut and fill slopes where feasible. Local terminal roads will be 12' wide unless otherwise justified. If feasible, relocate or remove roads occurring within riparian areas. Do not align roads to pass through the long axis of narrow riparian strips.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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L3	L24	ALL	<u>FA&amp;O Construction/Reconstruction</u>
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Construction/reconstruction of facilities to meet needs and design life of existing facilities will occur in each decade.

	L28		
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Inspect administrative class A, B, and C dams that have a high or moderate hazard classification annually.

P1	P01, P07 P08, P09	ALL	
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Fire and Fuels Management

To the extent practical, wildfires will receive an appropriate management response consistent with land and resource management objectives and fire management direction.

Appropriate management response will be taken on all man-caused fires as per other applicable standards and guidelines.

Wildfires which exceed, or are expected to exceed established Fire Management Direction will be considered escaped, and a Wildland Fire Situation Analysis prepared and implemented. An evaluation will be made for the management response prior to each burning period.

Consideration will be given to the following in development of the Wildland Fire Situation Analysis.

- 1) Resource management emphasis or threatened areas.
- 2) Probability of threat to loss of life and property.
- 3) Management response costs will be commensurate with resources protected.
- 4) Effects on environment:
  - a. Air quality impacts
  - b. Visual impacts
  - c. Soil/Watershed impacts
  - d. Archeological considerations
- 5) Social/political acceptance of acreage burned.
- 6) Current local, regional, and national fire situation.
- 7) Projected fire weather forecasts for the area (expected: wind, temperature, humidity, etc.).
- 8) Archeological support necessary for extensive heavy equipment line construction.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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P1	P01, P07 P08, P09	ALL	Fire management units (except for Unit VI) contain specific vegetation and fuels. It is recognized that some units often are interspersed among other units.
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Smaller (less than 100 acres) interspersed units will be considered the same as the dominant unit when determining which fire management direction is to be followed.

Fire Management Unit I is composed of 3 vegetative/fuel types:

1. Ponderosa Pine
2. Mixed Conifer
3. Spruce and Aspen

This unit includes all suitable timber land. Resource damage potential is high, as is the potential for major conflagrations. The majority of private land and residential areas are located in this unit.

P1	P07	ALL	<p>Management emphasis is to minimize fire fighting costs on all fires and minimize acreage burned by high severity fires.</p> <ul style="list-style-type: none"> <li>- Do not allow fires to spread onto lands of other ownership unless there are written agreements in place.</li> <li>- Protect life, property, and improvements.</li> <li>- Prompt control and mop-up of all high severity fires.</li> <li>- Maximum size objective for high severity fires is 15 acres.</li> <li>- Average annual expected burned areas, which results in substantial damage or loss of commercial timber is 800 acres.</li> <li>- Economically contain unwanted low severity fires.</li> <li>- Low severity fires resulting from unplanned ignition may be properly classified as wildland fire use and allowed to burn as long as they meet Forest Plan objectives and do not endanger life, property, or resources.</li> <li>- Fuels management requirements are: <ol style="list-style-type: none"> <li>1. Activity Created Fuels</li> </ol> </li> </ul>
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Fuel treatment plans are required for projects that generate slash.

Fuel treatment plans are coordinated with other resources and with input from other resource specialists.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
P1	P11	ALL	<p>Plan fuel treatments that have the least impact on the site, meet other resource objectives, are cost effective, and meet fuel treatment objectives.</p> <p>Plan fuel treatments on an area basis. Fuel treatment does not have to meet the suppression objectives on every acre as long as the suppression objectives are met on the area as a whole.</p>
	P12		<p>2. Natural or backlog fuels.</p> <p>Approximately 6,248 acres annually will be treated. Primary treatment will be broadcast burning.</p>
P1	P07, P08 P09, P12	ALL	<p><u>Fire Management Unit II</u> is composed of the following vegetative/fuel types:</p> <ul style="list-style-type: none"> <li>a. High mountain grasslands.</li> <li>b. Pinyon-juniper and associated grassland.</li> </ul> <p>Resource damage potential is low to moderate depending on slope. Management response emphasis is to minimize fire fighting costs and maintain soil productivity.</p> <ul style="list-style-type: none"> <li>- Do not allow fires to spread onto lands of other ownership unless there are written agreements in place.</li> <li>- Protect life, property, and improvements.</li> <li>- Maximum size objective of high severity fires is 1,000 acres in grasslands and woodlands.</li> <li>- Average annual allowable burned area of high severity fires is 2,000 acres.</li> <li>- Initial response objective is least cost confinement or containment within the size objective.</li> </ul> <p>Wildland Fire Situation Analysis considerations are:</p> <ul style="list-style-type: none"> <li>1) Confine fire to the woodland or grassland vegetation.</li> <li>2) Size objectives are based on continuous high severity fires.</li> <li>3) Archeological support necessary for extensive heavy equipment line construction in the pinyon-juniper and associated grassland.</li> <li>4) Minimum disturbance of grassland by heavy equipment.</li> </ul>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
P1	P07, P08 P09, P12	ALL	<ul style="list-style-type: none"> <li>- Low severity fires resulting from unplanned ignitions may be promptly classified as wildland fire use and allowed to burn as long as they meet Forest Plan objectives and do not endanger life, property, or resources.</li> </ul>
	P07, P08 P09, P12 P14, P15	02	<p><u>Fire Management Unit III</u> consists of the woodland oak-brush, and semi-desert vegetation types on the Clifton Ranger District. Resource damage potential is low to moderate, depending on slope. Potential for major conflagration is low. Management response emphasis is to minimize fire fighting costs and maintain soil productivity.</p> <ul style="list-style-type: none"> <li>- Do not allow fires to spread to land of other ownership unless there are written agreements in place.</li> </ul> <p>Fires within this unit will be monitored unless they threaten Units V or VI. When this occurs fire management direction for the threatened unit will be followed.</p> <ul style="list-style-type: none"> <li>- Protect life, property, and improvements.</li> <li>- Initial response objective is least cost confinement.</li> <li>- Low severity fires resulting from unplanned ignitions may be promptly classified as wildland fire use fires and allowed to burn as long as they meet Forest Plan objectives and do not endanger life, property, or resources.</li> </ul> <p>Wildland Fire Situation Analysis considerations are:</p> <ol style="list-style-type: none"> <li>1) Size objectives are based on continuous high severity fires.</li> <li>2) Archeological support necessary for extensive heavy equipment construction.</li> <li>3) Confine fire to the woodland oak-brush, and semi-desert vegetative type.</li> <li>4) Maximum use of natural features for control lines, rather than construction of fire lines.</li> </ol>
P1	P07, P08 P09, P12	07, 12, 13	<p><u>Fire Management Unit IV</u> is composed of the Mt. Baldy, Escudilla, and Bear Wallow Wilderness areas. Resource damage potential is high. Vegetation consists of mixed conifer/spruce type. Potential for major conflagrations range from high in portions of the “Bear Wallow”, to low in the upper elevations of Mt. Baldy and Escudilla.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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P1	P07,P08, P09,P12	07,12,13	<p>High severity wildfires have the potential to seriously damage and destroy wilderness values of these areas. Reduction of these fuel accumulations through a planned and systematic prescribed burning program and wildland fire use are the only means of maintaining and/or enhancing the wilderness values of the areas.</p> <ul style="list-style-type: none"> <li>- Do not allow fire to spread to lands of other ownership unless there are written agreements in place.</li> <li>- Protect life, property, and improvements.</li> <li>- Mechanical line-building equipment is prohibited, except in extreme emergencies and with Regional Forester approval.</li> <li>- Other motorized equipment or mechanical transport (helicopter, power saw, etc.) may be used with Forest Supervisor approval.</li> <li>- Maximum size objective of high severity fires is 20 acres.</li> <li>- Average annual burned area of high severity fires is 200 acres.</li> <li>- Low severity fires resulting from unplanned ignitions, may be promptly classified as wildland fire use and allowed to burn as long as they meet Forest Plan objectives and do not endanger life, property, or resources.</li> </ul>
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P1	P07, P08 P09, P12 P13, P15	01	<ul style="list-style-type: none"> <li>- Initial action objective is least cost containment within the size objective.</li> </ul>
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Wildland Fire Situation Analysis considerations are:

1. Impacts to scenic quality of the area.
2. Suppression impacts to the wilderness value.
3. Threat to adjacent units.

Fire Management Unit V is composed of ponderosa pine-oak brush vegetative fuel types, considered to be non-commercial. Most of this unit is below the Mogollon Rim on the Clifton District.

- Do not allow fires to spread onto lands of other ownership unless there are written agreements in place.
- Protect life, property, and improvements.
- Prompt control and mop-up of all high severity fires.
- Maximum size objective for high severity fires is 15 acres.
- Average annual allowable burned area of high severity fires is 200 acres.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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P1	P07, P08 P09, P12, P14, P15	01	<ul style="list-style-type: none"> <li>- Economically contain low severity fires.</li> <li>- Low severity fires resulting from unplanned ignitions, may be promptly classified as wildland fire use and allowed to burn as long as they meet Forest Plan objectives and do not endanger life, property, and resources.</li> </ul>
	P07, P08 P09, P10 P12, P14 P15	08	<p><u>Fire Management Unit VI</u> is composed of the Blue Primitive area and proposed additions. Resource damage potential is high. Vegetation consists of woodland oak-brush type in the lower elevation of the Blue Primitive Area, to ponderosa pine in the higher elevations. Potential for major conflagrations are high in portions of the “Blue”.</p> <p>Reduction of fuel accumulations through a planned and systematic prescribed burning program and wildland fire use are the only means of maintaining and/or enhancing the primitive values of the areas.</p> <ul style="list-style-type: none"> <li>- Do not allow fire to spread to lands of other ownership unless there are written agreements in place.</li> <li>- Protect life, property, and improvements.</li> <li>- Mechanical line-building equipment is prohibited, except in extreme emergencies and with Regional Forester approval.</li> <li>- Other motorized equipment or mechanical transport (helicopter, power saw, etc.) may be used with Forest Supervisor approval.</li> <li>- Maximum size objective of high severity fires is 1,000 acres.</li> <li>- Average annual burned area of high severity fires is 3,000 acres.</li> <li>- Low severity fires resulting from unplanned ignitions, may be promptly classified as wildland fire use and allowed to burn as long as they meet Forest Plan objectives and do not endanger life, property, and resources.</li> </ul> <p>A systematic program of planned prescribed burning with either planned or unplanned ignition (wildland fire use) may be undertaken to accomplish management area objectives.</p> <p>Initial action objective is least cost containment within the size objective.</p> <p>WFSA considerations are :</p> <ol style="list-style-type: none"> <li>1. Impacts to scenic quality of area.</li> <li>2. Suppression impacts on the wilderness value.</li> <li>3. Threat to adjacent units.</li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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Air Management

P16		Comply with State and Federal air quality standards. (See FSM 2120).
P04, P16		In the Class 1 air quality area (Mt. Baldy) maintain high quality visual conditions. The form, line, texture, and color characteristic landscape will be clearly distinguishable when viewed as middle ground.
P01, P16		Review Prevention of Significant Deterioration (PSD) Permit applications to determine the potential effect increased emissions from major stationary sources will have on air quality related values in the Mt. Baldy Class 1 area. Predict the impacts of air pollution generating activities with current modeling techniques.
P03, P17		Monitor specific air pollutant and meteorological parameters necessary for the determination of air quality in the Mt. Baldy Class 1 area.

Law Enforcement

P24, P25 P26		Enforce laws on the Apache-Sitgreaves National Forests to ensure that the Forest is available to all persons for legitimate uses with a minimum of restrictions and to promote visitor safety and protect Forest resources and facilities.
P24		Provide an increased visible presence of Forest Officers to facilitate law enforcement, deter violations, and provide information to the public. Consideration should be given to weekend and off hour patrols as identified by citizen's complaints, employee monitoring, etc.
P25		Cooperative law enforcement funds are provided to cover the cost of deputies making predetermined patrols of heavily used recreation areas and as back-up for our Law Enforcement Officers.
P26		Continue to be responsive to sheriff with every search and rescue request. Responses are within guidelines in County Memorandum of Understanding and our expenditure authority.

P34, E03		<p><u>Insect and Disease Management</u></p> <p>All silvicultural examinations will integrate insect and disease considerations in the final stand prescriptions to maintain stand vigor and composition to resistant conditions. Special attention will be given to removal of mistletoe infected trees during intermediate harvests and regeneration harvests.</p> <p>Dwarf Mistletoe – Remove infected overstories as soon as regeneration is accomplished. Thin understories to densities which will maximize fiber production over the length of the rotation, using yield simulation models as guides. Control the mistletoe by clearcutting (in conformance with Regional Standards for clearcut size) and regenerating artificially when yield simulation models indicate that stands will not reach maturity because of dwarf mistletoe.</p>
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Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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P34, E03

When pesticides are used for pest control, project plans will contain appropriate and necessary monitoring procedures and mitigation measures.

Monitor and report insect and disease conditions on a continuing basis and initiate appropriate control methods in early stages of potential outbreaks.

Conflict resolution among the resources will be accomplished on a case-by-case basis through the use of Integrated Resource Management (IRM) and National Environmental Policy Act (NEPA) process, based on the management emphasis for each management area and the forest as a whole.

## MANAGEMENT AREA 1

(Includes Management Areas 1-1, 3-1, 4-1, 5-1, 6-1, & 7-1, which are Ranger District subdivisions of the Management Area)

### Forested Land

All species, slopes and condition classes

Analysis Area 021, 101, 111–260, 361-363, 365, 371, 372, 391, 401, 402, 411, 421, 431, 441, 451, 452, 461, 471, 475, 481, 482, 485, 491, 492

Acres: 862, 666-26, 378 = 836, 288

This management area includes all of the suitable timber land as well as unsuitable timber lands outside special management area. Logging, grazing, fuelwood gathering, and recreation are historic uses. This area provides key habitat for many species of wildlife due to the diversity of habitat. Deer, elk, and turkey summer range and bird nesting habitat are found in this area.

Tree species composition varies with aspect, soils, elevation and precipitation. Generally, the lower, warmer and drier sites are occupied by ponderosa pine, the dominant tree species on the Forest. The mixed conifer type, including Douglas fir, White fir, Colorado Blue Spruce, and Ponderosa pine, occurs on cooler, moister sites. The Spruce fir type with Englemann Spruce, and corkbark fir is usually restricted to highest, wettest, and coldest sites. Exceptions occur where localized conditions provide the micro climate needed for individual species. Aspen usually occurs associated with mixed conifer and spruce-fir types where severe disturbance such as wildfire has opened the Forest floor. Although a minor species, area wise, it is important for wildlife and visual quality.

### **Management Emphasis**

Emphasize a combination of multiple uses including a sustained yield of timber and firewood production, wildlife habitat, livestock grazing, watershed, and dispersed recreation.

Manage for timber production using integrated resource management to achieve diverse stands protected from losses due to insects or diseases exceeding endemic levels.

Visual quality levels are generally modification, partial retention and retention. Maximum modification is allowed to manage insect or disease outbreaks or to harvest fire-killed timber.

### **Management Indicator Species**

Manage to maintain at least minimum habitat requirements for the following indicator species through integrated stand management:

Yellow-Bellied Sapsucker  
Mule Deer  
Turkey  
Goshawk  
Pygmy Nuthatch

Elk  
Abert Squirrel  
Red Squirrel  
Hairy Woodpecker  
Spotted Owl

Timber Suitability Land Classification      Acres

Total National Forest Land	836,288
Not Capable, Available, or Suitable	33,651
Non-Appropriate	36,350
Suitable	766,287

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A02	ALL	<u>Recreation</u>

Manage for the following acreages of ROS alternatives:

- 37,016 acres – Primitive
- 56,954 acres – Semi-primitive non-motorized
- 320,493 acres – Semi-primitive motorized
- 402,595 acres – Roaded natural
- 18,666 acres – Rural
- 564 acres – Urban

A01      Prepare dispersed area management plans for concentrated use areas. Implement plans.

A02      Manage for the following visual quality objectives:

- 0 acres – Preservation
- 294,326 acres – Retention
- 500,826 acres – Partial Retention
- 23,394 acres – Modification
- 17,742 acres – Maximum Modification

A08      021, 101, 421, 431, 441, 451, 452, 461, 471, 475      Manage recreation use at the less than standard service level. (Forested Areas within the Clifton District).

A08      111-260, 361, 362, 363, 365, 371, 372, 391, 401, 402, 411, 481, 482, 485, 491      Manage recreation use at the standard service level within existing concentrated use areas.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C3  
C01, C02  
E03  
371, 372, 401  
391, 482, 485  
491, 172, 182  
191, 192, 212  
111, 121, 131  
141, 161, 171  
181, 191, 201  
211, 221, 250  
230, 240, 361  
262, 222, 021  
101, 421, 431  
441, 451, 452  
461, 471, 475  
365, 260

Wildlife

Maintain structural diversity of vegetation within each diversity unit (10K) that are dominated by Forest or woodland ecosystems.

- a) Manage for minimum of 20% of the forested area within a diversity unit to provide vertical diversity except in areas where uneven-aged management is used.
- b) Manage for a minimum of 30% of the forested area within a diversity unit to provide horizontal diversity except in areas where uneven-aged management is used.
- c) Old Growth

Standards: Until the forest plan is revised allocate no less than 20% of each forested ecosystem management area to old growth as depicted in the following table.

In the long term, manage old growth in patterns that provide for a flow of functions and interactions at multiple scales across the landscape through time.

Allocations will consist of landscape percentages meeting old growth conditions and not specific areas.

Guidelines: All analyses should be at multiple scales – one scale above and one scale below the ecosystem management areas. The amount of old growth that can be provided and maintained will be evaluated at the ecosystem management area level and be based on forest type, site capability, and disturbance regimes.

Strive to create or sustain as much old growth compositional, structural, and functional flow as possible over time at multiple area scales. Seek to develop or retain old growth function on at least 20% of the naturally forested area by forest type in any landscape.

Use information about pre-European settlement conditions at the appropriate scales when considering the importance of various factors.

Consider the effects of spatial arrangement on old growth function, from groups to landscapes, including de facto allocations to old growth such as goshawk nest sites, Mexican spotted owl protected activity centers, sites protected for species behavior associated with old growth, wilderness, research natural areas, and other forest structures managed for old growth function.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C01, C02 E03	371, 372, 401 391, 482, 485 491, 172, 182 191, 192, 212 111, 121, 131 141, 161, 171 181, 191, 201 211, 221, 250 230, 240, 361 262, 222, 021 101, 421, 431 441, 451, 452 461, 471, 475 365, 260	<p>In allocating old growth and making decisions about old growth management, use appropriate information about the relative risks to sustaining old growth function at the appropriate scales, due to natural and human-caused events.</p> <p>Use quantitative models at the appropriate scales when considering the importance of various factors. These models may include, but are not limited to: Forest Vegetation Simulator, BEHAVE, and FARSITE.</p> <p>Forested sites should meet or exceed the structural attributes to be considered old growth in the 5 primary forest cover types in the southwest as depicted in the following table.</p>

**The Minimum Criteria for the Structural Attributes Used to Determine Old-Growth**

Forest Cover Type, Name	Pinyon-Juniper		Interior Ponderosa Pine		Aspen	Mixed-Species Group		Engelmann Spruce Subalpine Fir	
Forest Cover Type, SAF Code	239		237		217	210, 211 216, 219		206, 209	
Site Capability Potential Break Between Low & High Site			55 Minor			50 Douglas-fir Edminster & Jump		50 Englemann Spruce Alexander	
Site	Low	High	Low	High	All	Low	High	Low	High
1. Live Trees in Main Canopy									
Trees/Acre	12	30	20	20	20	12	16	20	30
DBH/DRC	9"	12"	14"	18"	14"	18"	20"	10"	14"
Age (Years)	150	200	180	180	100	150	150	140*/170*	140*/170*
								*	*
2. Variation in the Tree Diameters (Yes or No)	ND	ND	ND	ND	No	ND	ND	ND	ND
3. Dead Trees									
Standing									
Trees/Acre	.5*	1	1	1	ND	2.5	2.5		
Size, DBH/DRC (Inches)	9	10	14	14	10	14	16	3	3
Height (Feet)	8	10	15	15	ND	20	25	12	16
Down								20	30
Pieces/Acre	2	2**	2	2	ND	4	4		
Size (Diameter in Inches)	9	10	12	12	ND	12	12	5	5
Length (Feet)	8	10	15	15	ND	16	16	12	12
								16	16
4. Tree Decadence									
Trees/Acre	ND	ND	ND	ND	ND	ND	ND	ND	ND
								ND	ND
5. Number of Tree Canopies	SS/M	SS/M	SS/M	SS/M	SS	SS/M	SS/M		
	S	S	S	S		S	S	SS/MS	SS/MS
6. Total BA, Square Feet/Acre	6	24	70	90	ND	80	100		
								120	140
7. Total Canopy Cover, Percent	20	35	40	50	50	50	60		
								60	70

PINYON-PINE

\* Dead limbs help make up dead material deficit.

\*\* Unless removed for firewood or fire burning activities.

SPRUCE-FIR

\* In mixed corkbark fir and Engelmann spruce stand where Engelmann spruce is less than 50 percent composition in the stand.

\*\* In mixed corkbark fir and Engelmann spruce stands where Engelmann spruce is 50 percent or more composition in the stand.

ND is not determined: SS is single-storied: MS is multi-stories

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C01, C02 E03	371, 372, 401 391, 482, 485 491, 172, 182 191, 192, 212 111, 121, 131 141, 161, 171 181, 191, 201 211, 221, 250 230, 240, 361 262, 222, 021 101, 421, 431 441, 451, 452 461, 471, 475 365, 260	<p>a) In forested areas of a diversity unit, 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.</p> <p>b) Implement the Forest snag policy. Provide at least 55% of a diversity unit with at least 180 snags per 100 acres. In high priority areas, including both edge habitats adjacent to meadows or water, manage for an average of 280 snags per 100 acres.</p> <p>Only ponderosa pine/mixed conifer species will be counted toward meeting minimum snag requirements.</p> <p>c) Provide a minimum of 2 down logs per acre 12” diameter or larger) or untreated slash piles 10-foot in diameter or a combination of down logs and slash piles over 55% of a diversity unit.</p>
C3	C01, C02 E03	062, 063, 170 181, 072, 073 191, 201, 211 221, 230, 240 250	<p>Provide big game, non-game, and upland game habitat in aspen.</p> <p>Manage to provide a variety of stand sizes, shapes, crown closure, edge contrast, age structure, and interspersions.</p> <p>Manage for interspersions of conifer groups when present. Limit conifer groups to 1 acre groups per 10 acres of aspen.</p> <p>Where there has been manipulation to induce aspen regeneration, manage livestock to protect regeneration.</p>
	C01, C02 E03	111, 121, 131 141, 161, 171 181, 191, 201 211, 250, 230 240, 361, 362 452, 451, 461	<p>Use both commercial and non-commercial silvicultural practices to accomplish wildlife habitat objectives within diversity units.</p> <p>a) Manage for and maintain deer and elk hiding cover (vegetation) to hide 90% of an adult standing deer or elk from human view at 200 feet) on at least 40% of the perimeter of natural openings, openings created for silvicultural purposes, and along at least 40% of the edges of arterial and collector roads, streams, rivers, and power line corridors. Cover areas should be managed as at least 10 acre stands.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C01, C02 E03	111, 121, 131 141, 161, 171 181, 191, 201 211, 250, 230 240, 361, 362 452, 451, 461	<p>Meadows are natural openings greater than 1 acre. Each meadow greater than 1 acre will be managed toward or maintained with at least 40% of the perimeter in timber stands that provide cover.</p> <p>b) Within diversity units where no conflicts occur with TES species needs, as a guideline manage for forage to cover ratios between 40:60 and 70:30.</p> <p>Manage for at least 30 percent cover in each diversity unit. Of this at least 1/3 should be in thermal cover, 1/3 in hiding cover, and 1/3 in either hiding or thermal cover.</p> <p>Thermal cover for elk is a stand of coniferous forest, tall and wide enough to allow animal movement and bedding with a high degree of crown closure. Emphasize maintaining thermal cover in known travel ways and bedding areas.</p> <p>Hiding cover is vegetation and topographical features capable of hiding 90 percent of a standing deer or elk from human view at a distance of 200 feet or less. Emphasize maintaining hiding cover adjacent to dependable water and key openings, along known travel ways, and in pine stringers.</p> <p>Evaluation of existing and potential cover considers open road densities, topography, and tree, shrub, and herbaceous species to determine effective cover. The presence of species, such as Gambel oak, New Mexico locust, juniper, aspen, and bigtooth maple, or topographic features, will require less BA/GSL to meet cover requirements.</p> <p>Protect and manage to include hiding and thermal cover and defer logging activities from May 15 to June 30 in known fawning and calving areas. This restriction may be lifted if on-the-ground inspection indicates the area is not being used for fawning/calving and other areas adjacent to the sale area are available for wildlife needs.</p> <p>The following table lists basal area (BA) and growing stock levels (GSL) which experience has shown fully meet hiding and thermal cover requirements in even age ponderosa pine and mixed conifer when there are no cover effects from topographic features or other species. The presence of more than 1 size class may reduce the amount of BA/GSL required to provide effective cover. Before determining that cover must be obtained by managing stands in suitable lands for these BA/GSL's, conduct field examinations to evaluate cover distribution needs and to determine whether other factors contributing to effective cover are present.</p>

Hiding and thermal cover levels in Ponderosa Pine and mixed conifer

Species	Size Class	Optimum Range
Pipo Hiding	1 – 5” dbh	150 – 170 GSL
	5 – 9” dbh	150 – 180 GSL
	9 – 12” dbh	160 – 200 BA
	Area Size	15 – 25 AC
MC Hiding	1 – 5” dbh	80 – 100 GSL
	5 – 9” dbh	100 – 120 GSL
	9 – 12” dbh	100 – 120 BA
	Area Size	15 – 25 AC
Pipo Thermal	5 – 9” dbh	180 – 200 GSL
	9 – 12” dbh	180 – 210 GSL
	12 – 15” dbh	200 – 240 BA
	Area Size	30 – 40+ AC
MC Thermal	5 – 9” dbh	140 - 160 GSL
	9 – 12” dbh	140 – 160 GSL
	12 – 15” dbh	160 - *180 BA
	Area Size	30 – 40+ AC

\* BA in more than 1 size class, presence of Gambel Oak preferable

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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C3  
C01, C02  
E06, E07

Maintain turkey habitat.

Defer slash treatment activities in turkey nesting areas from April 15 through June 30.

Manage for turkey nesting cover through modified slash treatment. Leave scattered patches, at least ¼ acre in size, of untreated slash within ½ mile of dependable water in actual or potential turkey nesting areas.

At least 10 percent and not more than 20 percent of the area treated within the nesting areas shall be left untreated for at least 5 years, longer if it is determined that nesting is still occurring in the area. These guidelines will be evaluated and adjustments made, if necessary, after two years of implementation.

1. Selected turkey nesting areas are those that are determined to be actual or potential turkey nesting areas through field survey or have a known history of turkey nesting activity.
2. Nests are usually on slopes rather than flat ground and have a high degree of canopy coverage.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C01, C02		
	E06, E07		
		141, 111, 121 131, 141, 161 171, 181, 191 201, 211, 250 230, 240, 361 362, 452, 551 461	<ol style="list-style-type: none"> <li>3. Gambel oak is important for cover, and patches of oak near nesting areas are an important consideration when selecting areas for retaining slash. Other species such as New Mexico locust and current also can provide cover. Oak stands in the nesting areas should be evaluated for opportunities to manage for cover.</li> <li>4. High value areas for leaving slash are adjacent to a deferred stand or within the edge of a deferred stand.</li> <li>5. If large areas, as opposed to scattered patches, or untreated slash are left, retain strips of slash on the contour of the slope.</li> <li>6. The untreated slash may be prescribe burned after the needles have dropped off and the area is determined to not be used for nesting.</li> <li>7. Brood areas are also important near the nest. These areas are small openings 50 to 100 feet in diameter with little canopy coverage that produces herbaceous vegetation that can be used for forage. Grass species used for forage are generally those that produce abundant large seeds.</li> <li>8. Nests are usually within ½ miles of dependable water, but can be up to ¾ of a mile. Dependable water can be springs, streams, seeps, lakes, or stock tanks that usually have some available water during the driest parts of the year.</li> </ol>
			Protect active raptor nest tree groups and advise Wildlife biologist of location. Manage raptor nest tree groups as stands, if possible. Nest group consists of nest tree and adjacent trees and is maintained as follows:

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C01, C02, E06, E07	141, 111, 121 131, 141, 161 171, 181, 191 201, 211, 250 230, 240, 361 362, 452, 551 461	<p>Osprey – On non-aquatic sites – Manage for a buffer of 100 acres of restricted timber harvest (retain dominant tree and snags).</p> <p>On aquatic sites – Utilize linear buffer or streams/rivers using a 1200 foot restricted timber harvest (retain dominant trees and snags) along the water’s edge a distance of 300 feet back from the lake or stream edge.</p> <ul style="list-style-type: none"> <li>- Cooper’s hawk – 15 acres of uncut area around active nests.</li> <li>- Sharp-shinned hawk and ospreys – 10 acres of uncut area around active nests.</li> <li>- Other raptors – An area extending to 200 feet from active nests is left uncut.</li> <li>- Protect bald eagle winter roosts with a 300 foot uncut buffer zone around the roost. Prohibit road development in the roost and buffer zone.</li> </ul>
	C01		<ul style="list-style-type: none"> <li>- Protect special wildlife features and maintain cover adjacent to elk wallows, salt licks, seeps, etc.</li> </ul>
	C02, E03	111, 112, 121 122, 131, 132	As needed to meet habitat capability, protect red squirrel primary caches at a density of 1 cache per 2 acres. Retain all trees within a 26-foot radius from the cache to maintain nest tree groupings (1/20 <sup>th</sup> acre) (spruce-fir and mixed conifer). Do not use in final removal and regeneration cuts.
	C02, E03	171, 181, 191 201, 212, 221 062, 063, 042 052, 111, 112 121, 122, 131 132, 141, 151 161, 230, 240 181-240, 362 482, 402	<p>As needed to meet habitat capability, retain at least 20 Abert Squirrel nest tree groups per 100 acres. Not applicable to final removal and seed cuts.</p> <p><u>Big Game Management</u></p> <p>In key habitat, manage for at least 30 percent of the mixed conifer to meet hiding cover needs. Give priority for cover management in drainage bottoms, heads of drainages, and isolated pockets of mixed conifer. Defer logging activities in these areas from April 15 to June 30.</p>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D2	D01, D02	ALL	<p><u>Range Resource Planning &amp; Inventory</u></p> <p>Manage allotments at the current level of Management Intensity. (See Glossary for a definition of management intensity levels). Upgrade to the D level of management intensity on the more productive sites.</p> <p>Manage vegetative types to indicated intensities. (This establishes forage allocation and investment levels).</p> <p>On an allotment basis, develop the management plan constrained by the investment and allocation to accomplish the objectives in each management area.</p> <p>Full capacity lands are assigned a grazing capacity.</p> <p>Potential capacity lands may be assigned a capacity at a later date as improvements are made.</p>
	D04	ALL	<p><u>Range Forage Improvement Maintenance</u></p> <p>Evaluate forage improvements and maintain forage improvement acres in satisfactory or better condition. Except during the timber regeneration period, revegetate suitable sites. Forage emphasis is to attain a composition of cool and warm season forage species.</p>
	D03	ALL	<p>Seed behind intermediate timber harvests with mixes tailored to fit the site. Emphasize high production shade tolerant, multi-growing season species.</p> <p>Where open meadows and parks in the pine/mixed conifer type are to be maintained, eliminate invading overstory vegetation, stabilize gullies to raise the water table, scarify the soil, and seed with appropriate grass and forage species. Control grazing through management and/or fencing to establish the revegetation.</p>
E4	E04, E06 E07, F02	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240, 250 361, 362, 451 452, 461	<p><u>REFORESTATION</u></p> <p>All regeneration harvests will have an objective of creating a new stand.</p> <p>Final removal cuts will not be scheduled until adequate regeneration is established.</p> <p>In mixed conifer stands that contain aspen, encourage aspen regeneration as a minor stand component (less than 50% of total stocking) at the time of regeneration, through location of skid trails, landings, and temporary roads.</p> <p>Restrict regeneration cuts to areas where soils have reforestation potential of low-moderate or higher.</p> <p>Restrict regeneration cutting to areas capable of regeneration.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E4	E04, E06 E07, F02	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240, 250 361, 362, 451 452, 461	<p>Natural regeneration will be the preferred stand regeneration procedure.</p> <p>Plantations will not be established in natural openings or meadows.</p> <p>All reforestation projects will include rodent control where needed.</p> <p>Regeneration areas will be adequately protected from grazing to insure establishment of the trees, in accordance with FSM 2470.</p> <p>Site preparation by mechanical, prescribed fire, or chemical means will be done as needed following the regeneration cut (seed cut or clearcut). The method to be used will be selected based on situation and economics.</p> <p>Satisfactory stocking will be in accordance with standards established and published Forest Service manuals and handbooks.</p>
	E08	ALL	<p><u>Nursery Management</u></p> <p>Collect sufficient tree seed by species to maintain a 10-year supply by Ranger District and seed zone.</p>
	E09	ALL	<p><u>Genetic forest tree improvement program.</u></p> <p>The Forest will participate in the tree improvement program at level 4 (seed orchards) for ponderosa pine, and level 1 (seed zones) for all other commercial species.</p>
E5	E05, C01 C02	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240	<p><u>Pre-commercial Thinning</u></p> <p>Pre-commercial thinning projects not already included in timber sale design will be designed using the integrated resource management process.</p> <p>Control stocking to improve product size and stand vigor.</p> <p>Pre-commercial thinning on slopes less than 40% will be done in overstocked conifer stands to reduce stocking to levels, recommended in FSH 2409.26a. Cutting Methods Handbook.</p> <p>Thinning should not be preformed where there is a mistletoe infected overstory of the same species. Chapter 70, FSH 2409.26c.</p> <p>On slopes over 40%, reduce stocking so the stand average diameter will reach a minimum of 15 inches by age 120. This can be determined by the use of growth simulation in models. Generally, stocking should be reduced to approximately 100 trees per acre for ponderosa pine, 125 trees per acre in mixed conifer and 150 trees per acre in spruce stands.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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E8	E03	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240, 250 371, 372, 391 401, 402, 411 361, 362, 451 452, 461	<p><u>Silvicultural Examination &amp; Prescription</u></p> <p>Carry out silvicultural examinations to keep track of site specific forest conditions and treatment needs.</p> <p>Use various types of evaluation, including yield simulations, to determine densities, etc., to minimize losses to insects and disease.</p>
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E8	E03	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240, 361 362, 451, 452 461	<p><u>Stand Management</u></p> <p>Integrated stand resource management will be used to develop wildlife habitat diversity.</p> <p>Silvicultural prescriptions will emphasize uneven-age management where possible. Even-age management may be used in special circumstances as determined through the IRM process.</p>
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E03, E06 C01, C02 F02	250	<p>Maintain the existing total acreage of aspen stands on the Forest. This may be done by eliminating existing stands and creating new ones to replace them, maintaining existing stands, or a combination of both.</p> <p>Manage aspen stands for a combination of timber, aesthetic and wildlife values. Aspen will be included in commercial timber sales to the extent needed to meet management objectives, including aspen regeneration.</p> <p>Clearcuts will be the preferred method of aspen regeneration. Conifers will be removed from regenerated aspen stands.</p> <p>Rotation age for aspen will be 80 to 100 years.</p> <p>Natural regeneration with site preparation will be the only regeneration method for aspen.</p> <p>The preferred site preparation method for aspen will be by prescribed broadcast burning.</p> <p>Manage aspen stands under the even-aged system using the clearcut method.</p>
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Aspen Regeneration

District	Acres
Alpine	1,000
Springerville	1,000
Chevelon	200
Heber	100
Lakeside	200

Timber stands will generally be managed for timber production using uneven-aged systems. Shelterwood or clearcutting may be used for special purposes.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	E03	111, 121, 131	All timber sale offerings will follow the Integrated Resource Management (IRM) process for project development and implementation. IRM is an interdisciplinary approach to project design which will identify the resources involved, define the resource interrelationships and reasonably predict the effects or impacts of the project. The first step or phase requires a review of the Plan, followed by an initial determination of the parameters of the project. The subsequent steps guide the process so that NEPA compliance is assured, Plan direction is followed, citizen participation and involvement is sought and utilized, adequate environmental analysis is obtained and successful/quality on-the-ground project implementation is achieved.
		141, 151, 161	
		171, 181, 191	
		361, 362, 451	The shelterwood method will be a regeneration cut and 1 removal cut.
		452, 461	On slopes of less than 40%, the standard silvicultural guidelines will be: 1 pre-commercial thinning, 1 or more intermediate cuts.
			Final removal cut will be made as soon as possible, considering other standards and guidelines, after certified as regenerated.
			Artificial regeneration is required on all clearcuts and all burns where natural regeneration is inadequate 5 years after deforestation and where timber production is a management objective.
			Artificial regeneration may be planned for any area to meet management objectives.
			Rotation lengths of less than CMAI age (110 years) may be used in existing stands where the stand has already culminated because of heavy dwarf mistletoe infection, or to improve age class distribution within a diversity unit.
			Uneven-aged stands will have three or more distinct age classes present. The different aged trees are usually intermixed. Cutting methods to develop and maintain uneven-aged stands will be single-tree selection, group selection, or deferment.
			On slopes of less than 40 percent uneven-aged management is preferred in all timber types, except aspen.
			Standard silvicultural guidelines on slopes of 40% or greater: one pre-commercial thinning to low enough stocking to allow the remaining trees to reach at least 15 inches dbh without further thinning (about 100-150 trees per acre); otherwise, same as for slopes for less than 40%.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	E03, E04	111, 121, 131	To create horizontal diversity, except for old growth or stands managed under the uneven-aged system:
	E06, A01 A02, A04 D01, C01	141, 151, 161 171, 181, 191 201, 211, 221	1) Stand sizes will range from 10 to 100 acres. Stand sizes will be changed during regeneration or intermediate cuts if greater than 100 acres or less than 10 acres. Stands greater than 100 acres or less than 10 acres may be retained at their present size until regeneration. However, early regeneration (i.e. regeneration before the stand reaches CMAI), or varying intermediate treatments, should be considered where feasible to accelerate the process of changing stand size.
	A13, C02 F02	230, 240, 250 361, 362, 451 452, 461	<p>Openings created in all timberlands and woodlands will not exceed 40 acres without Regional Forester approval. Openings should be distributed over the area rather than confined to one small part of the area.</p> <p>To develop an even distribution of age classes, regenerate at least 8% but not more than 40 % of the forested area of each diversity unit every 20 years. However, more than 40% of a diversity unit may be regenerated in a 20-year period in the event of a catastrophic fire or insect epidemic. Less than 8% may be regenerated if a current inventory indicates that less than 40% of the forested area of a diversity unit is in structural stages 4A, 4B, 4C, and 5 combined.</p>
E8	E03, E06 C02	ALL	<p><u>Old Growth Management</u></p> <p>OLD GROWTH – (See Standards and Guidelines as depicted beginning on page 97)</p>
E8	E03, A03	ALL	<p><u>Visual Management</u></p> <p>Timber stands managed to meet visual management objectives are managed as follows:</p> <p>Preservation</p> <ol style="list-style-type: none"> <li>1. Management activities, except very low visual impact recreation facilities are prohibited.</li> </ol> <p>Foreground retention (VQO) Silvicultural Objectives are:</p> <ol style="list-style-type: none"> <li>1. Establish variety along roadway or use area by changing age of overstory at least every 1,500 feet to 2,000 feet.</li> <li>2. Within one-eighth of a mile of roadway or use area, encourage diversity within each stand.</li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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E8

E03, A03

ALL

3. In spruce-fir and aspen areas, limit created openings to one per ½ mile along roadway or use area, and limit size of opening to 10 acres, undulate and feather edges. Created openings shall be limited to a 10-acre maximum size and a maximum of one per two miles in the other forest types.
4. In ponderosa pine, mixed conifer, and spruce-fir areas, retain groups of two or more over mature trees. Over mature groups to be approximately 400 feet apart and located near roadway or use area.
5. In ponderosa pine, mixed conifer, and spruce-fir areas, rotation to be not less than 160 years. Rotation to be not less than 80 years in aspen.
6. Develop one over mature and one dense stand every 2½ to 3 miles along roadway.
7. Within view of roadway or use area, slash is to be removed or disposed of within one year.
8. Avoid log landings if practical. If not practical, minimize size and occurrence and rehabilitate within 1 year.
9. Where insect and disease conditions will not allow achieving these goals, the Forest Supervisor may approve other control treatments.

Foreground Partial Retention (VQO) Silvicultural Objectives are:

1. Over the rotation, change stands in timbered areas at least every 1,500 feet to 2,000 feet.
2. In spruce-fir areas limit created openings to one per ½ mile along roadway or use area, and limit size of opening to 10 acres, undulate and feather edges.
3. In ponderosa pine, mixed conifer, and spruce-fir areas, rotation to be not less than 120 years. Rotation to be not less than 80 years in aspen.
4. Develop 1 dense stand every 2½ to 3 miles.
5. Within view of roadway or use area, slash is to be removed or disposed of within one year.
6. Where insect and disease conditions will not allow achieving these goals, the Forest Supervisor may approve other control treatments that are not compatible with the goals.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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E8	E03, A03	ALL	Foreground Modifications (VQO) Silvicultural Objectives are:
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1. Openings shall be undulated.
2. Slash to be kept within two feet of the ground within view of roadway of use areas.

Middle and Background Retention, Partial Retention, and Modification (VQO) Silvicultural Objectives are:

Openings shall be undulated.

E06	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240, 250 361, 362, 451 452, 461
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Timber Sale Preparation

Minimum harvest volume for a commercial entry will be 160 cubic feet per acre on slopes under 40%, except for salvage sales, and 600 cubic feet per acre on slopes over 40%.

Logging will be accomplished by the use of tractor skidders and advanced methods like skylines. Skylines or other advanced methods will be used on all slopes >40% and may be used on other areas if needed to meet other management objectives like soil or stream course protection.

E01, E02 E06, F02 F03, A01 A02, A04 C01, D01	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240, 250 361, 362, 451 452, 461
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Restrict logging to areas where soil movement is expected to return to tolerance levels within 2 years.

Drain and seed all roads, landings, and skid trails that are no longer needed for immediate use.

Harvest of miscellaneous forest products, such as Christmas trees, posts, poles, etc., will be planned to meet integrated management goals.

Slash created by timber harvest activities will be made available for fuelwood where feasible.

Nine to twelve inch dbh trees will be offered as saw-timber after the close of the Colorado Plateau pulpwood sale.

Timber sale planning after the close of the Colorado Plateau Pulpwood Contract will consider multiproduct sales. Sale Planning will consider saw-timber, pulpwood, and precommercial thinning treatment needs in one integrated resource management analysis. Multiple contracts or use of special contract clauses for the separate products will be used where appropriate or necessary.

The Forest Supervisor will issue guidance annually on the pace of advanced sale preparation consistent with regional direction and lump sum funding.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	E03, E06	111, 121,	<u>Forest Insect and Disease Management</u>
	A01, C01	131	
	C02, P35	141, 151,	Reduce loss of timber production through the control of root rots.
		161	
		171, 181,	1) In root rot centers, salvage dead and dying trees during scheduled
		191	harvests.
		201, 211,	2) Remove susceptible trees within 1 to 2 chains of the border of the
		221	center.
		230, 240,	3) Do not invest in the thinning or planting in an infection center.
		250	
		361, 362,	Reduce susceptibility of Engelmann Spruce stands to Engelmann bark
		451	beetle.
		452, 461	1) Schedule over mature stands for harvest first, subject to other
			resource objectives.
			Remove defective, unsound, unhealthy trees during regeneration
			harvests.
			2) Salvage wind-thrown trees as soon as possible.
			3) Treat all green spruce slash over 6 inches DIB to make it unsuitable
			for bark beetle habitat.
			Reduce loss of timber production to dwarf mistletoes through silvicultural
			controls.
			1) No live trees will be left as potential snags if they are infected with
			dwarf mistletoe unless they are girdled or poisoned.
			2) No live dwarf mistletoe infected overstory trees, including those
			used as seed sources will be left in areas with established
			regeneration.
			Reduce ponderosa pine stands' susceptibility to attack by IPS beetles.
			1) Do not carry out slash creating activities on the same area for 2 or
			more consecutive years.
			2) Maximize utilization of all trees cut during silvicultural treatments.
			3) Treat slash in low elevation pine stands to make it unfavorable
			beetle habitat.
			4) In precommercial thinning projects in low elevation pine, cut trees
			only during the period of July 1 through December 31.
			Reduce mixed conifer stands' susceptibility to attack by Douglas fir beetle.
			1) Harvest over mature stands first consistent with other resource
			objectives.
			2) Remove harvested logs within 1 year of felling.
			3) Thin stands periodically to maintain vigor.
			Reduce the amount of wood volume lost to stem decays.
			1) Remove infected, unsound and defective trees at the first
			opportunity.
			2) Strictly enforce all contractual provisions that will minimize
			wounding of residual trees during logging.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	L01, L13 L02, L06 L10, L12 L13          E03, 306 A01, C01 C02, P35	111, 121, 131 141, 151, 161 171, 181, 191 201, 211, 221 230, 240, 250 361, 362, 451 452, 461	<p><u>Timber Sale Preparation and Administration</u></p> <p>Road densities should be planned to economically balance road costs and skidding costs. Permanent road densities should average 3.5 miles/square mile or less, unless topography dictates higher densities to economically remove the timber. Also, open road densities after Timber sale activities cease should average 2.0 mi/sq. mi. or less.</p> <p>Prepare project transportation plans to determine economic standard to meet resource objectives. Incorporate road management plans into the transportation plan. Road objectives and design criteria should be documented for each project in the transportation plan.</p> <p>Road costs should be commensurate with product being hauled. Construction costs to improve the standard of existing roads should not be greater than the savings in user and maintenance costs resulting from the improvement.</p> <p>Construct/reconstruct access roads minimal standard, and minimal density necessary for removing green firewood and in a manner to minimize resource impacts and ground disturbance and provide for user safety. Use collections from firewood permit surcharge to fund road work activities.</p> <p>Local terminal roads should be closed after each use.</p> <p>Seasonally or permanently close existing roads, prohibit off-road vehicle use or manage use when conflicts occur with wildlife management objectives. Generally, limit closures to local roads in erosive soil areas, riparian areas, or wildlife areas that require specific management practices.</p>
F3	F03       E06, F02	111-260	<p><u>Soil &amp; Water</u></p> <p>Enhance watershed condition by obliterating roads causing resource damage, which are unneeded for forest management. (See Plan, page 86).</p> <p>Log landings should be the smallest size and fewest numbers necessary to facilitate the safe loading of logs (to minimize compaction/loss of soil productivity).</p> <p>Skidding and hauling on soils included within TES units – 181, 182, 183, 191, 192, 193, 194, 201, 202, 532, 561, 562, 595, 942, 943, and 944 should be restricted to soil moisture conditions which do not cause excessive soil compaction, displacement, or puddling. When possible, limit logging activities (skidding, machine piling, etc.) on these soils to dry or frozen conditions.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
F3	F02, (258) E07		Locate/Design landings on slopes less than 15% (5-10% preferred, ensure proper drainage on all landings).
	D01, D02 F02	111, 260	Evaluate soils information to predict areas where vegetation type conversion is likely to occur as a result of management activity. Determine the reforestation/revegetation potential prior to project initiation. (Ref. TES Handbook).
	A08, C02 C03, D03 D04, E06 F02		Utilize sale area improvement plans as an opportunity to accomplish resource improvements within the timber sale area.

## MANAGEMENT AREA 2

(Includes Management Areas 1-2, 3-2, 4-2, 5-2, 6-2, & 7-2, which are Ranger District subdivisions of the Management Area)

### Woodland

#### All Slopes

Analysis Areas: 24, 103, 270, 280, 373, 393, 403, 412, 423, 434, 444, 463, 474, 483, 493.

Acres: 640, 253-29, 228 = 611,025

The Woodland Management Area consists of Pinyon, Juniper (one seeded Utah Rocky Mountain) and Alligator. There is a wide variety of grass, forbs and shrubs in the understory.

Traditional uses include hunting, fuelwood gathering, pinyon nut gathering, Christmas tree and juniper post cutting, big game winter range and grazing. There are many unmaintained two-track roads throughout the area. This area contains the majority of the archeological sites on the Forests. Range status data used in development of this plan indicates that there are 439,396 acres of full capacity range, of which 351,793 acres are in satisfactory condition and 87,603 acres are in unsatisfactory condition. As new inventories become available they will be utilized to make future adjustments to the range status descriptions.

#### **Management Emphasis:**

Manage for the following indicator species:

Plain Titmouse  
Mule Deer  
Elk  
Antelope

Emphasize fuelwood production, wildlife habitat, watershed condition, and livestock grazing. Other resources are managed in harmony with the emphasized resources.

#### Timber Suitability Land Classification

Total National Forest Land	611,025
Not Capable, Available, or Suitable	611,025
Non-Appropriate	0
Suitable	0

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
			<u>Recreation Management</u>
A2	A08	ALL	Manage recreation use at the less than standard service level.
A2	A02	ALL	Manage the following acreages in each Recreation Opportunity Spectrum (ROS) class:
			43,199 acres – Primitive
			100,453 acres – Semiprimitive Non-motorized
			200,705 acres – Semiprimitive Motorized
			197,117 acres – Roaded Natural
			69,351 acres – Rural
			200 acres – Urban
			Manage the following visual quality objectives:
			0 acres – Preservation
			82,040 acres – Retention
			235,509 acres – Partial Retention
			281,811 acres – Modification
			11,665 acres – Maximum Modification
			<u>Wildlife</u>
C3	C01, C02, D01	ALL	Maintain or improve big game habitat.
			a) Limit created openings on big game winter range to no wider than 1,200 feet. Leave cover strips at least 500 feet wide between openings, openings are not to exceed 40 acres.
			b) Maintain no less than the current level of openings on current antelope ranges.
			c) Emphasize openings adjacent to pine stringers.
C3	C01, C02 E03, E06	ALL	Manage areas that are harvested for fuelwood.
			a) Emphasize openings on existing and potential big game range. Retain thermal and hiding cover on north and east exposures.
			b) Manage fuelwood sales to break up large areas of single-age classes.
			c) Leave cavity excavated trees, shrubs, and oak in openings created for wildlife habitat.
			d) <u>Standards and Guidelines</u>
			The alligator juniper component of the ponderosa pine is managed primarily for maintenance and enhancement of wildlife habitat by the following criteria:

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
			-
C3	C01, C02 E03, E06	ALL	<ul style="list-style-type: none"> <li>- In areas where alligator juniper comprise less than 50 percent of the total basal area, retain live alligator juniper trees <math>\geq</math> 12 inches D.B.H.</li> <li>- In areas where alligator juniper comprise more than 50 percent of the total basal area, live trees <math>\geq</math> 12 inches D.B.H. may be removed if <math>&lt;</math> 25 percent of the crown is living.</li> <li>- In both of the above cases, some live trees <math>\leq</math> 12 inches D.B.H. may be removed. Retain at least 40 percent of the trees.</li> </ul>
	C02		<ul style="list-style-type: none"> <li>e) Retain Ponderosa pine stringers as inclusions.</li> </ul> <p>Areas needing additional forage for elk are given first priority in scheduling firewood/wildlife habitat treatments. Treatments are usually done in areas remote from major disturbance.</p>
	F03, C02		<p>Manage for hiding and thermal cover in known fawning and calving areas.</p>
C3	F02, C03	ALL	<p>Manage for at least an average of 100 snags per 100 acres on 40 percent of the pinyon-juniper woodland acres in each diversity unit. Snags are at least 9" diameter at the root collar and at least 10" high.</p>
			<p>Defer firewood activities from May 15 to June 30 in known fawning and calving areas.</p> <p>Manage for at least 20 percent of each diversity unit in hiding and thermal cover. Emphasize cover management in travel ways, bedding areas, reproductive areas, and adjacent to key openings. Cover is managed to provide at least 60 percent crown cover and at least 500' wide.</p> <p>In treated stands manage for small game and nongame by leaving an average of one slash pile per 3 acres in the woodland type or leave lopped and scattered slash on 30percent of area.</p>
	F03, C02		<p>Cover corridors are laid out to connect treated areas, or breaks in terrain to provide interconnecting cover corridors. Known or suspected routes of game travel are used to lay out cover corridors.</p>
D3	D01, D02	ALL	<p><u>Range Resource Planning and Inventory</u></p> <p>Manage at the current level of Management Intensity. (See Glossary for a definition of management intensity levels). Upgrade to D Level of Management Intensity on the more productive sites.</p>
D3	D03		<p><u>Range Forage Improvement Maintenance</u></p> <p>As necessary, broadcast seed immediately following natural or planned burns with a warm and cool season seed mix on soils with moderate to high forage production, including forbs and browse species ratings to increase production for the site.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D3	D03		<p>Where seral grasslands are maintained in the pinyon-juniper woodland, eliminate invading vegetation through mechanical, chemical, or planned fire treatments on a maintenance schedule averaging once approximately every 25 years. Stabilize gullies, scarify the soil, and seed disturbed soils with a mix tailored for the site. Seed suitable areas in all range condition classes. Control grazing through management and/or fencing to allow for adequate revegetation of treated areas.</p>
D3	D03	ALL	<p><u>Range Forage Improvement</u></p> <p>On pinyon-juniper lands managed for firewood production where firewood harvesting has taken place, require that slash be lopped and/or scattered to create a moist microclimate. Any burning will require careful evaluation.</p> <p>Small site conversions to a lower successional state occur only where the rating of soil potential for revegetation and the erosion potential (TESH, January 7, 1985) are determined to be suitable and where the forage production rating is moderate or high.</p> <p>When seeding is necessary, sites are seeded with a mix that emphasizes creating a balance between warm and cool season grasses. Control grazing through management and/or fencing to allow for adequate revegetation protection of treated areas.</p> <p>Manage pinyon-juniper to produce forage and ground cover.</p> <p>Diversity standards and size of opening standards apply except where antelope range is the objective.</p> <p>Pinyon-juniper overstory removal will be accomplished through fuelwood harvest. Where public demand for fuelwood is not sufficient to permit the desired treatment schedule to be met, and fuelwood harvest does not achieve the desired management objectives, or the stand does not provide suitable fuelwood, or factors with are necessary to accomplish harvest are not available, other measures can be used.</p>
E8	E03, E06 C01, D01 D03, F02 A01, A02 A14, E40 E41, E42 E43	270, 280, 423 434, 444, 453 463	<p>Manage the pinyon-juniper woodland type, to provide balance for continuous yields for fuelwood, other products, amenities, ground cover, big game winter range, and livestock grazing.</p> <p>Stands will be managed on the even-aged system, using clearcut and shelterwood methods.</p> <p>The general silvicultural treatments will be as follows:</p> <p>No pre-commercial thinning. Commercial thinning for fuelwood will be done to improve watershed conditions and big game winter range.</p> <p>Clearcut juniper stands (sprouting species) to regenerate them.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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E8	E03, E06 C01, D01 D03, F02 A01, A02 A14, E40 E41, E42 E43	270, 280, 423 434, 444, 453 463	<p><u>Old Growth</u></p> <p>OLD GROWTH – (See Standards and Guidelines as depicted beginning on page 97)</p> <p>For mixed stands of pinyon and juniper:</p> <ul style="list-style-type: none"> <li>a) Seed cut-remove all juniper except alligator junipers over 12 inches DRC.</li> <li>b) Final removal-remove all pinyon after at least 100 seedlings per acre become established. Rotation age is 180 to 200 years.</li> </ul>
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Timber harvests will not be made on slopes of 40% or greater.

Personal use will be given preference over commercial sales of fuelwood.

Christmas trees may be harvested from P-J stands where this meets management objectives.

Openings created in all timberlands and woodlands will not exceed 40 acres without Regional Forester approval.

Harvest block size will be a minimum of 10 acres and a maximum of 100 acres. Wood from overstory modification projects will be made available for fuelwood.

Visual Management

E03, A03 Foreground Retention and foreground Partial Retention Areas. Treatments follow these guidelines:

- Create or maintain a mosaic of savannah and forest.
- Emphasize open stands of mature (12” bdh or larger) trees with a variety of other size classes.
- If other species occur in the stand naturally, such as oak, a representative population of these species should be retained.
- Created slash will be treated.

Middle-ground and Background Retention and Partial Retention Areas. Treatments should follow these guidelines:

- Create or maintain a diversified texture of forested landscape in relation to the characteristic landscape.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	E03, A03		Natural regeneration will be the only regeneration method.
F2	F02	ALL	Roads will be located away from stream bottoms to minimize sediment delivery to the stream course whenever possible.
	F02, (258) F03, (265) A02, A03 A08, D03 L04, L12 L19	ALL	Plan/accomplish erosion reduction projects on areas disturbed by project activities where the site is not expected to stabilize within 2 years or when water quality degradation will occur.
	F02, (258) A08, C01 C02, E02 E06, L01 L02, L10	All	Maintain suitable filter/buffer strips between stream courses and disturbed areas and/or location to: <ul style="list-style-type: none"> <li>a. Maintain Suitable Stream Temperature.</li> <li>b. Maintain Water Quality Standards.</li> </ul>
	D03, F03	ALL	Soil resource improvement will be accomplished on an opportunity basis.  Develop/carry out water resource improvement plan per A/S N.F.'s watershed improvement needs inventory within the first 2 periods.



## MANAGEMENT AREA 3

(Includes Management Areas 1-3, 3-3, 4-3, 5-3, & 7-3, which are Ranger District subdivisions of the management area).

### Riparian

Analysis Areas: 25, 300, 374, 405, 424, 433, 445, 455, 464, 475, 484.

Acres: 10, 101-3, 231 = 6,870

Riparian areas are geographically delineable areas with distinctive resource values and characteristics that are comprised of the aquatic and riparian ecosystems. The aquatic ecosystem includes the stream channel, lake or estuary bed, water, biotic communities and associated habitat features. The riparian ecosystem is the transition between the aquatic and terrestrial ecosystem; identified by soil characteristics or distinctive vegetation communities that require free or unbound water. Riparian areas, with their high productivity and diversity, are a limited and critical ecological resource. In addition to having high timber, range, recreation, and cultural values, riparian areas are vital to the quantity and quality of habitats for fish and some wildlife species, and are basic to the hydrologic function of watersheds. All fish species, many terrestrial wildlife species and many threatened and endangered species depend on this Forest's riparian areas.

#### **Management Emphasis:**

Recognize the importance and distinctive values of riparian areas when implementing management activities. Give preferential consideration to riparian area dependent resources (see glossary) in cases of unsolvable conflicts. Manage to maintain or improve riparian areas to satisfactory riparian condition (see glossary). Other resource uses and activities may occur to the extent that they support or do not adversely affect riparian dependent resources.

Management emphasis will be directed at areas with riparian dependent resources in the following order of priority: 1. Threatened and Endangered Species; 2. cold water fisheries; 3. warm water fisheries; and 4. all other riparian areas. Riparian areas to be emphasized during the life of this plan by priority category are:

#### **Priority 1 – Threatened and Endangered Species**

<b>Stream/Riparian</b>	<b>Ranger District</b>	<b>Stream/Riparian</b>	<b>Ranger District</b>
Centerfire Creek	Alpine	Maime Creek	Alpine/Springerville
Wildcat Creek	Alpine	Lee Valley Creek	Alpine
Boggy Creek	Alpine	Hanagan Creek	Springerville
Fish Creek	Alpine	Home Creek	Alpine/Springerville
Hay Ground Creek	Springerville	Soldier Creek	Alpine
KP Creek	Alpine	Campbell Blue River	Alpine
Grant Creek	Alpine	Reservation Creek	Alpine
Coleman Creek	Alpine	Bear Wallow Creek	Alpine
Conklin Creek	Alpine	Snake Creek	Alpine
Double Cienega Creek	Alpine	Stinky Creek	Alpine
Corduroy Creek	Alpine	Chitty Creek	Clifton
Mineral Creek	Springerville	Little Colo. E. Fork	Springerville
Dix Creek	Clifton	Blue River	Alpine/Clifton
Eagle Creek	Clifton	San Francisco River	Clifton
Harden Cienga Creek	Clifton	Nutriosio Creek	Springerville
Chevelon Creek	Chevelon		

## Priority 2 – Cold Water Fisheries

Stream/Riparian	Ranger District	Stream/Riparian	Ranger District
Willow Springs Creek	Chevelon	Chevelon Creek	Chevelon
Woods Canyon Creek	Chevelon	Beaver Creek	Alpine
W. Fork – Black River	Springerville	N. Fork – Black River	Springerville
E. Fork – Black River	Alpine/Springerville	W. Fork – Black River	Alpine
Boneyard Creek	Alpine	S. Fork – Black River	Alpine
Willow Creek E. Clear	Chevelon	E. Fork – Black River	Springerville
Little Colo. S&W Forks	Springerville	Coyote Creek	Alpine

## Priority 3 – Warm Water Fisheries

Stream/Riparian	Ranger District	Stream/Riparian	Ranger District
Strayhorse Creek	Clifton	Pigeon Creek	Clifton
Little Blue Creek	Clifton	Horse Canyon Creek	Clifton
Hannah Springs Creek	Clifton	Sardine Creek	Clifton
Raspberry Creek	Clifton	Clear Creek	Clifton
Turkey Creek	Clifton		

Based on the Priority 1 streams, listed above, the following 11 allotments are scheduled for immediate management plan revisions. Assessments of these allotment based upon Integrated Resource Management (IRM) will be conducted in 1989. Revised allotment management plans will be completed by 1990. The remaining allotment management plans for allotments containing Priority 1 streams will be revised by 1992. The objective is to achieve satisfactory riparian management in all the allotments in a timely manner.

- |                           |                          |
|---------------------------|--------------------------|
| 1. Harris Lake Allotment  | 7. West Fork Allotment   |
| 2. Hayground Allotment    | 8. Reservation Allotment |
| 3. Bee Springs Allotment  | 9. Fish Creek Allotment  |
| 4. Water Canyon Allotment | 10. Hannagan Allotment   |
| 5. Burro Creek Allotment  | 11. PS Allotment         |
| 6. Big Dry Allotment      |                          |

Forage utilization standards for riparian areas will be determined for each allotment at levels permitting timely achievement of fisheries and T&E objectives. The following general utilization guidelines will guide revisions for allotment management plans.

- Areas in unsatisfactory riparian condition 0 – 45%
- Areas in satisfactory riparian condition 0 – 55%

The above utilization guidelines are a starting point for development of allotment management strategies. Variations in soil productivity, species composition, and sophistication of management will be considered when actual utilization standards are set for each individual allotment during the allotment management plan revision process.

Manage for the following indicator species:

- |                      |                            |
|----------------------|----------------------------|
| Lincoln Sparrows     | Lucy's Warbler             |
| Yellow Breasted Chat | Aquatic Macroinvertebrates |

Range status data used in development of this plan indicates that there are 5,427 acres of full capacity range, of which 1,751 acres are in satisfactory condition and 3,676 acres are in unsatisfactory condition. New

inventories and range classification systems will be utilized to make future adjustments to the range status descriptions.

Timber Suitability Land Classification

Total National Forest Land	6,870
Not Capable, Available, or Suitable	6,870
Non-Appropriate	0
Suitable	0

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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J2 J22 ALL Planning And Inventory

Inventory and classify all riparian areas by 1996. By 1992, for inventoried priority 1 & 2 riparian areas that are in unsatisfactory condition:  
a.) Determine the significant causative factors affecting riparian condition.  
b.) Establish recovery objectives specifically addressing causative factors for each area.  
c.) Schedule activities to achieve recovery objectives.

Priority 1 areas will be placed under proper management by 1992. Priority 2 areas will be placed under proper management by 1996. Proper management means that systems are in place and activities are scheduled that will put unsatisfactory areas on the road to recovery.

Recovery activities such as fencing, vegetation projects, and special management prescriptions will be maintained until the affected area(s) are brought into satisfactory condition and as long thereafter as necessary to maintain the area(s) in satisfactory condition, or until they are replaced by more effective techniques.

Activities to be accomplished, including those described in the Fisheries and Riparian Habitat Improvement Implementation Plan of September 1987 and the Wetland Habitat Management Plan of September 1986, will be scheduled in the Forest Plan 10 Year Implementation Schedule.

Amend the Forest Plan, as appropriate, to reflect improved data from inventory and classification.

J13, J15 ALL

Acquire riparian areas when funding becomes available or through exchange authorities.

A2 A01 ALL

Recreation

Identify capacity for recreation in each riparian area. The objective for each riparian area should be maximum possible recreation use while protecting or enhancing the riparian characteristics of each site.

Prepare implementation plans for dispersed recreation use areas in those riparian areas associated with a viable fishery.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01	ALL	<p>Riparian areas in satisfactory condition will be managed at the standard service level.</p> <p>Recreation use, including off-road vehicle use, will be prohibited or restricted and sites rehabilitated in areas in unsatisfactory condition, when recreation was a significant causative factor affecting condition.</p>
	A02	ALL	<p>Manage the following acreages in each Recreation Opportunity Spectrum (ROS) class:</p> <ul style="list-style-type: none"> <li>366 acres – Primitive</li> <li>2,124 acres – Semi-primitive Non-motorized</li> <li>2,485 acres – Semi-primitive Motorized</li> <li>1,889 acres – Roaded Natural</li> <li>6 acres – Rural</li> <li>0 acres – Urban</li> </ul> <p>Manage for the following visual quality objectives:</p> <ul style="list-style-type: none"> <li>0 acres – Preservation</li> <li>5,224 acres – Retention</li> <li>1,646 acres – Partial Retention</li> <li>0 acres – Modification</li> <li>0 acres – Maximum Modification</li> </ul>
C2	C01	ALL	<p><u>Wildlife Management</u></p> <p>Cooperate with Arizona Game and Fish Department to: 1. develop implementation plans for Arizona Cold Water Fisheries Strategic Plan; 2. plan lake and stream habitat improvement projects; 3. maintain a current fish habitat inventory; and 4. control fish populations, aquatic plants, and fish stocking to meet state fisheries management goals.</p> <p>Manage for or maintain a least 60% of potential habitat capability for Apache Trout, Rainbow Trout, Brook Trout, Brown Trout, Loach Minnow, and Little Colorado Spinedace.</p> <p>For Priority 1 and 2 Riparian Areas:</p> <ul style="list-style-type: none"> <li>a) Aquatic resources: <ul style="list-style-type: none"> <li>(1) Manage for and maintain at least 80 percent of near natural shade over water surfaces.</li> <li>(2) Manage for and maintain at least 80 percent of streambank total linear distance in stable condition.</li> </ul> </li> </ul>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	C01	ALL	<ul style="list-style-type: none"> <li>(3) Prevent siltation not to exceed 20 percent fines (&lt;855mm) in riffle areas.</li> <li>(4) Maintain 80 percent of the spawning gravel surface free of inorganic sediment.</li> <li>(5) Manage for stream temperatures not to exceed 68 degrees F, unless not technically feasible.</li> <li>(6) Manage for and maintain at least a 80 Biotic Condition Index on all perennial streams.</li> </ul> <p>b) Vegetation resource (where the site is capable of supporting woody plants):</p> <ul style="list-style-type: none"> <li>(1) Manage for and maintain at least 60 percent of the woody plant composition in three or more riparian species.</li> <li>(2) Manage for and maintain at least three age classes of riparian woody plants, with at least 10 percent of the woody plant cover in sprouts, seedlings, and saplings.</li> <li>(3) Manage for and maintain at least 60 percent near natural shrub and tree crown cover.</li> <li>(4) Determine need and rehabilitate riparian areas through seeding and planting woody species in areas that are in unsatisfactory condition.</li> </ul> <p>For Wetlands:</p> <ul style="list-style-type: none"> <li>a) Improve wetlands in accordance with the Forest Wetlands Management Plan where consistent with private water rights.</li> <li>b) Potential emergent vegetation cover in key wetlands as identified in the Wetland Project Implementation Plan will be maintained at optimum density from late spring (May 1) to July 15.</li> <li>c) Improve wintering water fowl habitat, including loafing island construction.</li> <li>d) Maintain or improve nesting cover in conjunction with construction of waterfowl islands by seeding herbaceous species unpalatable to large herbivores.</li> <li>e) Determine the need, and then maintain and improve wetland habitat by planting waterfowl forage species along with shorelines.</li> <li>f) Maintain or improve nesting cover and waterfowl forage on existing waterfowl islands and shorelines and in conjunction with construction of waterfowl islands.</li> <li>g) Consult and coordinate wetland improvement projects with affected permittees, individuals and groups.</li> </ul>
C06, D01			<p>Maintain riparian and meadow communities by providing waters for wildlife and livestock away from sensitive riparian areas.</p> <p>Modify watershed improvement structures where possible to provide water for wildlife and livestock.</p>
C3	C06		<p>Established exclosures to determine riparian vegetation potential on representative streams.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C06		Wildlife use will be controlled in areas in unsatisfactory condition where wildlife use is a significant causative factor affecting condition.
D2	D01	ALL	<p><u>RANGE MANAGEMENT</u></p> <p>Review and as necessary revise allotment management plans using the Integrated Resource management process to maintain or improve riparian and/or fish stream habitat objectives.</p> <p>Complete review and revision by 1992 for allotments containing Priority 1 areas and by 1996 for allotments containing Priority 2 areas. The review and revision schedule will be included in the Forest Plan 10 Year Implementation Schedule. (also, note plan page 121).</p> <p>Tailor grazing strategies to individual riparian areas. Grazing strategies should be directed toward recovery of both biological systems (vegetation diversity and structure) and physical systems (channel characteristics and hydrology).</p> <p>Grazing systems will consider various seasons of use, levels of utilization and exclusions, and classes of livestock.</p> <p>Determine grazing capability for livestock in each riparian area. The objectives for each riparian area should include livestock use when consistent with other resource objectives and riparian recovery goals.</p> <p>In areas of unsatisfactory riparian condition where grazing has been determined to be a significant causative factor revised allotment management plans will:</p> <ol style="list-style-type: none"> <li>a) Implement intensive management systems which limit grazing and provide adequate rest for riparian areas.</li> <li>b) Reduce stocking to a level that will allow degraded areas to recover. or</li> <li>c) Use site specific exclusion fencing</li> </ol> <p>Affected permittees and other interested individuals and groups will be involved in revision and implementation of revised allotment management plans.</p> <p>Salting in or within one-fourth mile of riparian areas for the purpose of livestock management is prohibited.</p> <p>Limit moving of livestock from pasture to pasture or between allotments along the length of riparian areas except on approved routes as specified in annual permittee instructions. Approval will be granted only where it is determined that there is no alternative route and that riparian areas will not be damaged.</p> <p>Cooperate with willing permittees to implement riparian recovery objectives ahead of schedule when possible.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	A03, A15 C02, E06		<u>Timber</u>  Use vegetation manipulation, e.g. salvage, thinning, slash piling, planting, seeding, only where needed to enhance riparian objectives.
F3	F03         A02, A03 C02, D03 F03	300      ALL	<u>Soil and Water</u>  Enhance watershed condition by obliterating roads causing resource damage, which are unneeded for Forest management. (See Plan, page 86)  Ensure compliance with State and Federal Water Quality Laws. Implement best management practices to prevent water quality degradation. Implement improvement action where water quality degradation does occur, except for special cases where temporary or short term degradation is occurring from road crossing construction or similar situations.  Ensure compliance with executive order 11990 “Protection of Wetlands”, executive order 11988 “Floodplain Management”.  Develop/carry out water resource improvement plan per A/S N.F.’s watershed improvement needs inventory within the first two periods.  Plan and accomplish erosion reduction projects on area disturbed by project activities where the site is not expected to stabilize within 2 years or where water quality degradation will occur. Locate roads away from stream bottoms to minimize sediment delivery to the stream course, when ever possible.

## MANAGEMENT AREA 4

(Includes management areas 1-4, 3-4, 4-4, 5-4, 6-4, & 7-4, which are Ranger District subdivisions of the Management area).

Analysis Areas: 22, 23, 102, 291, 292, 364, 392, 404, 422, 432, 442, 443, 454, 462, 472, 473, 492.

Acres: 244,077-951 = 243,126

### Grasslands

Includes mountain grasslands, and desert and prairie grasslands which occur as inclusions in the woodland type. This management area includes all grassland ecosystems on the forest occupied by less than 20% tree cover from high mountain meadows to desert grassland types on the southern part of the Apache National Forest. It includes about 50,000 acres of past pinyon-juniper overstory treatment which will be maintained. A wide variety of species of grasses and forbs in various stages of plant succession, varying soil, temperature and moisture conditions characterize the type. Grasslands provide wildlife habitat diversity for wildlife and contribute significantly to the visual quality of the area. Range status data used in the development of this plan indicates that there are 214,687 acres of full capacity range, of which 155,414 are in satisfactory condition and 59,233 are in unsatisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.

Manage for the following indicator species: Antelope and Elk

### **Management Emphasis:**

Emphasize wildlife habitat and visual quality, especially big game winter range.

### Timber Suitability Land Classification

Total national Forest Land	243,126
Not Capable, Available, or Suitable	243,126
Non-Appropriate	0
Suitable	0



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2            A02            ALL            Recreation

Manage the following acreages in each Recreation Opportunity Spectrum (ROS) class:

- 1,873 acres – Primitive
- 14,757 acres – Semi-primitive Non-motorized
- 120,749 acres – Semi-primitive Motorized
- 100,455 acres – Roaded Natural
- 5,292 acres – Rural
- 0 acres – Urban

Manage for the following visual quality objectives:

- 0 acres – Preservation
- 69,826 acres – Retention
- 78,074 acres – Partial Retention
- 89,525 acres – Modification
- 5,601 acres – Maximum Modification

A2            A08            ALL            Manage recreation use at less than standard service level.

C3            C03, F02        022, 102,        Wildlife Management

292  
364, 392,  
404  
422, 432,  
447  
454, 462,  
472  
492  
ALL

Evaluate need, maintain and improve meadows by eliminating competing conifers, stabilizing gullies to restore water tables, and reseeding with species desirable to wildlife.

Structural Wildlife Habitat Improvements

Evaluate need and construct fences where necessary to protect key meadows from grazing.

When springs are developed in meadow communities, riparian areas, or other sensitive areas, protect these areas by piping the water to water developments in adjacent, less sensitive areas.

Maintain existing antelope range.

Maintain existing wild horse territory and herd.

D2            E01, D02        ALL            Range Management

Manage at the current level of Management Intensity. Upgrade to D level of Management Intensity on the more productive sites.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
		022, 102, 292 364, 392, 404 422, 432, 442 454, 462, 472 492	<u>Range Forage Improvement</u>  Maintain existing mountain meadows by removing invading conifers and shrub overstories by cutting or other methods, gully stabilization to raise the water table, soil scarification, and seeding with appropriate grass and forage species.
		ALL	Control grazing by management and fencing to allow adequate regeneration of grasses and forbs.
D2	D01, D02	ALL	Increase forage production by attaining a composition of cool and warm season forage species.
D3	D04	023, 291, 443 473	A seral grassland or savanna woodlands state is maintained. On pinyon-juniper lands where overstory modifications have occurred in the past (50,219 acres), a retreatment schedule of approximately 25 years is initiated. Retreatments are accomplished through one or all of the following methods: <ul style="list-style-type: none"> <li>- Individual tree removal</li> <li>- Chemical treatments</li> <li>- Prescribed burning</li> </ul>
		ALL	Depending upon plant composition density and diversity and where seeding is determined to be necessary, seed treated sites with a mix tailored to the site, emphasizing reestablishing native species to achieve a balance between warm and cool season plants. The goal of retreatment is to maintain the seral grasslands in a state that emphasizes a diversity of habitats to enhance forage for livestock and wildlife.
F3	F03	291, 292	<u>Soils and Water</u>  Enhance watershed condition by closing/obliterating roads causing resource damage that are unneeded for forest management.

## MANAGEMENT AREA 5

(Includes Management Areas 1-5, 3-5, 4-5, 5-5, 6-5, & 7-5, which are Ranger District subdivisions of the Management Area.)

Analysis Area: 320

Acres: 1,665

### Developed Recreation Sites

This management area consist of the actual developed area and immediate vicinity of developed recreation facilities, including campgrounds, picnic areas, concessionaire facilities, organization camps and summer homes. Management area also includes acres where proposed recreation developments are planned. This management area is not assigned any grazing capacity.

### **Management Emphasis:**

Emphasize developed recreation.

### Timber Suitability Land Classification

Total National Forest Land	1,665
Not Capable, Available, or Suitable	1,665
Non-Appropriate	0
Suitable	0

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01	320	<u>Recreation</u>
			<p>Operation and maintenance plans for developed sites are prepared/reviewed and approved annually and maintenance is scheduled for all facilities on a regular basis. Manage facilities to RIM Condition Class 1 (satisfactory).</p>
	A02	ALL	<p>Manage the following acreages in each Recreation Opportunity Spectrum (ROS) class:</p>
		320	<p>0 acres – Primitive  0 acres – Semi-primitive Non-motorized  30 acres – Semi-primitive Motorized  1,305 acres – Roaded Natural  300 acres – Rural  30 acres – Urban</p>
	A07		<p>Operate developed recreation sites in the most efficient manner within practical maximum capacity and as directed by funding constraints.</p> <p>All existing sites will be operated throughout the 5 planning periods.</p> <p>All developed use will be managed at the standard service level.</p> <p>Eliminate maintenance related health and safety hazards on facilities in all maintenance classes.</p> <p>Hazard inspections will be made on developed sites each spring. Serious hazards will be corrected prior to opening the site to the public.</p> <p>Cleanup developed sites according to standards in “Cleaning Recreation Sites”, USDA, 1980, &amp; in accordance with R-3 Standards.</p>
	A02		<p>Manage for visual quality objective of retention for each developed site and the surrounding visible foreground. Utilize the definition of the characteristic landscape which includes man made features.</p> <p>All recreation residences in the Little Colorado Burke Addition, and Lee Valley summer home area are included as base-for-exchange properties along with the Montlure organization camp. Granville summer home area as well as the other organization camps will continue to be managed as recreation special uses.</p> <p>Administer commercial public service, developed recreation operations. Annually inspect equipment for public health and safety per the American National Standard Institute B77.1, 1982.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A02

Encourage and enlist involvement of the private sector and State and local governments, in providing both developed and dispersed recreation opportunities to supplement those provided on private land within or in close proximity to the Forest boundary.

Administer recreation special use permits per FSM standard to at least current levels.

Inspect recreation special use permits periodically and aggressively enforce permit stipulations.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2

A01,F02

320

DOWNHILL SKI/WINTER SPORTS MANAGEMENT

Evaluate development of proposed downhill ski/winter sports complexes as per NEPA requirements at South Mountain (SW of Alpine) and Greens Peak. The following additional conditions either must exist or must be attainable prior to any authorization being granted by the Forest Service to allow construction or operations of a winter sports complex:

1. Acceptable demand versus existing supply indicates a solvent operation capable of surviving marginal snowfall years is probable.
2. There will be no irreversible commitment of non-renewable resources, unless at predetermined acceptable levels.
3. Impacts to the areas capacity to provide established utilities (water, sewage, etc.), are acceptable or satisfactorily mitigated by the permittee.
4. Arrangements are made to handle law enforcement, fire protection, and medical needs created by the additional people and improvements in the affected communities.
5. Other social and economic impacts to affected communities must be considered acceptable at any stage or degree of development.
6. Ability to finance the development to the degree a profitable operation can be achieved within an acceptable time period must be proven by the proponent before any work takes place.
7. The cost of construction must not exceed the upper limits of normal industry development cost per skier.
8. Costs to cover Forest Service monitoring the construction of any improvements on the National Forest will be borne by the proponent through a Collections Agreement.
9. The area is designed to eventually ensure full utilization of the skiing opportunity the area can profitable provide.
10. Snow making capabilities exist and are available to any operator of the ski area.
11. Slopes provide an optimum combination of trainer, surface, or chair lifts to facilitate specified area capacities in accord with American National Ski Industries Standards.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines																					
A2	A01, F02	320	<p>12. Ski trail clearing should approximate the following ability level breakdown:</p> <table data-bbox="711 373 1187 667"> <thead> <tr> <th></th> <th><u>Slope</u></th> <th><u>% of Total</u></th> </tr> </thead> <tbody> <tr> <td>Beginner</td> <td>8-25%</td> <td>10-20%</td> </tr> <tr> <td>Novice</td> <td></td> <td></td> </tr> <tr> <td>Low Inter.</td> <td>26-39%</td> <td>50-60%</td> </tr> <tr> <td>Intermediate</td> <td></td> <td></td> </tr> <tr> <td>Adv. Inter.</td> <td>40%+</td> <td>25-35%</td> </tr> <tr> <td>Expert</td> <td></td> <td></td> </tr> </tbody> </table>		<u>Slope</u>	<u>% of Total</u>	Beginner	8-25%	10-20%	Novice			Low Inter.	26-39%	50-60%	Intermediate			Adv. Inter.	40%+	25-35%	Expert		
	<u>Slope</u>	<u>% of Total</u>																						
Beginner	8-25%	10-20%																						
Novice																								
Low Inter.	26-39%	50-60%																						
Intermediate																								
Adv. Inter.	40%+	25-35%																						
Expert																								
			<p>13. Ski trails to be concentrated where snow retention capacity is maximized.</p>																					
			<p>14. On-site parking for service vehicles, emergency vehicles, and snow grooming and moving equipment must be provided.</p>																					
			<p>15. Available snow equipment should include snow grooming and snow moving, and others as necessary.</p>																					
			<p>16. Adequate maintenance and vehicle storage must be provided.</p>																					
	A01, F02		<p>17. Construction of base lodge and support facilities must conform to all State, County and local codes if allowed on National Forest System Lands.</p>																					
	A01, F02, F07		<p>18. Water rights to cover anticipated usage are available and obtainable.</p>																					
	A01, F02		<p>19. On-site parking to handle anticipated average weekend use. Off site parking and shuttle arrangements for high use days.</p>																					
			<p>20. Permittee agrees to be responsible for the prevention and suppression of fires occurring as result of his permit.</p>																					

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01, F02	320	<p>21. Visual impacts will be minimized by attempting to repeat form, line, color, and texture of the dominant factors in the natural landscape. Manage for the visual quality objective of partial retention and modification. This will be accomplished by use of any or all of the following:</p> <ul style="list-style-type: none"> <li>(a) When possible, avoid long tangents in ski trail and lift clearings on visually sensitive areas.</li> <li>(b) Scallop the edges of openings.</li> <li>(c) Vary width of ski trails, leave islands of trees.</li> <li>(d) Use road clearing for utility corridor whenever possible.</li> <li>(e) Combine lift clearings and ski runs in the same opening whenever possible.</li> <li>(f) Design lift lines and ski trails to take advantage of natural openings and blend into the topography.</li> </ul> <p>22. Width of ski trails will be limited to the maximum length necessary to provide an average experience level for the degree of difficulty in which designed.</p> <p>23. Develop a vegetative management plan to provide direction in dealing with future fuels and insect and disease problems.</p> <p>24. Man-made structures will be compatible and complimentary to the natural environment. An architectural theme will be adopted and all structures and signs will conform to it.</p> <p>25. The Forest Service will coordinate with the community and county planning authorities to insure land use and development proposals on adjacent private land associated with the ski area are properly evaluated.</p> <p>26. Proponent will pay for the preparation of the EIS and other associated project analysis requirements including collection of data. Payment will be for either a contractor or utilizing a collection agreement, which will provide funding for Forest Service personnel.</p>
A07			<p><u>Developed Recreation Sites Standard Service Management</u></p>
A01			<p>Develop a Forest site rehabilitation program using the RIM condition survey data, bringing facilities to Condition Class 1 as funds become available. Site rehabilitation includes</p>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A01	320	<p>site grading, stream protection, vegetation establishment, and road improvement and realignment, where appropriate.</p> <p>Developed sites are operated at a Standard Service level. Patrol areas regularly for such things as public safety, facility/resource protection, and fee compliance checks.</p>
E8	E03  E06, E07  E03, A01 A07, P35	320	<p><u>Timber Resource Management Planning &amp; Inventory</u></p> <p>Conduct inventory, plans, and examination as requested by other resources.</p> <p>No timber activities are planned unless requested for maintenance of the desired setting, or hazard tree removal. If harvest is necessary, follow standards and guidelines found in management area.</p> <p>Plan, prepare, administer, and sell or issue permits for commercial and personal use, miscellaneous convertible and nonconvertible products as requested by other resources (FSM 2462.).</p> <p>Timber in developed recreation sites will be managed to meet recreation and visual resource management objectives.</p> <p>Timber harvest or silvicultural treatments will be done to maintain a healthy stand to meet recreation and natural resource objectives.</p>
F2	F03	320	<p><u>Water Resources Monitoring</u></p> <p>Monitor water quality and quantity in compliance with P.L. 95-200, Section 208.</p> <p>Conduct water quality monitoring of primary contact recreation sites to standards of FSM 2540 and Arizona Water Quality Standards for full body contact waters (swimming and wading).</p>
P2	P01		<p><u>Fire Management Planning And Analysis</u></p> <p>Suppression objective is to exclude wildfire and to minimize damage to improvements and/or resources.</p> <p>Prescribed fire using planned ignitions is used as a management tool where it is needed to accomplish resource objectives.</p>

## MANAGEMENT AREA 7

### Mount Baldy Wilderness

Acres: 7,079

The Mount Baldy Wilderness was designated as part of the National Wilderness Preservation System in 1970. Its 7,079 acres on the eastern slope of Mount Baldy lie entirely within the Springerville Ranger District of the Apache National Forest. Elevations range from 9,000 feet to 11,550 feet above sea level. Mount Baldy is an extinct volcano which has experienced three distinct periods of glaciation. The peak itself is on the Fort Apache Indian Reservation.

Two developed trails pass through the wilderness to the top of Mount Baldy. The West Fork Trail begins near the Sheep Crossing parking lot and ascends along the West Fork of the Little Colorado River. The East Fork Trail begins near Phelps Cabin and ascends along the East Fork of the Little Colorado River. The 2 trails meet near the top and continue to the summit. Each trail is approximately seven miles in length.

The average annual precipitation is about 45 inches. Half of this comes as snow. Severe thunderstorms and frequent showers are common during July and August. Range status data used in the development of this plan indicates that there are 600 acres of full capacity range, of which 600 acres are in satisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.

#### **Management emphasis:**

Emphasize wilderness recreation while maintaining wilderness resource values.

#### Timber Suitability Land Classification

Total National Forest Land	7,079
Not Capable, Available, or Suitable	7,079
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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B2	B03	ALL	Manage recreation use within capacities determined for each Wilderness Opportunity Spectrum Class. (WOS)
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WOS Class	Acres	Capacity (RVD's)
Pristine	0	0
Primitive	0	0
Semi Primitive	6,909	8,700
Transition	170	400
Total	7,079	9,100

B2	B01, 03, 02	ALL	In the first period conduct a limit of acceptable change (LAC) inventory to :
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1. Determine true capacity in high use areas recognizing traditional Mt. Baldy use is not typical of most areas.
2. Utilizing capacity based on inventory identify areas where use exceeds capacity.

B01, B02, B03			In period 1 assess need to implement a permit system to control use within capacity. Implement permit system if only feasible way to contain use within desired capacity.
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B01, B03			Develop projects in period 1 to restore wilderness qualities lost due to past management. Implement in period 2 if funding permits. Utilize volunteers, if available.
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F09, B03			Manage to maintain Class 1 air quality.
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B03			Reprint, when needed, the map/brochure for the area.
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Trash in high use areas picked up concurrently.

Maximum camping group size is limited to 5 persons or the number of members of an immediate family. Hiking and riding groups are limited to 25 participants.

B01, B03			Outfitter/Guide caches of equipment and/or supplies may be permitted with District Ranger approval.
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Cooperate with SCS on winter snow course monitoring.

B03, A10 B05, F01			Priority for trail reconstruction based on 1 <sup>st</sup> - on potential for loss or degradation of wilderness values, 2 <sup>nd</sup> - impacts to wilderness recreation experience levels, 3 <sup>rd</sup> - trails which receive the greatest use.
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Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D2	D01, D02	ALL	<p><u>Range Management</u></p> <p>Manage at the B – C level of Management Intensity. Upgrade to D level of Management Intensity on the more productive sites.</p> <p>B03 Recreation use will be managed at the Standard Service Level.</p>
D3	D02	ALL	<p>The manner and extent to which livestock grazing is conducted to meet wilderness objectives range resource needs, desired conditions of ecosystems, and other resources is addressed by individual Allotment Management Plans within the guidelines and policy cited above and approved by the Forest Supervisor.</p> <p>Permits for grazing in wilderness shall be issued only in areas where grazing was established at the time of wilderness designation.</p> <p>Any adjustments in the numbers of livestock permitted to graze in wildernesses should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration.</p> <p>It is anticipated that the numbers of livestock permitted to graze in wilderness would remain at the approximate levels existing at the time an area enters the wilderness system. If land management plans reveal conclusively that increased livestock numbers or animal unit months (AUM's) could be made available with no adverse impact on wilderness values such as plant communities, primitive recreation, and wildlife populations or habitat, some increases in AUM's may be permissible (Conference Report S. 2009 H.R. no. 96.1126). By the same token, if it is discovered that present livestock numbers have an adverse impact on wilderness values, some decreases in AUM's may be necessary.</p>
	D05, D06		<p><u>Range Structural Improvements</u></p> <p>New structural improvements and maintaining existing improvements must be considered in the overall context of the purpose and direction of the Wilderness Act and evaluated through practical, reasonable, and uniform application of the “Grazing in National Forest Wilderness Areas” committee guidelines.</p> <p>New structural range improvements deemed necessary for proper management and/or protection of the wilderness resource still must be approved by the Forest Supervisor.</p>
ALL	ALL	ALL	<p>Inventoried riparian areas in this management area will be subject to direction of Management Area.</p>

## MANAGEMENT AREA 8

Analysis Areas: 31-35, 41-45, 51-56.

Acres: 187,410

### Blue Range Primitive Area and Additions

The Blue Range was classified as a Primitive Area in 1933, to preserve its wilderness qualities. Its 187,410 acres include deep, rugged canyons separated by steep timbered ridges. The Mogollon Rim bisects the area and provides dramatic topographic features. Elevations range from 4,500 feet in the southern portion to 9100 feet along the Rim. This rapid change in elevation exposes several interesting and unique ecological and geological associations. Unusual and spectacular rock formations are common.

Several perennial streams have population of trout. The abundant deer herds are hunted each fall, and the 150 miles of trails provide good access throughout the area. The best time to hike this area above the Rim is in the spring or fall, whereas winter hiking is encouraged in the lower elevations. This area is not as heavily visited as are other wildernesses, so solitude is a prize reward to the hardy hiker.

Range status data used in the development of this plan indicated that there are 60,303 acres of full capacity range of which 48,242 are in satisfactory condition and 12,061 are in unsatisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.

### **Management Emphasis:**

Emphasize wilderness recreation while maintaining wilderness resource values.

### Timber Suitability Land Classification

Total National Forest Land	187,410
Not Capable, Available, or Suitable	187,410
Non-Appropriate	0
Suitable	0

Program Components	Activities	Applicable Management Areas	Standards and Guidelines																		
B2	B03	ALL	Manage recreation use within capacities determined for each Wilderness Opportunity Spectrum Class. (WOS) To the degree possible considering the constraints imposed by 36 CFR 293.17(b).																		
B2	B03	ALL	<table border="1" data-bbox="620 403 1356 604"> <thead> <tr> <th data-bbox="620 403 873 436">WOS Class</th> <th data-bbox="873 403 1089 436">Acres</th> <th data-bbox="1089 403 1356 436">Capacity (RVD's)</th> </tr> </thead> <tbody> <tr> <td data-bbox="620 436 873 470">Pristine</td> <td data-bbox="873 436 1089 470">0</td> <td data-bbox="1089 436 1356 470">0</td> </tr> <tr> <td data-bbox="620 470 873 504">Primitive</td> <td data-bbox="873 470 1089 504">117,531</td> <td data-bbox="1089 470 1356 504">16,807</td> </tr> <tr> <td data-bbox="620 504 873 537">Semi Primitive</td> <td data-bbox="873 504 1089 537">51,291</td> <td data-bbox="1089 504 1356 537">38,267</td> </tr> <tr> <td data-bbox="620 537 873 571">Transition</td> <td data-bbox="873 537 1089 571">18,588</td> <td data-bbox="1089 537 1356 571">34,585</td> </tr> <tr> <td data-bbox="620 571 873 604">Total</td> <td data-bbox="873 571 1089 604">187,410</td> <td data-bbox="1089 571 1356 604">89,659</td> </tr> </tbody> </table>	WOS Class	Acres	Capacity (RVD's)	Pristine	0	0	Primitive	117,531	16,807	Semi Primitive	51,291	38,267	Transition	18,588	34,585	Total	187,410	89,659
WOS Class	Acres	Capacity (RVD's)																			
Pristine	0	0																			
Primitive	117,531	16,807																			
Semi Primitive	51,291	38,267																			
Transition	18,588	34,585																			
Total	187,410	89,659																			
	A02	ALL	<p data-bbox="620 642 1520 705">Visual quality objective is preservation except that exceptions are authorized as per 36 CFR 293.17.</p> <p data-bbox="620 743 1479 806">Trash in high use areas picked up at the end of the high use season during decade 1.</p> <p data-bbox="620 844 1435 875">Trash in high use areas picked up concurrently beginning in decade 2.</p>																		
B01, B03			<p data-bbox="620 911 1503 974">Outfitter/Guide caches of equipment and/or supplies may be permitted with District Ranger approval.</p>																		
	B03		<p data-bbox="620 1014 1516 1077">Classify any private inholding as high priority for acquisition unless they are included in the proposed deletion acres.</p> <p data-bbox="620 1115 1036 1146">Manage Primitive Area boundaries.</p> <p data-bbox="620 1184 1523 1215">All Primitive Area boundaries will be posted except along inaccessible areas.</p> <p data-bbox="620 1253 1516 1348">Those areas classified under the Wilderness Opportunity Spectrum (W.O.S.) System as primitive or pristine that are without trails will be kept without trails.</p> <p data-bbox="620 1386 1463 1449">Recreation use will be managed at the less than standard service level in period 1: at the standards service level in the beginning of decade 2.</p>																		
D2	D01, D02	ALL	<p data-bbox="620 1482 854 1514"><u>Range Management</u></p> <p data-bbox="620 1551 1484 1614">Manage at the B through C level of Management Intensity. Upgrade to D level of Management Intensity on the more productive sites.</p>																		
D3	D02	ALL	<p data-bbox="620 1654 1455 1812">The manner and extent to which livestock grazing is conducted to meet wilderness objectives, range resource needs, desired conditions of ecosystems, and other resources is addressed by individual Allotment Management Plans within the guidelines and policy cited above and approved by the Forest Supervisor.</p>																		

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D3	D02	ALL	<p>Permits for grazing in wilderness shall be issued only in areas where grazing was established at the time of wilderness designation.</p> <p>Any adjustments in the numbers of livestock permitted to graze in wildernesses should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration. It is anticipated that then numbers of livestock permitted to graze in wilderness would remain at the approximate levels existing at the time on area enters the wilderness system. If land management plans reveal conclusively that increased livestock numbers or animal unit months (AUM's) could be made available with no adverse impact on wilderness values such as plant communities, primitive recreation, and wildlife populations or habitat, some increases in AUM's may be permissible (Conference Report S. 2009 H.R. No. 96.1126). By the same token, if it is discovered that present livestock numbers have an adverse impact on wilderness values, some decreases in AUM's may be necessary.</p>
G1, G2	G01	ALL	<p><u>Range Structural Improvements</u></p> <p>New structural improvements and maintaining existing improvements must be considered in the overall context of the purpose and direction of the Wilderness Act and evaluated through practical, reasonable, and uniform application of the "Grazing in National Forest Wilderness Areas" committee guidelines.</p> <p>New structural range improvements deemed necessary for proper management and/or protection of the wilderness resource still must be approved by the Forest Supervisor.</p>
G1, G2	G01	ALL	<p>Prospecting, locating, and developing mineral resources within the Blue Range may occur [36 CFR 293.17(b)]. Those activities are to be managed to minimize the effect on the areas wilderness character.</p>
ALL	ALL	ALL	<p>Inventoried riparian areas in this management area are subject to direction in Management Area 3 consistent with wilderness objectives.</p>

## MANAGEMENT AREA 9

Analysis Areas: 61-66, 71-77, 81-82.

Acres: 10,872

### Escudilla Demonstration Area

Escudilla Demonstration Area was established in the late 1970's to provide an area for scientific research and to serve as an area where a variety of management practices could be demonstrated to the public. Since this time the Arizona Wilderness Bill created the Escudilla Wilderness which was a portion of the Demonstration Area. The Demonstration Area includes Terry Flat and the step side slopes of Escudilla Mountain. Range status data used in the development of this plan indicates that there are 1,000 acres of full capacity range, of which 1,000 acres are in satisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.

### **Management Emphasis:**

Emphasize management that will provide a variety of practices for scientific study and environmental education for the public.

Acres suitable for timber management – 7,536.

### Timber Suitability Land Classification

Total National Forest Land	10,872
Not Capable, Available, or Suitable	2,980
Non-Appropriate	356
Suitable	7,536



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A08  A02	ALL	<p><u>Recreation</u></p> <p>Manage dispersed recreation use at the less than standard service level.</p> <p>Manage the following acreages in each Recreation Opportunity Spectrum (ROS) Class:</p> <ul style="list-style-type: none"> <li>0 acres – Primitive</li> <li>1,551 acres – Semi-primitive Non-motorized</li> <li>7,446 acres – Semi-primitive Motorized</li> <li>1,875 acres – Roaded Natural</li> <li>0 acres – Rural</li> <li>0 acres – Urban</li> </ul> <p>Manage for the following visual quality objectives:</p> <ul style="list-style-type: none"> <li>0 acres – Preservation</li> <li>10,460 acres – Retention</li> <li>412 acres – Partial Retention</li> <li>0 acres – Modification</li> <li>0 acres – Maximum Modification</li> </ul>
C3, E03	C01, C02	062, 063, 066, 072, 073, 074, 077	<p><u>Wildlife</u></p> <p>Maintain structural diversity of vegetation within each diversity unit (10K) that is dominated by forest or woodland ecosystems.</p> <ol style="list-style-type: none"> <li>a. Maintain or establish a minimum of 20% of the forested area within a diversity unit to provide vertical diversity, except in areas where uneven-aged management is used.</li> <li>b. Maintain or establish 30% of the forested area within a diversity unit to provide horizontal diversity, except in areas where uneven-aged management is used.</li> <li>c. See Old Growth S&amp;Gs as stated on page 97 of this plan. <ul style="list-style-type: none"> <li>Between 100-300 acres and 5 chains or greater width in groupings of stands in close proximity to provide contiguous habitat for interior dwelling species within and between diversity units.</li> </ul> </li> </ol>
C3	C01, C02 E03	ALL	<ol style="list-style-type: none"> <li>d. In forested areas of a unit, create or modify created openings so they have a pattern edge shape index of at least 1.4 and have at least a medium edge contrast.</li> </ol>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C#	C02, C02, E03	ALL	<p>Only ponderosa pine/mixed conifer species can contribute to the minimum snag requirements. In high priority areas, including both edge habitats adjacent to meadows or water, manage for an average of 280 snags per 100 acres. Retain all gambel oak snags greater than 10 inches D.B.H. and 10 feet tall.</p>
			<p>e. Implement the Forest Snag policy. Provide at least 55% of a forested area with 180 snags per 100 acres.</p> <p>f. Provide a minimum of 2 down logs per acre (12” DRC or larger) or untreated slash piles 10-foot in diameter or a combination of down logs and slash piles over 55% of a diversity unit.</p>
	C01, C02 E03, E06 A01		<p>Manage to provide a variety of stand sizes, shapes, crown closure, edge contrast, age structure, and interspersion in aspen stands.</p> <p>a. Manage for and maintain deer and elk hiding cover (vegetation to hide 90% of an adult standing deer or elk from human view at 200 feet on at least 40% of the permits of natural openings, openings created for silvicultural purposes, and along at least 40% of the edges of arterial and collector roads, streams, rivers, and powerline corridors. Cover areas should be managed as at least 10 acres stands.</p> <p>b. Where there has been manipulation to induce aspen regeneration, do not allow aspen seedlings to be grazed by livestock more than one out of 3 years.</p>
	C01, C02 E03		<p>Use both commercial and non-commercial silvicultural practices to accomplish wildlife habitats objectives within diversity units.</p> <p>a. Within diversity units where no conflicts occur with TES species needs, as a guideline manage for forage to cover ratios 40:60 and 70:30.</p>

**Hiding and thermal cover levels in ponderosa pine and mixed conifer.**

Species	Size Class	Minimum	Acceptable	Optimum
Pipo Hiding	1 – 5” dbh	120 GSL	150 GSL	170 GSL
	5 – 9” dbh	120 GSL	150 GSL	180 GSL
	8 – 12” dbh	140 BA	160 BA	200 BA
	Area Size	10 acres	15 acres	25 acres
MC Hiding	1 – 5” dbh	60 GSL	80 GSL	100 GSL
	5 – 9” dbh	80 GSL	100 GSL	120 GSL
	8 – 12” dbh	80 GSL	100 BA	120 BA
	Area Size	10 acres	15 acres	25 acres
Pipo Thermal	5 – 9” dbh	120 GSL	180 GSL	200 GSL
	8 – 12” dbh	140 BA	180 BA	210 BA
	12 – 15 “ dbh	160 BA	200 BA	*220-240 BA
	Area Size	10 acres	30 acres	40+ acres
MC Thermal	5 – 9” dbh	120 GSL	140 GSL	160 GSL
	8 – 12” dbh	120 BA	140 BA	160 BA
	12 – 15” dbh	120 BA	160 BA	*180 BA
	Area Size	10 acres	30 acres	40+ acres

\* BA in more than one size class, presence of Gambel Oak preferable

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	C01, E06 E07	ALL	Protect elk calving and deer fawning areas.  a) Within identified deer and elk fawning and calving areas, restrict timber harvest activities during critical deer fawning and elk calving period to a maximum of 50% of the sale area in a contiguous block. Critical elk calving period: 5/15 – 6/30. Critical deer fawning period: 6/15 – 8/15.
C3	C01, C02 E06	062, 063, 066 072, 073, 074 077, 081	Maintain turkey habitat.
C2		ALL	Defer slash treatment activities in turkey nesting areas from April 15 through June 30.  Manage for turkey nesting cover through modified slash treatment. Leave scattered patches, at least ¼ acre in size, of untreated slash within ½ mile of dependable water in actual or potential turkey nesting areas. At least 10 percent and not more than 20 percent of the area treated within the nesting area shall be left untreated for at least 5 years, longer if it is determined that nesting is still occurring in the area. These guidelines will be evaluated and adjustments made, if necessary, after two years of implementation.  1. Selected turkey nesting areas are those that are determined to be actual or potential turkey nesting areas through field survey or have a known history of turkey nesting activity.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	C01, C02 E06	ALL	

2. Nests are usually on slopes rather than flat ground and have a high degree of canopy coverage.
3. Gambel oak is important for cover, and patches of oak near nesting areas are an important consideration when selecting areas for retaining slash. Other species such as New Mexico locust and currant also can provide cover.
4. High value areas for leaving slash are adjacent to a deferred stand or within the edge or a deferred stand.
5. If large areas, as opposed to scattered patches, of untreated slash are left, retain strips of slash on the contour of the slope.
6. The untreated slash may be prescribed burned after the needles have dropped off, and the area is determined to not be used for nesting.
7. Brood areas are also important near the nest. These areas are small openings 50 to 100 feet in diameter with little canopy coverage that produce herbaceous vegetation that can be used for forage. Grass species used for forage are generally those that produce abundant large seeds.
8. Nests are usually within ½ mile of dependable water but can be up to ¾ of a mile. Dependable water can be springs, streams, seeps, lakes, or stock tanks that usually have some available water during the driest parts of the year.

Protect active raptor nest tree groups and advise Wildlife Biologist of location. Nest group consists of nest tree and adjacent trees and is maintained as follows:

- Cooper's Hawk – 15 acres of uncut area around active nests.
- Sharp-shinned hawk and spreys – 10 acres of uncut area around active nests.
- Other raptors – an area extending to 50 feet from active nests is left uncut.
- Protect bald eagle winter roosts with a 300-foot uncut buffer zone around the roost. Prohibit road development in the roost and buffer zone.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C2	C01		Protect special wildlife features and maintain cover adjacent to elk wallows, salt licks, seeps, etc.
C2	E03, C02	ALL	In key bear habitat, manage for at least 30 percent of the mixed conifer to meet hiding cover needs. Give priority for cover management in drainage bottoms, heads of drainages, and isolated pockets of mixed conifer. Defer logging activities in these areas from April 15 to June 30.
C3	E03, C42		<p>As needed to meet habitat capability, protect red squirrel primary caches at a density of one cache per 2 acres. Retain all trees within a 26-foot radius from the cache to maintain nest tree groupings (1/20<sup>th</sup> acre) (spruce-fir and mixed conifer). Do not use in final removal and regeneration cuts.</p> <p>As needed to meet habitat capability, retain at least 20 Abert Squirrel nest tree groups per 100 acres. Not applicable to final removal and seed cuts.</p> <p>Manage for a least 20 percent of potential habitat capability of Red Squirrels in diversity units as determined by the Forest Habitat Capability Model.</p>
D2	D01, D02		<p><u>Range Resource Planning and Inventory</u></p> <p>Manage at the B through C level of Management Intensity. Upgrade to D level of Management Intensity on the more productive sites.</p>
	D02, E03	061, 075	Manage aspen regeneration stands to limit aspen sprout consumption by grazing to one out of 3 years, 20% or less of current year's growth.
D3	D03  D04		<p>Where water facilities are provided inside aspen stands, pipe water to areas outside the stand to maintain distribution of livestock and wildlife.</p> <p><u>Range Forage Improvement Maintenance</u></p> <p>Evaluate forage improvements and maintain forage improvement acres in satisfactory or better condition. Except during the timber regeneration period, revegetate suitable sites. Forage emphasis is to attain a balanced composition of cool and war season forage species.</p>
D3	D03	061	Unless planned for timber regeneration, broadcast seed immediately following natural or planned burns, with a tailored warm and cool season seed mix.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D3	D03	061	Where open meadows in the pine/mixed conifer type are to be maintained, eliminate invading overstory vegetation, stabilize gullies to raise the water table, scarify the soil, and seed with appropriate grass and forage species. Control grazing through management and/or fencing to establish the revegetation.
	D02, D01 D07, C0 1		The needs of wildlife will be considered when establishing domestic livestock carrying capacity.
E4	E04, E05 E07, F02	062, 063, 072 073, 074, 075 081	<p><u>Timber</u></p> <p>Regeneration harvests will have an objective of creating a new stand.</p> <p>Final removal cuts will not be scheduled until adequate regeneration is established.</p> <p>In mixed conifer stands that contain aspen, encourage aspen regeneration as a minor stand component (less than 50% of total stocking) at the time of regeneration, through location of skid trails, landings, and temporary roads.</p> <p>Restrict regeneration cuts to areas where soils have a reforestation potential of moderate or higher.</p> <p>Restrict regeneration cutting to areas capable of regeneration.</p>
E4	E04, E06 E07, F02	062, 072, 074 075, 081	<p>Natural regeneration will be preferred stand regeneration procedure.</p> <p>Plantations will not be established in natural openings or meadows.</p> <p>All reforestation projects will include rodent control where needed.</p> <p>Regeneration areas will be adequately protected from domestic livestock grazing to ensure establishment of the trees, in accordance with FSM 2470.</p> <p>Site preparation by mechanical, prescribed fire, or chemical means will be done as needed following the regeneration cut (seed cut or clearcut). The method to be used will be selected based on habitat type, existing situation and economics.</p> <p>Satisfactory stocking will be in accordance with standards established and published in FSM 2472.03, R-3 Supplement.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E5	E05, C01 C02	062, 063, 072 073, 074, 081	<p><u>Pre-commercial Thinning</u></p> <p>Control Stocking to improve product size and stand vigor.</p> <p>Precommercial thinning in stands on slopes &lt;40% will be done in overstocked conifer stands to reduce stocking to levels recommended in FSH 2404.26a, Cutting Methods Handbook.</p> <p>Thinning should not be performed where there is a dwarf mistletoe infected overstory of the same species. Chapter 70, FSH 2409.26c.</p>
E8	E04, E05 E07  E09  E03	062, 072, 074 075, 081   062, 063, 072 073, 074, 081  072, 073, 074	<p><u>Nursery Management</u></p> <p>Collect sufficient tree seed by species to maintain a 10 year supply by Ranger District and seed zone.</p> <p><u>Genetic Forest Tree Improvement Program</u></p> <p>The forest will participate in the tree improvement program at level 4 (seed orchards) for ponderosa pine and level 1 (seed zones) for all other commercial species.</p> <p><u>Silvicultural Examination and Prescription</u></p> <p>Carry out silvicultural examinations to keep track of site specific forest conditions for treatment needs.</p> <p>Use various types of evaluation, including yield simulations, to determine densities, etc., to minimize losses to insects and disease.</p> <p>Standard silvicultural guidelines on slopes of 40% or greater: one precommercial thinning to low enough stocking to allow the remaining trees to reach at least 15 inches DBH without further thinning (About 100-150 trees per acre); no intermediate cuts; no uneven aged management; otherwise, same as for slopes of less than 40%.</p>
E03	062, 063 072, 073 074, 075 081		<p><u>Stand Management</u></p> <p>Timber stands will generally be managed for timber production using uneven-aged system. Even-aged management may be used in special circumstances determined through the IRM process. The standard silvicultural guidelines on slopes of less than 40% will be: one precommercial thinning, 1 or more intermediate cuts.</p> <p>The final removal cut will be scheduled as soon as possible, considering other standards and guidelines, after the stand is regenerated.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	E03	062, 063 072, 073, 074, 075 081	<p>Artificial regeneration is required on all clearcuts and all burns where natural regeneration is inadequate 5 years after deforestation and where timber production is management objective.</p> <p>Artificial regeneration may be planned for any area to meet management objectives.</p> <p>Rotation lengths may be less than CMAI age (110 years) may be used, in existing stands where the stand has already culminated because of heavy dwarf mistletoe infection, or to improve age class distribution within a diversity unit.</p> <p>On slopes of less than 40 percent uneven-aged management is preferred in all timber types, except aspen.</p> <p>On slopes over 40%, reduce stocking during precommercial thinning so the stand average diameter will reach a minimum of 15 inches by age 120. This can be determined by the use of growth simulation models, and generally, stocking should be reduced to approximately 100 trees per acre for ponderosa pine, 125 trees per acre in mixed conifer and 150 trees per acre in spruce stands.</p>
E8	E03, E06  E03, E04 E06, A01 A02, A04 D01, C01 C02, F02	075  062, 063, 072 073, 074, 081	<p>No commercial harvest of pure aspen stands will be done on slopes of 40% or greater.</p> <p>To create horizontal diversity 1. Stand sizes will range from 10 to 100 acres. Stand sizes will be changed during regeneration cuts if necessary.</p> <p>To meet visual quality objectives for timber land, openings created in all timberlands and woodlands will not exceed 40 acres without Regional Forester approval.</p> <p>To develop an even distribution of age classes, regenerate at least 8% but not more than 40% of the forested area of each diversity unit every 20 years. However, more than 40% of a diversity unit may be regenerated in a 20-year period in the event of a catastrophe like fire or insect epidemic. Less than 8% may be regenerated if a current inventory indicates that less than 40% of the forested area of a diversity unit is in structural stages 4A, 4B, 4C, and 5.</p>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	E03, E04 E06, A01 A02, A04 D01, C01 C02, F02	062, 063	To manage Terry Flat as a demonstration area, timber management will utilize a full range of silvicultural and harvest treatments. The various treatments will be identified with signs so the treatment done and the purpose of the treatment are identified.
E8	E03, E06 C02	062, 063, 072 073, 074, 081	<u>Old Growth Management</u>  (See Standards and Guidelines as depicted beginning on page 97).
E8	E06	062, 063, 072 073, 074, 081	<u>Timber Sale Preparation</u>  Minimum harvest volume for a commercial entry will be 160 cubic feet per acre on slopes under 40% except for salvage sales, and 600 cubic feet per acre on slopes over 40%.
	E06	062, 063, 072 073, 074, 081	Logging will be accomplished by the use of tractor skidders and advanced methods like skylines. Skylines or other advanced methods will be used on all slopes >40% and may be used on other areas if needed to meet other management objectives like soil or streamcourse protection.
	E01, E02 E06, F02 F01, A01 A02, A04 C01, D01	062, 063, 072 073, 074, 075 081	Restrict logging to areas where soil movement is expected to return to tolerance levels within 2 years.  Drain and seed all roads, landings and skid trails that are no longer needed for immediate use.
			Harvest of miscellaneous forest products, like Christmas trees, posts, poles, etc., will be planned to meet integrated management goals.
			Slash created by timber harvest activities will be made available for fuelwood where feasible.
			All species, 9 to 12 inch DBH trees will be offered as sawtimber, after the close of the Colorado Plateau Pulpwood Sale.
E8	E03, E06 A01, C01 C02, P35	062, 063, 072 074, 081	<u>Forest Insect and Disease Management</u>  Reduce loss of timber production through the control of root rots.
			<ol style="list-style-type: none"> <li>1. In root rot centers, salvage dead and dying trees during regeneration cuts.</li> <li>2. Remove susceptible trees within 1 to 2 chains of the border of the center.</li> <li>3. Do not invest in thinning or planting in an infection center.</li> </ol>



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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E8 E03, E06  
A01, C01  
C02, P35 062, 063,  
072  
074, 081

Reduce susceptibility of Engelmann Spruce stands to Engelmann Spruce Bark Beetle.

1. Schedule over mature stands for harvest first, subject to other resource objectives.
2. Remove defective, unsound, unhealthy trees during regeneration harvests.
3. Salvage windthrown trees as soon as possible.
4. Treat all green spruce slash over 6 inches DIB to make it unsuitable for Bark Beetle habitat.

Reduce loss of timber production to dwarf mistletoes through silvicultural controls.

1. No live trees will be left as potential snags if they are infected with dwarf mistletoe unless they are girdled or poisoned.
2. No live dwarf mistletoe infected trees, including those used as seed sources will be left in areas with established regeneration.

Reduce ponderosa pine stands' susceptibility to attack by Ips Beetles.

1. Do not carry out slash creating activities on the same area for 2 or more consecutive years.
2. Maximize utilization of all trees cut during silvicultural treatments.
3. Treat slash in low elevation pine stands to make it unfavorable beetle habitat.
4. In precommercial thinning projects in low elevation pine, cut trees only during the period of July 1 through December 31.

Reduce mixed conifer stands' susceptibility to attack of Douglas-Fir Beetle.

1. Harvest over mature stands first, consistent with other resource objectives.
2. Remove harvested logs within 1 year of felling.
3. Thin stands periodically to maintain vigor.
4. Salvage windthrow trees promptly.

Reduce the amount of wood volume lost to stem decays.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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1. Remove infected, unsound and defective trees at the first opportunity.

2. Strictly enforce all contract provisions that will minimize wounding of residual trees during logging.

L01, L13

11-260

Timber Sale Preparation and Administration

Local Terminal roads should be closed after each use. Close them any time use of a road ceases for more than three months.

Seasonally or permanently close existing roads, prohibit off-road vehicle use or manage use when conflicts occur with wildlife management objectives. Generally, limit closures to local roads in erosive soil areas, riparian areas, or wildlife areas that require specific management practices.

F3

F03

061-066  
071-077  
081, 082

Soils and Water

Enhance watershed condition by closing/obliterating roads causing resource damage that are unneeded for forest management.

## MANAGEMENT AREA 10

Analysis Areas: 92, 94, 230, 240, 270.

### Research Natural Areas

Acres: 2,550

This includes the following research natural areas:

<u>Status</u>	<u>Name</u>	<u>Type</u>	<u>Areas-Acres</u>
Existing	Phelps Cabin	Montane Grassland	312
Recommended	Thomas Creek	Mixed Conifer	500
Recommended	Escudilla Mtn.	Spruce Montane grassland	909
Recommended	Wildcat	Pinyon Juniper	513
Recommended	Hayground	Blue Spruce/ Allium Goodingii	316

This management area is not assigned any grazing capacity.

### **Management Emphasis:**

Emphasis protection of the natural ecosystem for research purposes.

### Timber Suitability Land Classification

Total National Forest Land	2,550
Not Capable, Available, or Suitable	2,550
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
	A01	ALL	<u>Recreation</u>  Prepare a dispersed use implementation plan with the objective of identifying the recreation attractions and means to discourage use.
	A08		Implement the plan. Do not encourage recreation use in these areas.
D2	D01	ALL	<u>Range</u>  Range resource planning and inventory. RNA's are assigned no grazing capacity. RNA's are fenced to protect them as necessary.

## MANAGEMENT AREA 11

(Includes Management Areas 1-11, 4-11, 5-11, 6-11, and 7-11.)

Analysis Area: 310

### Water

Acres: 3,962

This management area includes the surface area of lakes and ponds, wetlands, and marshlands primarily, located on the forest. This management area also includes marshes and other wetlands. The lakes are major drawing cards for recreation users, particularly fishermen. Most major developed recreation areas are in close proximity to water. The lakes and ponds provide important habitat for wildlife, especially waterfowl.

### **Management Emphasis:**

Manage for the following indicator species:

Cinnamon Teal

Emphasis the production of fish and wildlife, including waterfowl. Manage the areas for dispersed recreation use.

### Timber Suitability Land Classification

Total National Forest Land	3,962
Not Capable, Available, or Suitable	3,962
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

NOTE: There may be some areas of duplication with management Area 3. Both management areas need to be reviewed for direction on wetland areas.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2

A02

310

Recreation

Manage the following acreages in each Recreation Opportunity Spectrum (ROS) Class:

- 0 acres – Primitive
- 9 acres – Semi-Primitive Non-Motorized
- 1,295 acres – Semi-Primitive Motorized
- 2,074 acres – Roaded Natural
- 584 acres – Rural
- 0 acres – Urban

Manage the following acreages in each Visual Quality Objective (VQO).

- 0 acres – Preservation
- 3,072 acres – Retention
- 890 acres – Partial Retention
- 0 acres – Modification
- 0 acres – Maximum Modification

A08

Manage dispersed recreation use at the standard service level.

A01

Prepare a dispersed use implementation plan in close coordination with the Forest wildlife biologist. The objective of the plan is to identify recreation use capacity and to maintain or enhance the fishery. Implement the plan.

C3

C01, A08

Wildlife and Fish

Manage waters capable of supporting fish to maintain a fishery.

C06, C07

Manage lakes to improve fisheries habitat through construction of structures as selected based on analysis and professional judgment of the responsible official and resource specialist:

Manage waters to perpetuate Apache Trout in order that this species can be delisted from the endangered category.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
C3	C03		Determine the need and then maintain and improve wetland habitat by planting waterfowl forage species along the shorelines in the first decade. Complete by 2010.
	C06		Construct waterfowl islands, and create potholes in wetland areas to provide nesting habitat.
	C12		Cooperate with Arizona Game and Fish Department on fish population control of aquatic plants and fish stocking to meet State fisheries management goals.
C3	C01, C02		Manage for or maintain habitat capability for Arizona trout, rainbow trout, brook trout, brown trout, loach minnow, and spinedace at least 60% of potential.
	F08, F09		Secure working agreements for water users to maintain a fishery and/or wetland conditions.
C2	C01, A01		Coordinate with other resource functions to pursue instream flow rights to protect aquatic ecosystems, fish, and wildlife.
	D01, E04		
	F01, K03		
	L01, P01		
	C01, F06		Review existing and potential water impoundments and water impoundment sites, and obtain water rights for developing and maintaining fishing and/or wetland conditions in lakes and streams.
	F09		

## MANAGEMENT AREA 12

Analysis Areas: 381-385

Acres: 11,080

### Bear Wallow Wilderness Area

The newly established Bear Wallow Wilderness in eastern Arizona boasts a sizeable amount of virgin ponderosa pine for its size. Only a few trails provide access into and within this area, and only limited grazing of domestic livestock in the west half has kept this area pristine.

Bear Wallow Creek flows throughout the year, providing suitable habitat for the threatened Apache trout. Wildlife is abundant throughout the area. A majestic view from atop the Mogollon Rim is available to the hiker from the Rim Tail on the southern boundary of the wilderness.

Range status data use in the development of this plan indicates that there are 600 acres of full capacity range, of which 600 acres are in satisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.

### **Management Emphasis:**

Emphasize wilderness recreation while maintaining wilderness resource values.

### Timber Suitability Land Classification

Total National Forest Land	11,080
Not Capable, Available, or Suitable	11,080
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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B2	B03	381-385	Manage recreation use within capacities determined for each Wilderness Opportunity Spectrum Class. (WOS)
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WOS Class	Acres	Capacity (RVD's)
Pristine	3,435	280
Primitive	0	0
Semi-Primitive	5,983	4,224
Transition	<u>1,662</u>	<u>2,209</u>
Total	11,080	6,713

Trash in high use areas picked up at the end of the high use season during period 1.

Trash in high use areas picked up concurrently beginning in period 2.

B02, B02			Outfitter/Guide caches of equipment and/or supplies may be permitted with District Ranger approval.
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B01			Utilize volunteers to restore wilderness qualities lost due to past management.
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B03			Cooperate with the Arizona Game and Fish Department in the management of the Threatened Apache Trout.
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Close designated areas to public entry to protect T&E species during critical use periods.

Those areas classified under the Wilderness Opportunity Spectrum (W.O.S.) System as primitive or pristine that are without trails will be kept without trails.

Recreation use will be managed at the less than Standard Service Level in period 1; at the Standard Service Level beginning in Period 2.

Manage at the B Or C level of Management Intensity.

D2	D02		
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D3	D02		
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The manner and extent to which livestock grazing is conducted to meet wilderness objectives, range resource needs, desired conditions of ecosystems, and other resources, is addressed by individual Allotment Management Plans within the guidelines and policy cited above and approved by the Forest Supervisor.

Permits for grazing in wilderness shall be issued only in areas where grazing was established at the time of wilderness designation.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D3	D02		<p>Any adjustments in the numbers of livestock permitted to graze in wildernesses should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range conditions, and the protection of the range resource from deterioration. It is anticipated that the numbers of livestock permitted to graze in wilderness would remain at the approximate levels existing at the time an area enters the wilderness system. If land management plans reveal conclusively that increased livestock numbers or animal unit months (AUM's) could be made available with no adverse impact on wilderness values such as plant communities, primitive recreation, and wildlife populations or habitat, some increases in AUM's may be permissible (Conference Report S.2009 H.R. No. 96.1126). By the same token, if it is discovered that present livestock numbers have an adverse impact on wilderness values, some decreases in AUM's may be necessary.</p>
D3	D05, D06		<p><u>Range Structural Improvements</u></p> <p>New structural improvements and maintaining existing improvements must be considered in the overall context of the purpose and direction of the Wilderness Act and evaluated through practical, reasonable, and uniform application of the "Grazing in National forest Wilderness Areas" committee guidelines.</p> <p>New structural range improvements deemed necessary for proper management and/or protection of the wilderness resource still must be approved by the Forest Supervisor.</p>
ALL	ALL	ALL	<p>Inventoried riparian areas in this management area subject to the direction of Management Area 3.</p>

## MANAGEMENT AREA 13

Analysis Areas: 91-94

Acres: 5,200

### Escudilla Mountain Wilderness

The Escudilla Wilderness, designated in 1984 and containing 5,200 acres, lies atop Arizona's third highest peak, Escudilla Mountain. Its 10,912 feet elevation provides marvelous vistas. It is home to several pristine, high elevation meadows which are comprised of relatively rare plant associations. Notable landmarks in or just outside the wilderness include Profanity Ridge, Terry Flat, Toolbox Draw, and the Punchbowl.

A trail takes the visitor to Escudilla Lookout where he/she can absorb vistas many miles distant. Because of the relative scarcity of water and the small size of this wilderness, day use is encouraged. Range status data used in the development of this plan indicates that there are 1500 acres of full capacity range, of which 1500 acres are in satisfactory condition. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.

### **Management Emphasis:**

Emphasize wilderness recreation while maintaining wilderness resource values.

### Timber Suitability Land Classification

Total National Forest Land	5,200
Not Capable, Available, or Suitable	5,200
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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B2            B03            91-64            Wilderness

Manage recreation use within capacities determined for each Wilderness Opportunity Spectrum Class. (W.O.S.)

WOS Class	Acres	Capacity (RVD's)
Pristine	0	0
Primitive	0	0
Semi-Primitive	4,696	3,315
Transition	<u>504</u>	<u>670</u>
Total	5,200	3,985

Trash in high use areas picked up at the end of the high use season during Period 1. Trash in high use areas picked up concurrently beginning in Period 2.

	B01		Identify the route that loops for Trail 308 near the Escudilla L.O. to Bead Spr. Through the use of rock cairns or other subtle markers.
	B03, A12		Manage Escudilla National Recreation Trail (308) in a manner compatible with maintenance of the wilderness resource character.
	B03		Recreation use will be managed at the less than Standard Service Level in Period 1; at the Standard Service Level beginning in Period 2.
	B01, B03 P24		On Escudilla restrict use to day use only within the meadow where Bead Spring is located.
D3	D02		The manner and extent to which livestock grazing is conducted to meet wilderness objectives, range resource needs, desired conditions of ecosystems, and other resources is addressed by individual Allotment Management Plans within the guidelines and policy cited above and approved by the Forest Supervisor.
D3	D02	91-94	Permits for grazing in wilderness shall be issued only in areas where grazing was established at the time of wilderness designation.  Any adjustments in the numbers of livestock permitted to graze in wildernesses should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D3	D02		<p>It is anticipated that the numbers of livestock permitted to graze in wilderness would remain at the approximate levels existing at the time an area enters the wilderness system. If land management plans reveal conclusively that increased livestock numbers of animal unite months (AUM's) could be made available with no adverse impact on wilderness values such as plant communities, primitive recreation, and wildlife populations or habitat, some increases in AUM's may be permissible (Conference Report S.2009 H.R. No. 96.1126). By the same token, if it is discovered that present livestock numbers have an adverse impact on wilderness values, some decreases in AUM's may be necessary.</p>
	D05, D06		<p><u>Range Structural Improvements</u></p> <p>New structural improvements and maintaining existing improvements must be considered in the overall context of the purpose and direction of the Wilderness Act and evaluated through practical, reasonable, and uniform application of the "Grazing in National forest Wilderness Areas" committee guidelines.</p> <p>New structural range improvements deemed necessary for proper management and/or protection of the wilderness resource still must be approved by the Forest Supervisor.</p>
ALL	ALL	ALL	<p>Inventoried riparian areas in this management area subject to the direction of Management Area 3.</p>

## MANAGEMENT AREA 14

Acres: 7,176

### Black River (Mainstem)

The 16 mile Black River is a major tributary of the Salt River and flows in a sometimes tortuous channel winding through conifer covered mountainous terrain. The river corridor provides important habitat to a wide range of animals; deer, elk, bear, and turkey to name a few. As well, the river provides nesting habitat for many bird species including, southern bald eagles and possible peregrine falcons.

The Black River provides a highly scenic, water based, semi-primitive recreation opportunity for those hardy individuals willing to take the time, as access is not easy.

### **Management Emphasis:**

Emphasize semi-primitive recreation opportunities while preserving the highly scenic qualities of the corridor. Manage for possible inclusion into the Wild and Scenic River System under a scenic classification.

### Timber Suitability Land Classification

Total National Forest Land	7,176
Not Capable, Available, or Suitable	7,176
Non-Appropriate	0
Suitable	0

No vegetation management practices are planned in this management area.



Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2

A02

ALL

Recreation

Manage the following acreages in each Recreation Opportunity Spectrum (ROS) Class:

- 0 acres – Primitive
- 0 acres – Semi-Primitive Non-Motorized
- 4,301 acres – Semi-Primitive Motorized
- 2,875 acres – Roaded Natural
- 0 acres – Rural
- 0 acres – Urban

Manage the following acreages in each Visual Management Objective.

- 0 acres – Preservation
- 6,400 acres – Retention
- 225 acres – Partial Retention
- 200 acres – Modification
- 0 acres – Maximum Modification

A01

Recommend the mainstem of the Black River (approximately 16 miles) from the Buffalo Crossing area to the reservation boundary (see Management Areas Index Map) be designated as part of the National Wild and Scenic River System as a scenic river.

A01,  
A07

Until Congress makes the final decision to include the Black River as part of the National System, administer the river corridor in such a manner as to protect and enhance the values which caused it to be classified as scenic.

A01

Maintain at least the current semi-primitive recreation opportunities.

Within the boundaries of the river corridor, allow management actions that would cause a shift from acres classification as Roaded Natural to a classification of semi-primitive, motorized, or non-motorized.

All management activities will be in compliance with the visual management objectives as currently mapped.

C3

A12, C01  
C03, C04  
F02

Improvements such as wildlife spring developments, fish barriers, erosion-control structures, trails, etc., can be authorized as long as they do not conflict with the management emphasis.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
D2	D01, D02		The riparian portions of the river corridor are subject to direction for Management Area 3.
	F02, D07		
	D03, C01		
	C02		Manage for satisfactory riparian condition.
E8	E03		Timber harvesting is allowed only in special situations to respond to insect and disease problems that threaten adjoining commercial timber lands.
	A01,		Subject to valid existing rights, the performance of or issuance of a patent to any mining claim affecting lands within the Wild and Scenic River System shall confer or convey a right or title only to the mineral deposits and such rights only to the use of the surface and the surface resources as are reasonably required to carry on prospecting or mining operations and are constant with such regulations as may be prescribed by the Secretary of Agriculture. (Ph. 90-542)
	G03		
	G04		
	G03,		The area may be withdrawn from mineral entry.
	G04		Oil and Gas leases for the area will contain the no surface occupancy criteria.
	G07		No common variety mineral activities will be permitted.
	J01, F03		Gauging stations will be allowed if a suitable location does not exist elsewhere on the river and if there is not significant adverse effect on the natural character of the area.
	F06		
A2	J01		Special uses within the corridor should be avoided unless the use can meet the other standards and guidelines and comply with the management emphasis.

## MANAGEMENT AREA 15

Acres: 3,465

### East and West Fork of the Black River

This Management Area includes a 14 mile segment of the West Fork of the Black River from the confluence of the East and West Forks of the Black River near Buffalo Crossing upstream to the forest boundary just south of the Mt. Baldy Wilderness. With the main stem of the Black River, this segment forms a continuous 30 mile river segment from the headwaters to the forest boundary.

The West Fork of the Black River not only provides highly scenic water based recreation opportunities, it also represents a valuable fishery as well as habitat for a wide range of wildlife.

### **Management Emphasis:**

Emphasize a wide spectrum of recreation opportunities similar to that which currently exists. Manage to maintain or enhance the scenic quality of the corridor.

### Timber Suitability Land Classification

Total National forest Land	<u>3,465</u>
Not Capable, Available, or Suitable	<u>3,465</u>
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A02	ALL	<p>Manage the following acreages in each Recreation Opportunity Spectrum (ROS) Class:</p> <p>0 acres – Semi-Primitive Non-Motorized  <u>1,753</u> acres – Semi-Primitive Motorized  <u>1,712</u> acres – Roded Natural  0 acres – Rural  0 acres – Urban</p> <p>Recommend 14 miles of the West Fork of the Black River for inclusion in the Wild and Scenic Rivers System. Recommend 7 miles for wild designation, 3 miles for scenic designation, and 4 miles for recreation designation.</p> <p>Manage the following acreages in each Visual Management Objective.</p> <p>3,365 acres – Retention  100 acres – Partial Retention  0 acres – Modification/Maximum Modification</p>
	A01		<p>Prepare a site specific implementation plan to determine the appropriate recreation activities to manage for, the user capacity, as well as number and types of facilities needed.</p> <p>Remove all old barbed wire fences not currently in use that cross the river consider the occasional rafting and kayaking uses in construction of new fences that cross the channel.</p> <p>Maintain at least the current semi-primitive recreation opportunities.</p> <p>Maintain the current ROS classes with the exception that roded natural areas can be allowed to revert to semi-primitive classifications.</p> <p>Meet the current visual quality objectives.</p>
C3	A12, C01 C03, C03 F02  D01, C02 F02, D07 D03, C01 C02		<p>Improvement such as wildlife spring developments, fish barriers, erosion control structures, trails, etc., can be authorized as long as they do not conflict with the management emphasis.</p> <p>The riparian portions of the river corridor are subject to direction of Management Area 3.</p> <p>- Manage for good riparian condition.</p> <p>Timber harvesting and road building will not occur in the 7 mile wild segment of the West Fork of the Black River.</p>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E6	E03		<p>Timber management including harvesting is an applicable activity within the scenic corridor. However, timber management objectives for all projects within the corridor must have the objective of maintaining or enhancing the recreation opportunities. Examples of a recreation objective would be: (1) removal of over-mature and other hazardous trees in concentrated use areas, (2) removal of diseased or insect infested, as well as other susceptible trees to stop the spread that threatens the natural appearances (as perceived by the recreation users) of the corridor, and (3) silvicultural prescriptions aimed at expanding the vegetation diversity to prevent insect and disease epidemics from threatening the area.</p>

## MANAGEMENT AREA 16

Acres: 11,534

### Chevelon Canyon

This management area includes 29.9 miles of Chevelon Creek from the confluence of Willow Canyon and Woods Canyon downstream to the forest boundary. Except for Chevelon Canyon Lake, the area will be recommended for addition to the Wild and Scenic Rivers System.

The corridor is a major drainage of the Mogollon Rim. Chevelon Creek cuts a scenic, steep, and twisting canyon through terrain covered with a mosaic of vegetation. Chevelon Canyon provides a canyon ecosystem relatively undistributed by human intrusion. It is a unique aquatic habitat in a relatively arid region with high semi-primitive recreation and wildlife values. This management area is not assigned any grazing capacity.

### **Management Emphasis:**

Emphasize semi-primitive non-motorized recreation opportunities (except at Chevelon Crossing). Strive to maintain the current opportunities for solitude. Protect the high scenic values, and maintain the current wildlife habitat values.

### Timber Suitability Land Classification

Total National Forest Land	<u>11,534</u>
Not Capable, Available, or Suitable	<u>11,534</u>
Non-Appropriate	0
Suitable	0

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
A2	A02	ALL	<p>Recommend Chevelon Creek for addition to the Wild and Scenic Rivers System as a Scenic River. The recommendation will include 29.9 miles of Chevelon Canyon from the confluence of Woods Canyon and Willow Canyon downstream to the forest boundary except for Chevelon Canyon Lake.</p> <p>Manage the following acreages in each Recreation Opportunity Spectrum (ROS) Class:</p> <ul style="list-style-type: none"> <li>0 acres – Primitive</li> <li><u>4,785</u> acres – Semi-Primitive Non-Motorized</li> <li><u>4,442</u> acres – Semi-Primitive Motorized</li> <li><u>2,225</u> acres – Roaded Natural</li> <li><u>85</u> acres – Rural</li> <li>0 acres – Urban</li> </ul> <p>Manage the following acreages in each Visual Management Objective.</p> <ul style="list-style-type: none"> <li><u>9,734</u> acres – Retention</li> <li><u>823</u> acres – Partial Retention</li> <li><u>977</u> acres – Modification</li> <li>0 acres – Maximum Modification</li> </ul>
A2	A01	ALL	<p>Maintain or enhance the current semi-primitive recreation opportunities.</p> <p>Maintain the current ROS classes with the exception that roaded natural areas can be allowed to revert to semi-primitive classifications.</p> <p>Meet the current visual quality objectives.</p>
C3	A12, C01 C03, C04 F02		<p>Improvements such as wildlife spring developments, fish barriers, erosion control structures, trails, etc., can be authorized as long as they do not conflict with the management emphasis.</p> <p>No grazing allowed other than what currently exists as a result of adjacent use.</p>
E8	D01		<p>Use vegetative manipulations; e.g. salvage, thinning, slash piling, planting, seeding, only where needed to enhance other management area objectives.</p>
	J01		<p>The pump and pipeline near Durfee Crossing can remain and be maintained in an appropriate condition as determined by the District Ranger.</p>
	A01		<p>Access will be strictly managed within the Chevelon Creek area as follows:</p> <ul style="list-style-type: none"> <li>- Trails are closed to motorized use.</li> <li>- Off-road travel by motorized vehicles is prohibited.</li> <li>- By 1991 identify all probable access points. Management of those points will be guided by the objective for a low concentration of users. (Semiprimitive experience)</li> </ul>

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	A01	ALL	<ul style="list-style-type: none"> <li>- Motorized use within the corridor is restricted to the 504 Road. The road to Durfee Crossing will remain closed. Any vehicular access within the corridor other than the 504 Road must be authorized by the District Ranger.</li> <li>- Motorized use is allowed on established routes within Chevelon Crossing Campground.</li> </ul>
	G03, G04		<p>The area may be withdrawn from mineral entry.</p> <p>Oil and gas leases for the area will contain the no surface occupancy criteria.</p>
	G07		<p>No common variety mineral activities will be permitted.</p>
	J01, F03 F06		<p>Gauging stations will be allowed if a suitable location does not exist elsewhere on the river and if there is no significant adverse effect on the natural character of the area.</p>
A2	J01		<p>Special uses within the corridor will not be authorized unless the use can meet the other standards and guidelines and comply with the management emphasis.</p>



## MANAGEMENT AREA 17

Acres: 2,360

### East and West Forks Little Colorado River

The East and West Forks of the Little Colorado River possess a high quality semi-primitive non-motorized water based recreation opportunities adjacent to the popular resort community of Greer.

In addition, within the corridor are several unique stands of willow deserving special protection.

### **Management Emphasis:**

Emphasize semi-primitive recreation opportunities while protecting the unique botanical qualities.

### Timber Suitability Land Classification

Total National Forest Land	2,360
Not Capable, Available, or Suitable	2,360
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2

A02

ALL

Recreation

Manage the following acreages in each Recreation Opportunity Spectrum (ROS) Class:

- 0 acres – Primitive
- 0 acres – Semi-Primitive Non-Motorized
- 1,249 acres – Semi-Primitive Motorized
- 1,111 acres – Roded Natural
- 0 acres – Rural
- 0 acres – Urban

Manage the following acreages for each Visual Management Objective.

- 2,360 acres – Retention
- 0 acres – Partial Retention
- 0 acres – Modification
- 0 acres – Maximum Modification

A01

Maintain or enhance ROS classes with the exception that roded natural areas can be allowed to revert to semi-primitive classifications.

Meet the current visual quality objectives.

A08

Avoid any encouragement of recreation activities within unique willow stands.

The road and parking area at Government Spring will be maintained as a trailhead for users of the East Fork and the recreation area.

C3

A12, C01  
C03, C04  
F02

Improvements such as wildlife spring developments, fish barriers, erosion control structures, trails, etc., can be authorized as long as they do not conflict with the management emphasis.

C03

Improve habitat capability for fish, and maintain stream channel stability.

D2

D01,  
D02  
D03,  
D07  
C01, C02  
F02

The riparian portions of the river corridor are subject to direction for Management Area 3.

- Manage for satisfactory riparian condition.
- Insure there is no effect on the unique willow stands caused by grazing.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
E8	E08	ALL	Timber harvesting is allowed only in special situations to respond to insect and disease problems that threaten adjoining commercial timberlands.
	G03, G04		The area may be withdrawn from mineral entry.  Oil and gas leases for the area will contain the no surface occupancy criteria.
	G07		No common variety mineral activities will be permitted.
A2	J01		Special uses within the corridor will not be authorized unless the use can meet the other standards and guidelines and comply with the management emphasis.
	J01, F03 F06		Gauging stations will be allowed if a suitable location does not exist elsewhere on the river and if there is no significant adverse effect on the natural character of the area.

## MANAGEMENT AREA 18

Acres: 26,037

### Sandrock

The Sandrock Allotment (61,348 acres) was deferred from grazing in December 1983. The purpose of the deferment was to accelerate the recovery of the watershed. The 26,037 acres of this special management area represents that portion of the Sandrock Allotment outside of the Blue Range Primitive Area (Management Area 8). Range status data used in the development of this plan indicates that this management area is not assigned any grazing capacity. As new inventories become available they will be utilized to make future adjustments to these management area range status descriptions.

### **Management Emphasis:**

Emphasize the recovery of this critical watershed. In addition, emphasize the management of the loach minnow (Tiaroga cobitus) and the Black hawk (Buteogallus anthracinus).

### Timber Suitability Land Classification

Total National Forest Land	26,037
Not Capable, Available, or Suitable	26,037
Non-Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

Program Components	Activities	Applicable Management Areas	Standards and Guidelines
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A2

A02

ALL

Recreation

Manage the following acreages in each Recreation Opportunity Spectrum (ROS) Class:

- 10,182 acres – Primitive
- 7,455 acres – Semi-primitive Non-Motorized
- 4,593 acres – Semi-primitive Motorized
- 3,807 acres – Roded Natural
- 0 acres – Rural
- 0 acres – Urban

Manage the following acreages in each Visual Management Objective.

- 0 acres – Retention
- 17,474 acres – Partial Retention
- 8,563 acres – Modification
- 0 acres – Maximum Modification

Maintain at least the current primitive and semi-primitive classifications.

Maintain the current ROS classes with the exception that Roded Natural Areas can be allowed to revert to semi-primitive classifications.

Meet the current visual quality objectives.

C2

A01, A08  
B01, B03  
C01, D01  
F01, F02  
G03, G04  
G06, G10  
J01, J02  
J04, K03  
P01, P10  
P11, P27

Cooperate with the Arizona Game & Fish Department and the U.S. Fish and Wildlife Service in the management of the Loach Minnow.

L2

201

Close designated areas to public entry when Black hawk nests are found.

D2

D02

Defer from grazing until critical watershed and riparian areas are satisfactorily restored.

Periodic check for stray cattle will be made.

## 5. MONITORING PLAN

### INTRODUCTION

Monitoring and evaluating Forest Plan implementation is done to inform the decision maker of progress toward achieving the goals, objectives, and standards and guidelines. A Monitoring Plan is required by 36 CFR 219.12(k) to determine how well objectives have been met, and how closely management standards have been applied. The Monitoring Plan highlights those items that are an existing part of the planned program as well as new items that are legally required.

Monitoring more specifically determines:

If the management prescriptions are applied as directed.

If standards are being followed.

If the Forest is achieving the objectives of the Forest Plan.

If the Issues are being resolved by the management prescriptions.

If the effects of implementing the Forest Plan are occurring as predicted.

If the costs of implementing the Forest Plan are as predicted and are acceptable.

If management practices on adjacent or intermingled non-forest lands are affecting Forest Plan goals and objectives.

A detailed annual monitoring action plan (MAP) is prepared. The MAP includes what, where, and how many items are monitored and who is responsible for monitoring.

The annual evaluation report documents an evaluation of the results of the MAP. A Forest Interdisciplinary Team analyzes and evaluates the significance of the results of the MAP every 5 years.

The evaluation report is the basis for any recommendation to the Forest Supervisor on the Forest Plan status. The recommendations can include:

No action needed. Monitoring indicates goals, objectives, and standards are being reasonably achieved.

Refer recommended action to the appropriate line officer to improve application of management prescriptions.

Modify the management prescription as a Forest Plan amendment.

Modify the assignment of a prescription as a Forest Plan amendment.

Revise the projected schedule of outputs.

Revise the Forest Plan.

A file of the Forest Supervisor's decisions resulting from conclusions drawn from the results of the MAP is maintained for future use in amending or revising the Forest Plan. An annual evaluation of these decisions will be prepared and sent to the Regional Forester for consideration.

The Forest Plan's monitoring requirements follow in Table 14. For each activity, practice, or effect to be monitored, 1 or more measurement techniques and the expected future condition to be met are specified. A frequency for measuring and reporting the monitored item is established, and the expected accuracy and precision of that measurement is stated. Precision refers to how close to each other repeated measurements of the same quantity are. Accuracy is a measure of how close a measurement is to the actual value of the variable being measured.

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>A2 RECREATION</b>						
Developed site use.	Determine recreation use.	Recreation use reports/RVD's	Annually	80/80	+20% difference between projected & actual use, & when capacity is exceeded by 25%	
ORV compliance & damage.	Prevent unacceptable damage to resources & meet provisions of specific dispersed area implementation plans once completed that relate to ORV use.	Area and project reviews, Recreation use system.	Every two years.	80/80	ORV use on damage conflicts with management goals or lowers visual quality level below objective.	
Dispersed area use and experience levels.	Determine recreation use.	Recreation use system RVD's	Every 2-5 years.	60/60	Use exceeds by 20% or more the ROS social setting criteria for the ROS class.	
Cultural resource compliance.	Meet federal regulation; ensure project compliance with guidelines.	Approved cultural resource clearance for each ground disturbing activity project.	Annually	80/80	R-3 direction is not met.	
Cultural resource property protection.	Protect National Register designation properties.	Patrol highly susceptible areas in conjunction with other duties/site condition.	Annually	90/90	Properties being damaged/destroyed by unauthorized uses and/or controllable natural agents.	
Trail condition	Determine effectiveness of Forest Trails Program.	Project reviews, trail condition surveys/miles.	Sample 10% annually.	90/90	>10% of system trails drop one condition class level.	



Monitoring Plan					
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation
<b>A2 RECREATION (Continued)</b>					
Visual Quality Objective (VQO) compliance.	Ensure Forest standards and guidelines for visual manage-ment are met.	Review project work plans involving vegetative treatment, road/trail construction, or major development/acres by VQO.	Bi-Annually	80/80	A project reduces visual quality levels below objectives. Tolerance standards are listed in the forest-wide standards & guidelines.
<b>B2 WILDERNESS</b>					
Wilderness use.	Determine wilderness use and demand.	Recreation use system/RVD's	Annually	65/65	Capacity is exceeded by 20% in any WOS class.
Mt. Baldy wilderness condition.	Minimize resource damage and changes of WOS classes, particularly semi-primitive.	Recreation use system, limit of acceptable change inventories project reviews/area condition.	Every 5 years.	80/80	Limits of acceptable change conditions exceed tolerances established for each wilderness.
<b>C2/C3 WILDLIFE</b>					
<b>GOSHAWK &amp; SPOTTED OWL</b>					
Amount of old growth habitat.	Applied management achieves desired stand characteristics for old-growth and indicator species do not significantly decrease.	District stand file inventory, when available, compartment exams and habitat capability modeling/acres. <b>4</b>	Every 3 years on 10K units, within a Ranger District, where veg. manipulation has occurred in the Ponderosa Pine, Mixed Conifer or Spruce Fir habitat types.	75/75	Any 10K block without 6% of the capable forested land meeting old-growth conditions or being managed to reach the conditions as soon as possible given the constraints of the timber offering schedule. Existing habitat capability drops more than 10% over the last 5 years within the 10K.

Table 14

Monitoring Plan					
Items Monitored	Intent	Monitoring Method/ Unit of Measure	Measuring Frequency	Percent Accuracy/ Precision	Variability that would initiate Re-evaluation
C2/C3 WILDLIFE (Continued)					
GOSHAWK & SPOTTED OWL					
Amount of mature and old growth timber.	Maintain or improve existing habitat capability.	Habitat capability model/percent habitat capability. <b>4</b>	Every 3 years on 10K units, within a Ranger District, where veg. manipulation has occurred	65/65	Existing habitat capability drops below 40% of potential or more than 10% over the last 5 years within a 10K block.
HAIRY WOODPECKER, YELLOW-BELLIED SAPSUCKER, & PYGMY NUTHATCH					
Amount of old growth habitat.	Applied management achieves desired stand characteristics for old-growth and indicator species do not significantly decrease.	District stand file inventory, when available, compartment exams and habitat capability modeling/ acres. <b>4</b>	Every three years.	75/75	Any 10K <sup>2</sup> block without 6% of the capable forested land meeting old-growth conditions or being managed to reach the conditions as soon as possible given the constraints of the timber offering schedule. Existing HCI drops more than 15% <sup>3</sup> over the last 5 years within the 10K block. <b>6</b>
A Standard and Guideline will be developed regarding future snag recruitment. The S&G will reflect "Desired Future Conditions" and will be developed in conjunction with the reanalysis of the timber program.					
TURKEY					
Existing habitat capability.	Maintain existing habitat capability.	District stand file inventory, when available, compartment exams and habitat capability monitoring/ acres. <b>4</b>	Every 5 years on 10K units affected by vegetation manipulation projects	65/65	Existing habitat capability drops below 40% of potential or more than 15% in suitable turkey habitat over the last five years within the 10K block..
Population trend	Meet population goals.	Arizona Game & Fish Department. surveys/numbers	Annually	75/75	Comprehensive Plan goal not met, 25% decrease in pop-ulation over 5-year period.

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>C2/C3 WILDLIFE (Continued)</b>						
<b>RED SQUIRREL</b>						
Existing habitat capability.	Maintain existing habitat capability.	District stand file inventory, when available, compartment exams and habitat capability monitoring/acres. <b>4</b>	Every 3 years on of 10K units affected by vegetation manipulation projects.	65/65	Existing habitat capability drops below 40% or more than 15% <sup>3</sup> over the last 5 years within individual 10K blocks with red squirrel habitat.	
<b>ELK &amp; MULE DEER</b>						
Amount of existing hiding and thermal cover.	Maintain existing habitat capability and effective forage/cover ratios.	District stand file inventory, when available, compartment exams and habitat capability monitoring/acres. <b>4</b>	Every 3 years on of 10K units affected by vegetation manipulation projects.	65/65	Existing cover capability drops below 40% or more than 15% <sup>3</sup> over 5-year period or when accumulated 10K forage/cover ratios go outside the S&G 40/60 to 70/30.	
Population trends and distribution.	Meet population goal.	Arizona Game and Fish Department surveys/numbers	Annually	65/65	Comprehensive Plan goals not met.	
<b>ABERT SQUIRREL</b>						
Existing habitat capability.	Maintain existing habitat capability.	District stand file inventory, when available, compartment exams and habitat capability monitoring/acres. <b>4</b>	Every 3 years on of 10K units affected by vegetation manipulation projects.	65/65	Existing habitat capability drops below 40% or potential or more than 15% <sup>3</sup> over the last 5 years within the 10K blocks having suitable Abert Squirrel Habitat.	

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
C2/C3 WILDLIFE (Continued)						
PLAIN TITMOUSE						
Existing habitat capability.	Maintain existing habitat capability	District stand file inventory, when available, compartment exams and habitat capability monitoring/acres. <b>4</b>	Every 3 years on of 10K units affected by vegetation manipulation projects.	65/65	Existing habitat capability drops more than 15% <sup>3</sup> over the last 5- years within the 10K block.	
Snag densities and sizes for Pinyon/Juniper	Maintain habitat capability.	Compartment exams and snag inventories and project reconnaissance/acres.	Every 3 years on of 10K units affected by vegetation manipulation projects.	75/75	When prescribed snag densities and sizes not met on at least 55% of area evaluated over 5-year period.	
ANTELOPE						
Forage use.	Maintain habitat capability.	Habitat capability model/habitat capability.	Every 3 years on all of the 10K units affected by vegetation manipulation projects.	65/65	Existing habitat capability drops below 40% of potential or more than 15% over a 5-year period.	
Population trends.	Meet population goal.	Arizona Game and Fish Department surveys/numbers.	Annually	75/75	Comprehensive Plan goals not met.	

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>AQUATIC MACROINVERTEBRATES</b>						
Species diversity and biomass.	Maintain aquatic habitat effectiveness.	Systematic field sampling (modified Surber sampling)/Biotic Condition Index (BCI).	Every 2-5 year on improved streams identified in the riparian plan.	85/85	BCI index falls below 80 (Good)	
Priority One & Two Streams as Identified in FLMP S&Gs	Maintain and/or improve aquatic habitat effectiveness.	GAWS III and macroinvertebrate surveys on all Priority I & II streams. GAWS IV survey on those streams identified as requiring intensified survey through an IRM process. HCI is unit of measure. An additional unit of measure for Macroinvertebrates is BCI (Biotic Condition Index).	Every 5 years for Level III surveys and Level IV will be determined by the IRM process that identified the need.	75/75	If HCI falls below 60% and/or the BCI falls below 80%.	
Cold Water Stream Temperatures	Maintain and/or improve aquatic habitat effectiveness.	Instrumentation capable of measuring maximum stream temperatures.	Every 5 years.	95/95	If stream temperatures are above 68°.	

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-	
THREATENED AND (Flora or Fauna) ENDANGERED SPECIES (OTHER THAN SPOTTED OWL AND FOR WHICH WE HAVE SIGNIFICANT MONITORABLE DATA)						
TERRESTRIAL SPECIES: BALD EAGLE, AMERICAN PEREGRINE FALCON						
Amount of suitable habitat.	Sustain viable habitats.	Field surveys/suitable sites (nest, roost, etc.)	Variable by species.	85/85	Any potential impact on occupied or potential habitat.	
Populations	Meet recovery plans where completed.	Field surveys/numbers.	Variable by species.	85/85	5% decrease in local populations.	
AQUATIC SPECIES: LOECHE MINNOW, LITTLE COLORADO SPINDAGE, APACHE TROUT, SPIKEDAGE, RAZORBACK SUCKER						
Amount of suitable habitat	Sustain viable habitats	Field surveys/stream reach characteristics.	Every 3 years	85/85	If HCI (Habitat Condition Index) falls below 60%.	
Populations	Meet recovery plans where completed.	Field surveys/population numbers or mass.	Every 3 years	85/85	If populations fall below those viable population levels stated in the various recovery plans.	

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
SENSITIVE (Flora and Fauna) SPECIES (OTHER THAN GOSHAWK AND FOR WHICH WE HAVE SIGNIFICANT MONITORABLE DATA)						
TERRESTRIAL SPECIES						
Amount of suitable habitat and population trends.	Manage at appropriate levels to prevent listing as threatened or endangered species and implement MOUs, and survey report recommendations as available.	Field surveys/numbers, sites, acres, stream reaches.	Variable by species	75/75	10% decrease in local numbers, sites, acres, stream reaches.	
AQUATIC SPECIES: ROUNDTAIL CHUB, GILA CHUB						
Amount of suitable habitat and population trends.	Manage at appropriate levels to prevent listings as threatened or endangered.	Field surveys/stream reach characteristics.	Every 5 Years	75/75	If HCI falls below 60% or if population numbers fall by 20% or more between survey periods.	
D2 RANGE O&M						
Permitted use.	Check for term grazing permit and AMP compliance.	Annual Grazing Statistical Report/AUM's Forest-wide.	Annually	95/95	+10% or -20% or capacity.	

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>D2 RANGE O&amp;M (Continued)</b>						
Actual use.	Check compliance with term grazing permit, Allotment Management Plan (AMP), and Forest Plan.	Grazing actual use record, permittee reports, and actual range counts/AUM's Forest-wide.	Annually	85/80	+10% or Permitted Use levels.	
Capacity	Determine sustained livestock stocking levels.	Production and utilization surveys, range inspections/AUM's Forest-wide/T.E.S.	5 -15 year intervals. Depending on terms of specific AMPs.	85/70	+15% of most recent Forest-wide studies.	
Range condition and trend, and transitory range.	Identify changes in range condition & trend, recommend & changes in management, and determine shifts away from grass aspect due to overstory.	Range analysis; transect data, photo plots, and inspection records/acres.	10 year intervals.	75/60	+10% change in unsatisfactory range acres over previous study.	
Allotment Management Plan status.	Determine if permittee is in compliance, and if AMP reflects current needs of resource.	Actual use, permitted use, capacity records, range analysis, production & utilization studies, & allotment inspections/Plan/T.E.S.	Yearly to once every 10 years per allotment.	95/95	30% of the AMP's expire, or do not reflect current status of allotment's resources.	



Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>D3 RANGE IMPROVEMENTS</b>						
Condition of structural improvements.	Identify those structures which must be reconstructed.	Range inspections, range analysis, permittee reports/structure.	50% of range structures per decade.	95/95	30% of range structures have reached their 50-year life span or have deteriorated to that condition sooner despite maintenance.	
Condition of nonstructural improvements.	Identify those vegetation improvements that require retreatment.	Range inspections, range analysis, production & utilization surveys, & permittee reports/acre.	Assess success within 2 years & evaluate every 5 years thereafter.	90/90	40% of range nonstructural improvements are deteriorating & undesirable plans are invading site, canopy cover is over 15%.	
P-J Acres treated in each type by method.	Track Forest Plan objectives.	Project reports.	Annually	75/75	25% change	
<b>E4 TIMBER REFORESTATION</b>						
Practices and assumptions.	Ensure that: Regeneration is obtained within 5 years after final harvest cut & scheduled planting is accomplished.	Annual Reforestation/TSI Needs Report, plantation survival surveys, silvicultural prescriptions, post-sale administrative review, Stand Data Base/Acres.	Annually (plantation survival surveys are 1 <sup>st</sup> , 3 <sup>rd</sup> , & 5 <sup>th</sup> growing seasons) or as scheduled.	95/90	If more than 15% of regeneration efforts fail after 5 years, ID Team evaluates.	

Table 14

Monitoring Plan					
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation
<b>E5 TIMBER STAND IMPROVEMENT</b>					
Timber stand improvement acres and assumptions.	Ensure that scheduled TSI projects are accomplished.	Silvicultural prescriptions, accomplishment reports, certified projects, Reforestation/TSI needs Report, Stand Data Base/Acres.	Annually	90/90	If cumulative deviation for 8 years falls 33% below planned program, ID Team evaluates.
<b>E8 TIMBER</b>					
Silvicultural assumptions and practices.	<p>Ensure that:</p> <ul style="list-style-type: none"> <li>- appropriate management is applied to retention &amp; partial retention zones &amp; riparian areas;</li> <li>- silvicultural prescriptions follow management area standards;</li> <li>- silvicultural prescriptions precede vegetative treatments;</li> <li>- silvicultural prescriptions are practical &amp; achieve desired results.</li> </ul> <p>■</p>	Silvicultural prescriptions, EA's, project reviews/stands.	Annually	90/90	15% or more of stands reviewed fail to meet LMP standards.
Timber Assumptions: Volume, productivity, class.	<p>Ensure that:</p> <ul style="list-style-type: none"> <li>- board foot/cubic foot ratios are correct;</li> <li>- volume/acre yield is correct.</li> </ul>	Sale review, EA's, cruise summaries, TMIS, compartment exams, stand data base. Use the same conversion ratios as used in Plan calculations/ As appropriate.	Annually	80/80	Planning values vary more than 15% from experienced values.

Table 14

Monitoring Plan

Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy /Precision	Variability that would initiate Re-evaluation
E8. TIMBER (Continued)					
Size of openings.	Ensure openings comply with size limits & are periodically evaluated for appropriateness.	EA's presale & administrative reviews, & post-sale reviews/project area.	Annually	90/90	Unacceptable results of an ID Team or administrative review.
Acres of harvest by method of harvest.	Ensure that areas are harvested as modeled for LMP so conditions at end of the plan period are as anticipated.	Stand File, STARS, Staff review of 5% of treatment projects/acres.	Annually	90/90	Planned treatment varies + 25% from schedule at 5-year intervals, ID Team evaluates.
Board feet of net sawtimber offered.	Measure output, assure timber offered does not exceed allowable sale quantity for 10-year period.	STARS (Sales Tracking & Reporting System).	Annually	90/90	The volume may vary by -30% to +20 annually but cannot go above the Allowable Sale Quantity for the decade average.
Cords of firewood offered.	Ensure that: - green firewood is made available; - potential firewood from timber sales & road building is made reasonably available to the general public before slash disposal.	Review annual total of firewood sale reports, firewood advertised but not sold, and free use/cords.	Annually	70/70	Firewood use increases by more than 10% per year; evaluated at 5 <sup>th</sup> year.
Regenerated yield projections.	Ensure that yield projections are correct.	Permanent plots in regenerated stands/MBF/acre and/or trees/acre.	First decade.	80/80	Less than 50% accomplishment of scheduled permanent plots.

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Re-evaluate at time of Plan revision.	Variability that would initiate Re-evaluation
<b>E8- TIMBER (Continued)</b>						
Re-evaluation of suitable and unsuitable timber lands.	Evaluate the accuracy of suitable timberlands classification, periodically reexamine lands identified as not suited for timber production to determine if they have become suitable & could be returned to timber production.	Review new or updated soil survey data, compartment exam, project, assessments, timber planning process/acre.	Cover entire Forest in 1 <sup>st</sup> decade (1/10 of Forest annually). Frequency is driven primarily by project analysis.		Re-evaluate at time of Plan revision.	
Roads	Monitor road densities by individual sale.	Ensure compliance with standards & guidelines.	Annually	90/85	+20% Annually.	
<b>F2/F3 SOIL &amp; WATER</b>						
Watershed condition of forest lands.	Meet Federal regulation, ensure that treatable Forest watersheds are in satisfactory condition by 2020, assure productivity of the land is maintained.	Standard Watershed Condition transects, range transects, ocular estimates, & professional judgments.	Update on 15 year frequency. ponderosa pine & higher.	90/90	10% decrease in ground cover in the Ponderosa Pine & higher elevation.	
			Transition Zone & lower.	80/80	5% decrease in ground cover in the transition zone & lower elevation as measured by transects.	

Table 14

Monitoring Plan					
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation
F2/F3 SOIL & WATER (Continued)					
Watershed/ Soils prescriptions.	Monitor projects to determine compliance with recommendations & suitability of water & soil quality standards are met. (Best Management Practice).	Review sawtimber sales and other ground distributing activities for compliance with Best Management Practice.	To be done as part of scheduled activity reviews.	N/A	Deviation from use of Best Management Practices or current standards and guidelines.
Riparian improvement projects.	Review riparian improvement projects for changes in ground cover, species composition, bank stability, adequacy of & compliance with recommendations.	1. Structures: inspections, professional judgment 2. Vegetation improvements: inspections, ocular estimates, professional judgment.	1. Semi-annually 1 <sup>st</sup> 2 years after installation, annually for next 4 years, every 5 years thereafter. 2. Annually for 1 <sup>st</sup> 5 year.	1 and 2	Recommendations or design not followed, or when project objectives have not been met.

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>F2/F3 SOIL &amp; WATER (Continued)</b>						
Riparian Ecological Status	To ensure that Forest riparian areas & wetlands (Mgt. Areas 3 & 11) are either in satisfactory ecological status or are trending towards the Desired Future Vegetation in a timely manner through tracking changes in riparian condition.	Standards & guidelines regarding Desired Future Vegetation will be developed following completion of the Level II Ecosystem Survey. The survey will be used to define current riparian status with respect to Desired Future Vegetation. Monitoring will be accomplished on representative sites established in the Level II survey and/or through permanent photo points.	Complete classification & inventory of Forest riparian areas by 1996. Monitoring frequency of selected sites is variable by priority & habitat conditions. Priority 1 – TES habitat – 2 years Priority 2 – Cold Water Fisheries – 5 years Priority 3 – Warm Water Fisheries – 5 Years Priority 4 – All other riparian areas – 10 years.	90/90	Deviation from direction in standards & guidelines to be developed and/or trends away from the Desired Future Vegetation.	
Road obliteration & road closure.	Ensure compliance with standards & guidelines concerning road densities. Forest Issue related.	Work accomplishment reports/miles of roads obliterated and miles of roads closed.	Annually (Report in years 3, 6, 9)	90/90	+25% of planned.	
<b>G1 MINERALS</b>						
Compliance with terms of Minerals Operating Plans.	Meet agency guidelines.	Field checks/plans.	Annually	90/90	Non-compliance.	

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>J3 SPECIAL USES</b>						
Special use permits.	Process and administer special use permits in accordance with standards guidelines.	Land uses report (FLUR) field inspections/permits.	Annually	80/80	When Forest is unable to meet minimum standards.	
Occupancy trespass.	Minimize Forest trespass problems.	New cases as identified during boundary maintenance.	Annually	80/80	Number of new cases exceeds cases resolved, resulting in net increase in total number of cases.	
<b>L3 ROADS</b>						
Arterial/collector, reconstruction.	Ensure compliance with identified needs for arterial/collector reconstruction. Forest Issue related.	Work accomplishment reports/miles.	Annually	95/95	+20% of planned.	
Road Maintenance	Ensure compliance with standards & guidelines concerning maintenance.	Work accomplishment reports/miles/maintenance level – Road Maintenance Monitoring Plan.	Annually	90/85	+20% of planned.	

Table 14

Monitoring Plan						
Items Monitored	Intent	Monitoring Method/Unit of Measure	Measuring Frequency	Percent Accuracy/Precision	Variability that would initiate Re-evaluation	
<b>P1 PROTECTION</b>						
Growth reduction & mortality caused by insect & disease infestations.	Ensure endemic & introduced infestations do not become epidemic. Reduce adverse effects of dwarf mistletoe.	Integrated Pest Management aerial observation by R. O. entomologists, compartment exam, project inspections & reviews/Acres, Forest-wide.	Annually	90/85	Introduction of new insect or disease or spread of an existing insect or disease beyond endemic levels. Dwarf mistletoe infections are not reduced where treatments have been applied.	
Wildfire acre PAR's, wildfire suppression effectiveness.	Ensure wildfire acres are within projected annual burned acres.	Reports/acres.	Annually	95/95	25% above projected average annual wildfire burned acres Forest-wide over a 5-year period by Fire Management Zone where acres are not specific to MA's.	
<ol style="list-style-type: none"> <li>1 - For T&amp;E species a drop of 10% was professionally deemed an acceptable threshold. An example of a 10% drop in habitat capability would be when the existing habitat capability drops from 80% to 72%.</li> <li>2 - A 10K block/diversity unit is used as an analysis area to ensure adequate distribution of T&amp;E and indicator species.</li> <li>3 - For indicator species a drop of 15% was professionally deemed an acceptable threshold.</li> <li>4 - Post activity inventory or analysis.</li> <li>5 - These items were deleted as there are not currently any monitoring methods available. Wetland monitoring is an integral part of the ecological status monitoring item.</li> <li>6 - This implies the availability of an updated stand data base.</li> <li>7 - Level II Ecosystem survey with wetland and riparian parameters.</li> </ol>						



# Glossary

Access – See Public access.

Acquisition of land – Obtaining full ownership rights by donation, purchase, exchange, or condemnation.

Acre-foot – A measurement of water volume. The volume of water that would cover 1 acre to a depth of 1 foot, equal to 43,560 cubic feet or 325,851 gallons.

Activity – Actions, measures, or treatments that are undertaken which directly or indirectly produce, enhance, or maintain forest and rangeland outputs or achieve administrative or environmental objectives.

Administrative Site – A site which primarily exists for general administrative purposes. It normally will include office, warehouse, outside storage, and parking areas. It may include housing and pasture for livestock. A work center may be part of an administrative headquarters site.

Aesthetics – Pertaining to the quality of human perception of natural beauty (including sight, sound, smell, touch, taste, and movement).

Affected environment – The natural and physical environment, and the relationship of people to that environment, that will or may be changed by actions proposed.

Afforestation – The establishment of tree cover on an area where trees have not grown previously.

Age Class – Interval of years, commonly 20, into which trees are grouped for management.  
Example: 1-20 years, 21-40 years.

Airshed – The air encompassing a specific geographic region.

Allocation – The assignment of a land area to a particular use or uses, to achieve management goals and objectives.

Allocation model – See Resource allocation model.

Allotment – See Range Allotment.

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”.

Alternative – The Forest planning, a mix of management prescriptions applied in specific locations to achieve a desired management emphasis as expressed in goals and objectives.

Amenity – The pleasurable, educational, or aesthetic features of the land or resources.

Analysis area – The basic land unit of analysis which is used to allocate and schedule management prescriptions. Each analysis area is considered to be homogeneous in terms of input requirements and output response to management practices. Composed of capability areas or portions of capability areas with similar physical attributes, management costs, and resource yields.

Analysis of the management situation – A determination of the ability of the planning area to supply goods and services. A phase of the planning process.

Animal unit month – The quantity of forage required by one mature cow (1,000 pounds), or the equivalent for one month.

Arterial roads – Roads which service large areas and usually connect with public highways or other Forest arterial roads, to form an integrated network of primary travel routes. The location and standard are determined by a demand for maximum mobility and travel efficiency rather than by a specific resource management service. Usually they are developed and operated for long-term land and resource management purposes, and constant service.

Artifact – An object that has been modified, used, or constructed by man. Stone tools, pottery, buildings, roads, and mines are examples of artifacts.

AUM – See Animal unit month.

Available and suitable – See Available lands and Suitable lands.

Available lands – Those portions of the Forest not administratively excluded from use for timber harvest or livestock grazing.

Backlog – Resource jobs needing completion as directed by the deadlines in the Resource Planning Act (RPA). Includes reforestation, thinning, and land line location.

Backlog reforestation – Areas needing re-establishment of tree cover due to failure of natural regeneration as a result of site conditions or lack of seed trees.

Backlog thinning – Those areas that had not previously been thinned and were in need of a pre-commercial thinning as of 1965.

Bankhead-Jones Farm Tenant Act – Authorizes the Secretary of Agriculture to develop a program of land conservation and utilization in order to correct maladjustments in land use, and to assist in controlling soil erosion; promoting reforestation; preserving natural resources; protecting fish and wildlife; developing and protecting recreation facilities; mitigating floods; preventing impairment of dams and reservoirs; conserving surface and sub-surface moisture; protecting the watershed of navigable streams, and protecting the public's health, safety, and welfare.

Basal area – A measurement of how much of a site is occupied by trees. It is determined by measuring the square feet of the diameter of all the trees in an area at breast height (4.5 feet).

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 is not greater than the long-term sustained yield capacity.

Benefit-cost analysis – An analytical approach to solving problems of choice. Benefit-cost analysis identifies for each objective, that alternative which yields the greatest benefit for a given cost, or that alternative which produces the required level of benefits for the lowest cost.

Benefit-cost ratio – An economic indicator of efficiency, computed by dividing benefits by cost.

Best management practice – Application of the best available demonstrated control technology, process, measures, and operating methods that are socially, economically and technically feasible for controlling soil loss or improving water quality.

Big game – Those species of mammals normally managed as a sport hunting resource, e.g., deer, turkey, elk, bear, etc. Big game is classified by the Arizona Game and Fish Commission.

Big game winter range – The area available to, and used by big game through the winter season.

Biological Condition Index – An evaluation technique using Macroinvertebrates as biological indicators, to monitor effects of management activities, for detecting positive or negative trends in habitat quality, and to measure the success of action plan implementation.

Biological growth-potential – The average net growth attainable in a fully stocked natural forest.

BLM – Bureau of Land Management, U.S. Department of the Interior.

Board foot – The amount of wood in an unfinished board 1” thick, 12” long, and 12” wide.

Browse – That part of the current leaf and twig growth of shrubs, woody vines, and trees available for animal consumption.

Calving areas (elk) – The areas, usually on spring range, where elk cows give birth to calves and tend them during their first few days or weeks.

Candidate Species – See Threatened and endangered species.

Canopy – The more or less continuous cover of branches and foliage formed by the crowns of trees and other woody growth.

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 a given level of management intensity. Capability depends upon 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.

Capability area – A contiguous unit of land having similar geological, climatic and resource characteristics. Responses to treatment are expected to be relatively the same throughout the unit, as well as having similar treatment costs.

Carrying capacity (range or wildlife) – The maximum stocking rate possible without inducing damage to vegetation or related resources. It may vary from year to year due to changes in climatic conditions on the same area causing fluctuating forage production.

Cavity nesters – Wildlife species that utilize tree cavities. Primary cavity nesters excavate their own hole. Secondary cavity nesters use natural cavities or cavities created by primary cavity nesters.

CEQ – See Council on Environmental Quality.

CFR – Code of Federal Regulations.

Clearcut – Removal of all standing trees over a given area of land in a single cut. Clearcut areas may occur in large or small blocks, patches, or strips.

Clearcut harvest – Silvicultural system used to harvest mature trees at rotation age in one cut, for the purpose of regenerating a new even-aged stand.

Climax – The culminating stage in plant succession for a given site, where the vegetation has reached a highly stable condition.

Closure – An administrative order restricting either the location, timing, or type of use in a specific area.

CMAI – See Culmination of mean annual increment.

Cold-water fishery – Stream and lake waters which support predominately cold-water species of game or food fishes (e.g., trout, salmon), which have maximum sustained water temperature tolerances of about 70° F in the summer.

Collector roads – Roads which serve smaller land areas and are usually connected to a Forest arterial road or public highway. They collect traffic from forest local roads or terminal facilities. The location and standard are influenced by both long-term multi-resource service needs and travel efficiency. Forest collector roads are operated for constant service.

Commercial Forest – Forest land capable of producing merchantable timber, currently or prospectively accessible, and not withdrawn from such use. Excludes pinyon-juniper woodlands.

Commercial thinning – Thinning in tree stands with diameters greater than 5”, for which there is a market value for pulpwood and/or small saw logs.

Commodity – Tangible or physical output, such as timber, livestock, minerals, water, etc., synonymous with RPA’s “Market”.

Common variety minerals – See Minerals, common variety.

Concern – See Management concern.

Consumptive use – A use of resources that reduces the supply – such as logging and mining.  
(See also Non-consumptive use).

Contiguous analysis area – An analysis area confined within a single geographic area that is associated with a single issue, problem, or management concern.

Controlled burn – A deliberate application of fire to an area where control is exercised.  
(See prescribed fire).

Cord – A unit of volume measurement containing 128 cubic feet of solid wood. Generally, a stack of round or split wood measuring 4 foot wide, by 4 feet high, by 8 feet long.

Corridor – A linear strip of land identified for the present or future location of transportation or utility right-of-way.

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.

Council on Environmental Quality – An advisory council to the President, established by the National Environmental Policy Act of 1969. It reviews federal programs for their effect on the environment, conducts environmental studies, and advises the President on environmental matters.

Cover/Forage Ratio – The ratio of area of cover usually confers to foraging areas, natural openings, and clearcuts.

Cover, hiding – Vegetation capable of hiding 90% of a standing adult deer or elk from the view of a hunter, at a distance equal to or less than 200 feet.

Cover, thermal – cover used by animals to ameliorate effects of weather. Elk – A stand of coniferous trees, 30-60 acres, 40 feet or more tall with an average crown closure of 70% or more. Deer – Cover may include saplings, shrubs, or trees at least 5 feet tall, with 75% crown closure, in stands 2-5 acres in size.

Criteria – Predetermined factors from comparing alternatives to facilitate and expedite the decision making process. “Critical” is a formal designation.

Critical habitat – That portion of a wild animal’s habitat that is critical for the continued survival of the species.

Cubic foot – In timber management, a volume measured as a 1 foot cube of solid wood.

Culmination of mean annual increment (CMAI) – Point in time in the age of a forest stand in which the mean annual growth increment no longer increases.

Cultural resources – The physical remains (artifacts, ruins, burial mounds, petroglyphs, etc.), which represent former human cultures.

Culture – The complex whole which includes knowledge, beliefs, art, morals, customs, and any other capabilities and habitats peculiar to a society.

Cunit – Equivalent to 100 cubic feet of solid wood.

Current direction – The program level currently being used to implement the 1980 RPA program.

Cutting cycle – The planned, recurring period of time between successive cuttings or harvests in a stand of trees.

DBH – Diameter at Breast Height. Diameter of a tree approximately 4½ feet above the ground.

Decision unit – The smallest component of an alternative for which relevant inputs (costs) and outputs (benefits) are analyzed. A general term that applies to analyses at any level. Decision units may be grouped for decision making into aggregates called decision variables.

Decision variable – A component of an alternative in which input costs, outputs, and benefits are identified and used for analysis and decision making.

Demand – The quantity of a good or service called for by society at a given price.

Demonstrated Favorable – A geologic environment that has yielded in the past, or is currently yielding, mineral production in a regional context.

Departure – Timber harvest schedule which deviates from the principle of non-declining even flow by exhibiting a planned decrease in the timber sale and harvest schedule in the future. A departure is characterized as a temporary increase over the base sale schedule without impairing the Forest’s long-term sustained-yield.

Developed recreation – Use of a developed recreation site.

Developed recreation (private) – Use of a developed recreation site on National Forest System Lands where facilities were built, and are maintained by the private sector.

Developed recreation site – A distinctly defined area where facilities are provided by the Forest Service for concentrated public use, e.g., campgrounds, picnic areas, swimming areas.

Direction – See Management direction.

Discount rate – The interest rate used in plan formulation and evaluation for discounting future benefits and costs, or otherwise converting benefits and costs to a common time basis.

Dispersed recreation – Recreation used which occurs outside developed sites.

District – See Ranger district.

Diversity – “The distribution and abundance of different plant and animal communities and species within the areas covered by a land and resource management plan”. (36 CFR 219.3)

Diversity Unit – An area of approximately 10,000 acres delineated on maps in which diversity standards will be implemented.

DRC – Diameter at Root Collar.

Ecosystem – The system formed by the interaction of a group of organisms and their environment.

Edge – The place where plant communities meet or where successional stages or vegetative conditions within plant communities come together. It often contains organisms from both communities as well as those restricted to the interface area. The number of species present is sometimes greater than the surrounding communities.

Effects – Results expected to be achieved from implementation of the alternatives relative to physical, biological, and social (cultural and economic) factors. Examples of effects are tones of sediment, pounds of forage, person-years of employment, income, etc. There are direct effects, indirect effects, and cumulative effects.

Endangered species – A species which is in danger of extinction throughout all or a significant portion of its range – other than members of the class Insecta – and which have been designated under the provisions of the Endangered Species Act of 1973.

Endemic organism – A taxonomic category, (e.g., genus, species, variety) whose natural occurrence is confined to a certain region, and whose distribution is relatively limited.

Environment – All the conditions, circumstances, and influences surrounding and affecting the development of an organism or group of organisms.

Environmental assessment – A document which displays a comparison of the effects of a proposed project and alternatives to it on the environment.

Environmental setting – See Management situation.

Erosion – (1) The wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep. (2) Detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

Erosion, natural – Wearing away of the earth’s surface by natural agents under natural environmental conditions of climate, vegetation, etc., undisturbed by man. Also called geologic erosion.

Even-aged management – The application of a combination of actions that result 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 size) throughout the forest area. The difference in age between trees forming the main canopy level of a stand usually does not exceed 20% 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.

Even-flow – Maintaining a relatively constant supply of timber from decade to decade.

Experience levels – The range of opportunities for satisfying basic recreation needs of people. A scale of 5 experience levels ranging from “primitive” to “modern” is defined in the National Forest System

Extensive Grazing– Season-long use of rangelands, with distribution of livestock occurring through riding, salting, etc. This is similar to Level C.

Fawning Areas – The areas , usually on spring ranges, where deer give birth to fawns, and tend them for a few days or weeks.

Feasibility – The relative advantage of managing or improving a land unit, considering its capability and suitability for specific use under the existing or projected socioeconomic climate.

Fisheries habitat – Streams, lakes, and reservoirs that support fish.

Floodplain – The portion of a stream valley, adjacent to the channel which is covered with water when the stream overflows its banks at flood stages.

Forage – All browse and non-woody plants that are available to livestock or game animals for grazing or harvesting for feeding. The weight may be expressed as either, green, air dry, or oven dry. The term may also be modified as to time of production such as annual, current year, or seasonal forage production.

Forest land – Land at least 10% occupied by forest trees of any size, or formerly having had such tree cover and not currently developed for non-forest use. Lands developed for non-Forest use include areas for crops, improved pastures, residential or administrative areas, improved roads of any width and adjoining clearings, and powerline clearings of any width.

Forest standard – A performance criterion indicating acceptable norms or specifications that actions must meet to maintain the minimum conditions for a particular resource. This type of standard applies to all areas of the Forest regardless of the other management area direction applied.

Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) – An Act requiring the preparation of a program for the management of the National Forests’ renewable resources and of land and resource management plans for units of the National Forest System. It also requires a continuing inventory of all forest and rangelands, and renewable resources nation-wide.

Forest development roads – Roads that are part of the Forest transportation system, which includes all existing and planned roads, as well as other special and terminal facilities designated as Forest development transportation facilities.

Forest Plan – See National forest land and resource management plan.

Forest Supervisor – The official responsible for administering the National Forest System lands in a Forest Service administrative unit. He/she reports to the Regional Forester.

FREM – Acres of Final Removal.

Fuelbreak – Any natural or constructed barrier used to segregate, stop, and control the spread of fire or to provide a control line from which to work.

Fuels – Anything within the Forest that will burn. Usually live and dead woody vegetation, e.g., grass, shrubs, trees.

Fuel treatment – The rearrangement or disposal of fuels to reduce the fire hazard. Fuels are defined as both living and dead vegetative materials consumable by fire.

Full capacity range – Rangelands that are accessible to livestock, produce forage, or have inherent forage producing capabilities, are stable because of effective ground cover, and can be grazed on a sustained yield basis under reasonable management goals.

Game species – Any species of wildlife or fish normally harvested by hunters, trappers, and fishermen under State or Federal laws.

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 principal basis from which objectives are developed.

Goods and services – The various outputs, including on-site uses, produced from forest and rangeland resources.

Grass/forb – an early forest successional stage where grasses and forbs are the dominant vegetation.

Grazing – Consumption of range or pasture forage by animals.

Grazing allotment – See Range allotment.

Grazing capacity – The maximum stocking rate possible without inducing damage to vegetation or related resources.

Grazing permittee – an individual who has been granted written permission to graze for a specific period on a range allotment.

Grazing season – 1. A period of grazing to obtain optimum use of the forage resource. 2. On public lands, an established period for which grazing permits are issued.

Ground water – Water in a saturated zone of a geologic system

Growing Stock Level (GSL) – Growing Stock Level and Basal Area are equal and the same, when the average D.B.H. of a stand of trees is 10” or greater. In stands of trees smaller than 10” D.B.H., G.S.L. is the term used to determine the number of trees needed to achieve the stated basal area of the stand, when the average stand D.B.H. has grown to 10”. The number of trees stated for a given G.S.L. is based on the assumption that periodic thinnings will be made during the time that it takes for the stand to grow to an average D.B.H. of 10”.

Guideline – An indication or outline of policy or conduct.

Habitat – The natural environment of a plant or animal. The locality where the organism may generally be found, and where all essentials for its development and existence are present. Habitats are described by their geographical boundaries, or with such terms as “shady woodlands”, “banks of streams”, “dry hillsides”, etc.

Habitat Capability Index – An index with a range from zero to one, with one being the optimum. The index displays the percent of acres in an area meeting selected wildlife species habitat requirements for feeding and cover.

Habitat Capability Model – A computer model used to evaluate the capability of an area to support selected wildlife species. The model evaluates the mix and proportion of structural stages in different vegetation types, and determines a habitat capability index.

Habitat diversity – See Wildlife habitat diversity.

Habitat Effectiveness – The freedom from human disturbance of wildlife.

Harvest cut – The removal of a stand of trees as a final cut in even-aged management, or the removal of mature trees in uneven-aged management. Regeneration encouragement is emphasized.



Herbage – Herbs taken collectively, usually used in the same sense as forage, except that it may include material not palatable to grazing or browsing animals.

Hiding Cover – Vegetation capable of hiding a deer or elk from human view at a distance of 200 feet or less.

High power electronic site – Usually an FM radio or TV broadcasting facility. Actually any electronic use producing an output of 1,000 watts (effective radiation power).

Horizontal structure – consists of single age and size classes by stands.

Hydrologic Function – The ability of watershed to sustain favorable conditions of stream flow. Favorable conditions of stream flow are measured in terms of water quality, quantity, and timing.

Improvement – Manmade developments such as roads, trails, fences, stock tanks, pipelines, power and telephone lines, survey monuments, and ditches.

Indicator species – A wildlife species whose presence in a certain location or situation at a given population level, indicates a particular environmental condition. Population changes are believed to indicate effects of management activities on a number of other wildlife species.

Input/output analysis – A systematic technique for qualitatively analyzing the interdependence of producing and consuming units in an economy. It studies the interrelationship between products offered in the market place. It is a useful tool for separating the component parts of an economy to determine the influence of each on the other for short run forecasting and policy guidance.

Intermediate development level – A level of modification for developed recreation sites. Modification is moderate, equally protecting both site and users. Generally, facilities are made of native materials, and vehicle traffic controls are inconspicuous. Roads may be hard surfaced and trails formalized. Development density is about three family units per acre. Forest environment is essentially natural.

Instream flows – Flows needed to meet seasonal stream flow requirements for maintaining aquatic ecosystems, visual quality, and recreational opportunities at an acceptable level.

Intensive Grazing – Grazing management that controls distribution of cattle and duration of use on the range, usually by fences, so parts of the range are rested during the growing season.

Intermittent stream – A stream which flows only 50% to 90% of the year, when it receives water from some surface source such as melting snow.

Interpretive services – Information services designed to present inspirational, educational, and recreational values to Forest visitors, to provide the utmost in understanding, appreciation and enjoyment from their Forest experience.

Irretrievable resource commitment – Allocation decision causing loss of production or use of a renewable resource.

Irreversible resource commitment – Allocation decision affecting nonrenewable resources, soils, minerals, and cultural resources – causing permanent loss of these resources.

Issue – See Public issue.

Key Area – Areas of land or water that the responsible official and resource specialist determine to be important to wildlife or fish productivity. Other uses in key areas could result in negative effects to the wildlife or fish. For example, timber sale activity in an elk calving area could disturb the elk and cause calving failures.

Land exchange – The conveyance of non-Federal land or interest in the land to the United States, in exchange for National Forest System land or interest in the land.

Land line location – Location of Forest property boundaries.

Less than standard (LSTD) – In reference to recreation management. Management level is below established standards and practices.

Lifestyle – A characteristic way of living which may be individual variant within the cultural mainstream, or may be an individual expression of a subculture. “Lifestyles” are generally expressed through the means of economic sustenance, dwelling site and type, group associations, and social practices such as family form, religious practices, sexual mores, style of dress, and type of diet.

Linear programming – A mathematical method used to determine the most effective allocation of limited resources between competing demands, when both the objective (e.g., profit or cost) and the restrictions of its attainment are expressible as a system of linear equalities or inequalities (e.g.,  $y = a + bx$ ).

Livestock grazing Management levels –

Level A (no grazing) – Management excludes livestock to protect other values or eliminated conflict with other uses.

Level B (low investment) – Management objective is control livestock numbers within present grazing capacity. Improvements and/or management systems are inadequate to fully utilize the range resource. Use is generally continuous.

Level C (extensive) – Management seeks full utilization of forage allocated to livestock. Cost effective management systems and techniques, including fencing and water developments, are designed to obtain relatively uniform livestock distribution and use of forage, and to maintain plant vigor.

Level D (intensive) – Management seeks to optimize production and utilization of forage allocated to livestock within the constraints of multiple use. Cost effective methods for achieving improved forage supplies, and uniform livestock distribution and forage use. Cultural practices may be combined with fencing and water developments to implement complex grazing systems.

Level E (maximum livestock production) – Management seeks to maximize livestock production while maintaining basic soil and water values. Cost effective management systems and techniques are used to achieve this goal, may involve conversion of forest. It includes administrative pastures or other specifically seeded areas under intensive management.

Local roads – Local roads are usually one-lane roads constructed to serve a dominant use or resource. Local roads do not access large land areas since they are more site specific than arterial and collector roads.

Locatable minerals – See Minerals, locatable.

Long-term effects – Those effects which will be significant beyond the RPA planning horizon of 50 years.

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.

M – Thousand.

MM – Million.

Management area standard and guidelines – Management practices selected and scheduled for application in a specific area to attain multiple use and other goals and objectives.

Management concern – An issue, problem, or a condition which 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.

Management emphasis – A reflection of allocation choices for an analysis area. Management emphasis, as used in FORPLAN, is a 6-letter identifier used to describe (name) a prescription in FORPLAN.

Management indicator species – See Indicator species.

Management intensity – a management practice or combination of management practices and associated costs designed to obtain different levels of goods and service.

Management opportunity – A statement of general actions, measures, or treatments that address a public issue or management concern in a favorable way.

Management practice – a specific activity, measure, course of action, or treatment.

Management prescription – Management practices and intensity selected and scheduled for application on a specific area, to attain multiple use and other goals and objectives.

Management situation – A comprehensive statement of planning area resources, its history, past and present uses, and a review of the public's concerns with the area.

Mature sawtimber – Trees that have attained full development, and the growth rate has leveled off.

Maximum potential – The maximum potential output level that can be attained.

Mean annual increment of growth – The total increase in girth, diameter, basal area, height, or volume of individual trees or a stand up to a given age, divided by that age.

Mineral activity –

Production: The activity of obtaining and transporting a commercial yield from a mine, plant, quarry, or well. Activities include transportation over established roads, maintenance of structures, and extraction of mineral at a well defined location.

Development: The work performed to open up a proven deposit to prepare it for commercial exploitation. It may include surface and underground excavation around ore blocks, permanent access road construction, construction of on-site support facilities, and land acquisition.

Exploration: The work performed to determine the size, shape, character, and value of a deposit. This work may include geochemical and geophysical surveys, drilling, surface and underground excavations, bulk sampling, and multiple temporary access road construction.

Prospecting: The search for untested, undiscovered mineral deposits. The search usually involves casual use methods including surface mapping and sampling and reconnaissance surveys over existing roads and trails, but may include some pitting and trenching of mineral showings.

None: No form of mineral activity is anticipated.

Can't Predict: The mineral situation is too unknown or too changeable for forecasting of future activities.

Mineral entry – Filing a mining claim on public land to obtain the right to any minerals it may contain.

Mineral favorability – Demonstrated favorable: A geologic environment that has yielded in the past, or is currently yielding mineral production in a regional context.

Theoretically favorable: Geologic conditions are similar to those of a producing area or may be inferred similar through indirect evidence.

Non-applicable: The geologic conditions for estimating favorability are uncertain, but mineral occurrence cannot be precluded.

Unfavorable: The geologic environment has been proven by direct evidence to be unfavorable for mineral occurrence.

Insufficient geologic information: Knowledge of the geologic environment is absent or severely lacking.

Mineral withdrawal – Public lands withdrawn from mineral entry under the General Mining Laws and the mineral leasing laws. Lands withdrawn usually have unique features which are highly valued by the public or are needed for administrative purposes.

Minerals, common variety – Deposits which – although they may have value for use in trade, manufacture, the sciences, or in the mechanical or ornamental arts – do not possess a distinct, special economic value. May include sand, stone, gravel, pumicite, cinders, pumice (except that occurring in pieces of 2" on a side), clay, and petrified wood.

Minerals, leasable – Coal, oil, gas, phosphate, sodium, potassium, oil shale, and geothermal steam.

Minerals, locatable – Those hard rock minerals which are mined and processed for the recovery of metals. May include certain nonmetallic minerals and uncommon varieties of mineral materials, such as valuable and distinctive deposits of limestone or silica. May include any solid, natural inorganic substance occurring in the crust of the earth, except for the common varieties of mineral materials and leasable materials.

Mining claim – That portion of the public estate held for mining purposes in which the right of exclusive possession of locatable mineral deposits is vested in the locator of a deposit.

Mining claim, patented – A mining claim to which a patent has been secured from the Government by compliance with the laws relating to such claims.

Mining patent – The patent is a legal document which conveys the title to the ground (i.e., ownership) to the claim's owner.

Mixed Conifer Forest – Forested sites in the *Pseudotsuga menziesii*, *Abies concolor*, *Picea pungens*, *Pinus strobiformis* and *Pinus flexilis* series and included habitat types except for those sites where 80% or more of the existing dominant and co-dominant trees are species other than *Pseudotsuga menziesii*, *Abies concolor*, *Picea pungens*, *Pinus strobiformis* and *Pinus flexilis*. Also included are forested sites in the *Pinus aristata*, *Picea engelmannii*, and *Abies lasiocarpa* series where *Pinus aristata*, *Picea engelmannii*, and *Abies lasiocarpa* are not a plurality of the basal area. Excluded are sites with mixed species but where *Populus tremuloides* makes up 50% or more of the basal area.

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 and related services over areas large enough to provide sufficient latitude for periodic adjustments in 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.

National Environmental Policy Act (NEPA) – An Act declaring a National policy to encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and the biosphere, and stimulate the health and welfare of man, to enrich the understanding of the ecological systems and natural resources important to the Nation, and to establish a Council on Environmental Quality.

National Forest Land and Resource Management Plan – A plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all resource management activities, and establishes management standards and guidelines for the National Forest System lands of a given National Forest.

National Forest Management Act (NFMA) – A law passed in 1976 that amends the Forest and Rangeland Renewable Resources Planning Act, and requires preparation of Forest plans.

National Recreation Trails – Trails specifically designated by the Secretary of the Interior or the Secretary of Agriculture, as part of the national system of trails authorized by the National Trails System Act. National Recreation Trails provide a variety of outdoor recreation uses in or reasonably accessible to urban areas. Not all recreation trails are so recognized.

National Register of Historic Places – A list (maintained by the National Park Service) of areas which have been designated as being of historical significance. The Register includes places of local and state significance, as well as those of value to the Nation.

National Wild and Scenic River System – Rivers with outstanding scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values designated by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition.

National Wilderness Preservation System – Pristine federal lands designated by the Wilderness Act of 1964 and subsequent wilderness legislation. Generally, these lands are untouched by “works of man”.

Natural prescribed fire – See Wildland fire use.

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.

No action alternative – The most likely condition expected to exist in the future if current management directions would continue unchanged.

Non-consumptive use – Use of a resource that does not reduce the supply, such as many types of recreation. (See also Consumptive use).

Noncontiguous analysis area – An analysis area consisting of many parcels of biologically homogeneous land scattered throughout the Forest.

Non-declining even flow or yield – Refers to a harvest schedule in which the harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade of planning period.

Non-game wildlife – Species of animals which are not managed as sport hunting or fishing resource.

Non-point source pollution – The Environmental Protection Agency defines non-point source pollution in terms of activities rather than specific conveyances. Non-point sources of pollution are the result of activities which are initiated or caused by natural processes, including precipitation, drainage, seepage, percolation, and runoff; or is not traceable to a discrete or identifiable facility. The term silvicultural non-point sources include activities inherent to forest management, which accelerate the effects of natural processes. Such activities include nursery operations, site preparation, reforestation and subsequent culture, thinning, prescribed burning, pest and fire control, harvesting operations, and the construction and maintenance of roads and other transportation systems associated with these activities.

Non-structural range improvement – Practices and treatments undertaken to improve range not involving construction of improvements.

Objective – A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken, and the resources to be used in achieving identified goals.

Occupancy trespass – The illegal occupation or possession of National forest land or property.

Old growth – The final successional stage of a stand of trees, characterized by a high degree of decadence, because of declining health and vigor.

Ponderosa Pine – Stand size of between 100 to 300 acres and 5 chains or greater in width or grouping of stands in close proximity to provide contiguous habitat for interior dwelling species. Give priority to managing for old growth stands adjacent to lakes and streams in potential Osprey nesting and Bald Eagle wintering sites.

- At least 14 trees/acre of 20” D.B.H. or greater on sites >54 (Minor). At least 14 trees/acre of 14” D.B.H. or greater on sites <54 (Minor).
- At least two-storied stands with approximately 60 BA in the understory.
- At least an intermediate class with a GSI or BA of 80 and trees greater than 10” D.B.H.
- At least 180 snags/100 acres >14” D.B.H. and 15 feet tall.
- At least two trees/acres of down woody materials 12” or greater in diameter and 16 feet long. Fuel treatment is not to be applied until 12 tons/acre is exceeded.

Mixed Conifer (Douglas Fir and White Fir) – Stand size of between 100 and 300 acres and 5 chains or greater in width or grouping of stands in close proximity to provide contiguous habitat for interior dwelling species.

Manage stands to achieve:

- At least 16 trees/acre of 16” D.B.H. or greater.
- At least two-storied stands with 100 BA in understory.
- At least an intermediate class with a GSI or BA of 120 and trees greater than 8” D.B.H.
- At least 300 snags/100 acres of 20” D.B.H. and 15 feet tall.

- At least 4 trees/acre of down woody materials 12" or greater in diameter and 16 feet long. Fuel treatment is not to be applied until 20 tons/acre is exceeded.

Pinyon-Juniper – Stand size of between 100-300 acres and 5 chains greater in width or grouping of stands in close proximity to provide contiguous habitat for interior dwelling species.

Manage stands to achieve:

- At least 3,000 trees/100 acres of 9" diameter root collar.
- At least 100 snags/100 acres  $\geq 9$ " diameter root collar and 10 feet or greater in height.
- At least two trees/acre of down woody material 9" in diameter or greater and 10 feet long.

Onsite soil loss – The movement of soil from the point at which it was formed to another location.

Opportunity – See Management opportunity.

ORV – Off-Road Vehicle. This includes all mechanical means of transportation; passenger cars, 4-wheel drive pickups, trail bikes, snowmobiles or other ground transportation vehicles that are capable of traveling overland where no roads exist.

ORV closure – An administrative order closing a land area to specified types of off-road vehicle travel yearlong.

ORV restriction – An administrative order closing a land area to specified types of off-road vehicle travel during specific seasons or conditions.

Outputs – The goods, services, and products which are measurable and capable of being used to determine the effectiveness of programs and activities in meeting objectives. Also goods, end products, or services that are purchased, consumed, or utilized directly by people. A broad term for describing any result, product, or service that a process or activity actually produces.

Overstory – That portion of the trees in a forest of more than one story, forming the uppermost canopy layer.

Overstory modification – Removal of 80% or more of the overstory to increase production of grass and browse for utilization by livestock and wildlife.

Particulates – Small particles which are suspended in the air, and generally are considered pollutants.

Patented land – Public lands conveyed to private ownership most commonly by homestead, mining, or land exchange laws.

People at one time (PACT) – The number of people that can use a recreation opportunity at any one time without substantially diminishing the quality of the experience sought after.

Permitted grazing – Use of a National Forest range allotment under the terms of a grazing permit.

Personal use – Normally used to describe the type of permit issued for removal of wood products (firewood, posts, poles, and Christmas trees) from National Forest land when the product is for home use and not to be resold for profit.

Pesticide – any organic or inorganic preparation used to control populations of injurious organisms, plant or animal.

Pine-Oak Forest – All forested sites in the Pinus Leiophylla series. Forested sites within the Upper Gila and Colorado Plateau Recovery Units in the Pinus Ponderosa series with Pinus Ponderosa/Quercus Gambelii habitat

types where a plurality of the basal area exists in ponderosa pine and at least 10% or 10 square feet of the basal area is made up of *Quercus Gambelii* greater than 5” in diameter at the root collar. Forested sites in the Basin and Range West Recovery Unit where a plurality of the basal area is in yellow pines (Ponderosa, Arizona, Apache, or Chihuahua) and at least 10% or 10 square feet of basal area is made up of any oak species greater than 5” in diameter at the root collar.

Planning area – The area covered by a Forest Plan.

Planning Criteria – Standards, tests, rules, and guidelines by which the planning process is conducted, and upon which judgments and decisions are based.

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 which would influence the planning decisions.

Planning period – Generally one decade. The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

Planning records – a system that records decisions and activities that result from the process of developing a forest plan, revision, or significant amendment.

Point source pollution – Silvicultural point source pollution is defined to be those forestry related activities in which any discernible, confined, and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities from which pollutants are discharged into the waters of the United States.

Potential natural vegetation – Vegetation that would exist today if man were removed from the scene, and if resulting plant succession were telescoped into a single moment.

Practice – See Management practice.

Pre-commercial thinning – Thinning trees with diameters under 5” where material thinned does not have market value. Cutting of trees with an objective of removing the least desirable trees, and improving the spacing of remaining trees to accelerate growth.

Preferred alternative – The alternative recommended for implementation as the Forest Plan, based on the evaluation completed in the planning process. (See Proposed Action.)

Plant Phenology – The study of periodic biological plant phenomena, such as flowering or seed development. Certain plant phonological stages are useful in determining when rangelands are ready for grazing.

Riparian Area Dependent Resources – These are wildlife and fish habitat and watershed condition; and visual and water quality.

Satisfactory riparian condition - This means being in a condition where stream banks are stabilized, head cutting is not evident, riparian vegetation is present and increasing in density and vitality, Areas that do not approximate satisfactory riparian condition will be classified as being unsatisfactory riparian condition. Recovering areas will be classified as unsatisfactory riparian condition until riparian recovery objectives are met.

Preparatory cut – Removal of mature trees near the rotation age in a shelterwood harvest for the purpose of opening the canopy, to encourage development of cone bearing crowns for seed production on the remaining trees.



Prescribed fire – The intentional application of fire to wildland fuels under such conditions as to allow the fire to be confined to a predetermined area, fire severity, and rate of spread as required to obtain planned resource objectives.

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.

Present value of benefits (PVB) – the value of future benefits discounted to the present.

Present value of costs (PVC) – The value of future costs discounted to the present.

Primitive area – An area formally designated as such until it is added to the National Wilderness Preservation System by Congressional action, or similarly removed from primitive status. Managed in accordance with policies and procedures established for areas within the National Wilderness Preservation System.

Primitive roads – Roads constructed with no regard for grade control or designed drainage, sometimes by merely repeated driving over an area. These roads are single lane, usually with native surfacing, and sometimes passable with 4-wheel drive vehicles only, especially in wet weather.

Productivity – See Site productivity.

Proper Use – A degree of use of current year growth which, if continued, will achieve management objectives and maintain or improve the long-term productivity of the site. Proper use varies with time and system of grazing.

Proposed action – Specified in the National Environmental Policy Act as the project, activity, or decision that a Federal agency intends to implement or undertake, which is the subject of an environmental impact statement.

Public access – Usually refers to a road or trail route over which a public agency claims a right-of-way available for public use.

Public issue – a subject or question of widespread public interest relating to the management of National Forest System.

Range allotment – A designated area available for livestock grazing upon which a specified number, kind of livestock, and season of use may be grazed under a term grazing permit. The basic land unit used to facilitate management of the range resource on the National Forest System and associated lands administered by the Forest Service.

Range allotment plan – The document which contains the program needed to manage the range resource for livestock grazing while considering the soil, wildlife, watershed, recreation, timber, and other resources on lands within a range allotment.

Range Capacity Levels – Levels are described as follows:

No Allowable Capacity – Lands that are incapable of being grazed by domestic livestock under reasonable management goals. Examples include areas under natural conditions that are not capable of producing vegetation, soils that are not capable of producing more vegetation than is needed to prevent excessive erosion rates, and slopes over 45%.

Potential Capacity – Lands not undergoing accelerated erosion but requiring access, water developments, or other improvements to bring them up to full capacity.

**Full Capacity** – Lands that are presently stable because effective ground cover is holding soil loss to an acceptable level, and are, therefore, suited for grazing and can support a livestock operation.

**Range condition** – The state or health of the range vegetation and soil to produce a stable biotic community based on the composition, density, and vigor of the vegetation, and the physical characteristics of the soil. Condition is expressed as satisfactory or unsatisfactory.

**Range improvement** – Any structural or nonstructural improvement to facilitate management of rangelands or livestock.

**Range inventory** – The systematic acquisition and analysis of resource information needed for planning and managing rangeland. The information acquired through range inventory.

**Rangeland** – Land where the vegetation is predominately grasses, grass-like plants, forbs, or shrubs suitable for livestock grazing and browsing.

**Range management intensity level** – See Livestock management.

**Range management** – The art and science of planning and directing range use to obtain sustained maximum animal production, consistent with perpetuation of the natural resource.

**Ranger District** – Administrative subdivisions of the Forest supervised by a District Ranger, who reports to the Forest Supervisor.

**RARE II** – See Roadless Area Review and Evaluation II.

**Real dollar value** – A monetary value which compensates for the effects of inflation.

**Reconstruction** – Road or trail construction activities which take place on an existing road or trail, and raise the standard of the road or trail. This can include relocation of the facility in a completely new location.

**Receipt shares** – The portion of receipts derived from Forest Service resource management that is distributed to State and county governments, such as the Forest Service 25% fund payments.

**Record of Decision** – A document, separate from but associated with, an environmental impact statement that publicly and officially discloses the responsible official's decision on which alternative assessed in the EIS will be implemented.

**Recreation Opportunity Spectrum (ROS)** – A method of delineating types of recreation settings. There are six ROS settings. These settings are: Primitive – Essentially unmodified natural environments; Semi-Primitive Non-motorized – Few or subtle modifications by people, high probability of isolation, no motorized activity; Semi-Primitive Motorized – Predominately natural or natural appearing environments where motorized use occurs; Roded Natural – Predominately natural appearing environments with moderate evidence of the sights and sounds of man; Rural – Modified natural environment with facilities for special activities; Urban – substantially urbanized environment.

**Recreation Visitor Day (RVD)** – A unit for measuring recreation activities which aggregate 12 visitor hours. May consist of 1 person for 12 hours, 12 persons for 1 hour, or any equivalent combination of continuous or intermittent recreation use by individuals or groups.

**Reforestation** – The natural or artificial restocking of an area usually to produce timber and other wood products, but also to protect watersheds, prevent soil erosion, and improve wildlife, recreation, and other natural resources. Natural reforestation includes site preparation to reduce competing vegetation and provide a mineral seedbed for seed

provided by seed trees. Artificial reforestation is the planting of seedlings, cuttings, or seeds by hand or mechanical means, and may include site preparation.

Reforestation backlog – See Backlog reforestation.

Regeneration – The term is used two ways: 1) The actual seedlings or saplings existing in a young tree stand; or 2) The act of reforesting an area.

Regeneration cutting – The removal of trees intended for the purpose of assisting regeneration already present, or to make regeneration of the stand possible.

Region – For planning purposes, the standard administrative unit of the Forest Service administered by a Regional Forester.

Region 3 – The Southwestern Region. A Forest Service organizational unit consisting of all National Forests in New Mexico and Arizona, plus four (4) national Grasslands in Texas, Oklahoma, and New Mexico.

Regional Forester – The official responsible for administering a single Region, and preparing a Regional Guide.

Regional Guide – The plan developed to meet the requirements of the Forest and Rangeland Renewable Resource Planning Act of 1974, as amended, that guides all natural resource management activities and establishes management standards and guidelines for the National Forest System lands of a given region. It also disaggregates the RPA objectives assigned to the Region and the Forests within the region.

Removal cut – Removal of remaining mature trees near rotation age in a shelterwood harvest to provide full sunlight to the regenerated crop.

Research Natural Area – An area set aside by the Forest Service to preserve a representative sample of an ecological community primarily for scientific and educational purposes. Commercial exploitation is not allowed, and general public use is discouraged.

Resource allocation model – A mathematical model using linear programming which will allocate land to prescriptions, and schedule implementation of those prescriptions simultaneously. The end purpose of the model is to find a schedule and allocation that meets the goals of the Forest and optimizes some objective function.

Resource – An aspect of human environment which renders possible or facilitates the satisfaction of human wants, and the attainment of social objectives.

Resource element – A major Forest Service mission-oriented endeavor which fulfills statutory or executive requirements, and indicates a collection of activities from the various operating programs required to accomplish the mission. The 8 resource elements are recreation, wilderness, wildlife, and fish, range, timber, water, minerals, and human and community development.

Responsible line officer – The Forest Service employee who has the authority to select and/or carry out a specific planning action.

Revegetation – The re-establishment and development of a plant cover. This may take place naturally through the reproductive processes of the existing flora, or artificially through the direct action of man (reforestation or range reseeding).

Right-of-way – The right to pass through another person's land as obtained by condemnation or purchase.

Riparian ecosystem – A transition between the aquatic ecosystem and the adjacent terrestrial ecosystem, identified by soil characteristics and distinctive vegetation communities that require free or unbound water.

Roadless Area Review and Evaluation (RARE II) – The assessment of un-roaded areas within the National Forests as potential wilderness areas. This refers to the 2<sup>nd</sup> review which was begun in 1977 and documented in a final environmental impact statement, January 1979.

Road density – The number of miles of road per square mile in a land area.

Road maintenance – Level 1 maintenance involves annual inspection to identify drainage problems in order to protect the investment and resources. The road is always closed to public use. Level 2 maintenance includes brushing, logging-out, restoring the road prism, and signing necessary to provide passage for high clearance vehicles only. Passenger car traffic is not a consideration. Level 3 maintenance provides for minimal conditions for passenger cars. Traffic volumes are minor to moderate. User comfort and convenience are not priorities. Level 4 maintenance covers roads suitable for all types of vehicles. More emphasis is given to user comfort. Roads are frequently surface with aggregate material. Dust may be controlled. Level 5 maintenance provides for a smooth and dust free surface to ensure safe and comfortable driving conditions.

Rotation age – The period of years between initial establishment of a stand of timber and the time when it is regenerated.

RPA – See Forest and Rangeland Renewable Resource Planning Act.

RPA Program – The recommended direction for long range management of renewable resources of National Forest System lands. This direction serves as the basis for the Regional targets assigned to the Forest. The development of this direction is required by the Forest and Rangeland Renewable Resource Planning Act.

RVD – See Recreation Visitor Day.

Sale schedule – The quantity of timber planned for sale by time period from an area of suitable land covered by a forest plan. The 1<sup>st</sup> period, usually a decade, of the selected sale schedule provides the allowable sale quantity. Future periods are shown to establish that long-term sustained yield will be achieved and maintained.

Salvage harvest – Removal of dead or dying trees resulting from insect or disease epidemics, wildfire, or windthrow.

Sanitation harvest – Removal of dead or dying trees to prevent spread of insects or disease.

Satisfactory range allotments – Allotments with management intensities B-D. Stocking is at capacity. Range and watershed conditions are stable or improving.

Sawtimber – Trees suitable in size and quality for producing logs that can be processed into lumber. For planning purposes on the Forest, trees with a 9” diameter were classified as sawtimber.

Scoping – Determination of the significant issues to be addressed in an EIS.

SCORP – See State Comprehensive Outdoor Recreation Plan.

Secondary modern development level – A level of modification for developed recreation sites. Modification is heavy, with facilities provided strictly for comfort and convenience of users. Construction may use synthetic materials, and vehicular traffic controls are usually obvious. Artificial surfacing of roads and trails is extensive. Development density is 3 to 5 family units per acre. Forest environment is pleasing and attractive, but not necessarily natural.

Sediment – Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice, and has come to rest on the earth’s surface either above or below sea level.

Seed cut – Removal of mature trees near rotation age in a shelterwood harvest to permanently open the stand, and prepare the site for regeneration from the seed trees left for that purpose.

Seedling/sapling – A forest successional stage in which trees less than 5” in diameter are the predominant vegetation.

Selection cutting – The annual or periodic removal of trees, individually or in small groups from an uneven-aged forest in order to realize the yield, and establish a new crop of irregular constitution.

Seral – A plant and animal community which is transitional in stage of succession, being either short- or long-term. If left alone, the seral stage will pass, and another plant or animal community will replace it. Aspen represents a seral stage that would eventually be replaced by conifers such as spruce.

Shelterwood harvest – Silvicultural system used to harvest mature trees at rotation age in a series of preparatory, seed, and removal cuts designed to regenerate a new even-aged crop under the shelter of the old crop.

Short-term effects – Those effects which will not be significant beyond the RPA planning horizon of 50 years.

Silvicultural system – A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. Systems are classified according to the method, and carrying out of the fellings that remove the mature crop and provide for regeneration, and according to the type of forest thereby produced.

Silviculture – The science and art of growing and tending crops of forest trees.

Site preparation – Removing unwanted vegetation and debris from a site, and preparing the soil before reforestation.

Site productivity – Production capability of specific areas of land.

Size class – for the purposes of Forest planning, size class refers to the intervals of tree stem diameter used for classification of timber in the Forest Plan data base: less than 5” diameter = seedling/sapling; 5 to 9” diameter = pole timber; and greater than 9” diameter = sawtimber.

Slash – Debris left after logging, pruning, thinning, or brush cutting, and large accumulations of debris resulting from windstorms. It includes logs, bark, branches, and stumps.

Small game – Birds and small mammals normally hunted or trapped.

Snag – a standing dead tree from which the leaves and most of the branches have fallen. A ponderosa pine/mixed conifer snag is a tree greater than 12” D.B.H. and 15 feet tall. Only ponderosa pine/mixed conifer species can contribute to the minimum snag requirement. An aspen snag is a tree greater than 12” D.B.H. and 15 feet tall. An oak snag is a tree greater than 10” D.B.H. and 10 feet tall.

Social analysis – an analysis of the social (as distinct from the economic and environmental effects of a given plan or proposal for action. Social analysis includes identification and evaluation of all pertinent desirable and undesirable consequences to all segments of society, stated in some comparable quantitative terms. It also includes a subjective analysis of social factors not expressible in quantitative terms.

Softwood – A conventional term for both the timber and the trees belonging to the evergreen group, as the pine, spruce, fir, etc.

Soil erosion – The detachment and movement of soil from the land surface by wind, water, or gravity.

Soil productivity – The capacity of a soil in its normal environment, to produce a specific plant or sequence of plants under a specific system of management.

Soil survey – See Terrestrial Ecosystem Inventory.

Southwestern Region – See Region 3.

Special cutting – Logging activities in special areas, such as recreation areas and administrative sites, where other uses or values override timber production values.

Special use permits – Permits and granting of easements (excluding road permits and highway easements) authorizing the occupancy and use of land.

Special interest administrative areas – Areas having significant or unique features requiring special consideration. For example, candidate areas for research natural areas may qualify.

Stand – A group of trees on a minimum of 1 acre of forest land, that is at least 10% stocked by forest trees of any size.

Standard – Performance criteria indicating acceptable norms of specifications that actions must meet. A principle requiring a specific level of attainment, a rule to measure against.

Standard (STD) – In reference to recreation management. Management level that provides services at or above established standards and practices.

State Comprehensive Outdoor Recreation Plan (SCORP) – Plan prepared by the State which identifies recreation supply and demand, and recommends future development actions.

Stocking rate – Range management usage. The actual number of animals, expressed in either animal units or animal unit months, on a specific area at a specific time.

Successional stage – A phase in the gradual supplanting of one community of plants by another.

Structural range improvement – Improvement requiring construction or installation to improve the range, facilitate management, or control distribution and movement of livestock.

Suitability – The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences, and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices.

Suitable lands – Lands which are appropriate for the application of certain resource management practices as determined by an analysis of the economic and environmental consequences, and the alternative uses foregone.

Supply potential – The output production possible from available resources.

Suppression (Fire Suppression) – any act taken to slow, stop, or extinguish a fire. Examples of suppression activities include line construction, backfiring, and application of water or chemical fire retardants.

Sustained yield of products and services – The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest system without impairment of the productivity of the land.

Targets – Objectives assigned to the Forest by the Regional Guide.

Temporary roads – Temporary roads are low-level roads constructed for a single purpose and short-term use. Once use of the road has been completed it is obliterated, and the land it occupied is returned to production.

Terrestrial Ecosystem Survey – Systematic inventory based on the concept that within the landscape there are naturally occurring ecosystems with unique sets of properties. These terrestrial ecosystems form a continuum, and can be recognized at different levels in classification systems. The soils component of the ecosystem is inventoried through the use of “Soil Taxonomy”, USDA Soil Conservation Service Handbook #436, and the “Terrestrial Ecosystem Survey Handbook”. The vegetation component of the ecosystem is inventoried through the use of the International Classification and Mapping of Vegetation, UNESCO, and the above mentioned Forest Service handbooks. The terrestrial ecosystem inventory is sometimes referred to as a “soil survey” in the planning documents.

Theoretically Favorable – Geologic conditions are similar to those of producing area, or may be inferred similar through indirect evidence.

Thermal cover – Cover used by animals to reduce effects of weather; for an elk, a stand of coniferous trees 40 feet or more tall with an average crown closure of 70% or more.

Thinning – Cutting made in an immature stand to accelerate diameter growth and improve form of remaining trees.

Threatened and endangered species – Species identified by the Secretary of Interior in accordance with the 1973 Endangered Species Act, as amended.

Threatened Species – Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Endangered Species – Any species that is in danger of extinction throughout all or a significant portion of its range.

Candidate Species – (1) A species listed in a Notice of Review or a proposal for listing published in the Federal Register. A Notice of Review is triggered by a petition to list a species. The public at large is asked for data on a species. After the data has been collected, a species is proposed for listing as threatened or endangered in the Federal Register. In either case, the species is a candidate species and is not subject to protection under the Endangered Species Act; (2) A species listed in the Fish and Wildlife Service’s program advice is a candidate species; (3) A species proposed for listing, but for which the decision to list is forestalled is a candidate species.

Threatened species – any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, and which has been designated in the Federal Register by the Secretary of the Interior as a threatened species.

Timber production – The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use. The term “timber production” does not include production of fuelwood.

Timber stand improvement (TSI) – Cuttings made in an immature stand to accelerate diameter growth, and improve the form of the trees that remain.

Topography – The configuration of land surface including its relief, elevation, and the position of its natural and man-made features.

Transitory range – Land that is suitable for grazing use of a non-enduring nature over a period of time.

Trailhead – The parking, signing, and other facilities available at the terminus of a trail.

Trail Maintenance Level

Trail Maintenance Level I – Trails maintained for primitive experience level. Custodial care only. No tread maintenance. Drainage functional and not likely to fail. Trailsides not brushed but tread is kept passable. Small slides may remain except for erosion potential. Structures maintained as needed. Signing may be deferred.

Trail Maintenance Level II – Trails maintained for near-primitive experience level. Tread maintained for public safety. Logs or similar rustic structures may be provided at stream crossings. Drainage same as Level I. Signing at a minimum level commensurate with level of trail use.

Trail Maintenance Level III – Trails maintained for intermediate experience level. Tread maintained for public safety and user convenience. Drainage same as Level I. Trailsides brushed out at Handbook standards. Structures maintained to original design standards. Signing same as Level II.

Trail Maintenance Level IV – Trails maintained at relatively high standards to provide for public safety and convenience. Tread relatively smooth, firm, and may require stabilization. Signing at high level, all other elements same as Level III. The trails are generally maintained for family or senior citizen use.

Trail Maintenance Level V – Trails maintained for high use and experience levels, including special purposes such as VIS trails, bicycle trails, trails to major vista points, trails for handicapped, etc. Basic care same as Level IV but patching of paved tread may be needed annually. Trailsides maintained to meet high visual quality standards by brushing and cleanup of debris beyond the trail limits. Vistas maintained.

Transportation system – All existing and planned roads and trails needed to access the Forest.

Travelway – An un-constructed two-track road resulting from repeated cross-country travel.

Trick tank – A water development constructed by laying an impervious surface on a collection area, and funneling water to a storage and use point. The key consideration for trick tanks is they are not placed in defined channels, and therefore are not making use of appropriable water. Commonly constructed of tin, concrete, butyl or treated soil, and sometimes use natural collection from rock outcrops.

TSI – See Timber Stand Improvement.

Uneven-aged management – The application of 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.

Unpalatable species – In range management usage, plant species that are not readily eaten by animals.

Universal soil loss equation (USLE) – Empirical erosion model that computes long-term average soil losses from sheet and rill erosion under specified conditions.

Unsatisfactory range allotments – Allotments with management intensity of X. Stocking is at least 20% overstocked. Range and watershed conditions are deteriorating at a rate which will require significant management changes and/or investments to correct.

Use season – That period of time developed recreation sites are open for public use, with routine maintenance, cleanup, and operation on a scheduled basis.

USF&WLS – U.S. Fish and Wildlife Service, Department of Interior.



Vertical structure – Consists of more than one age and size class of trees within a forested stand.

Viable population – A wildlife or fish population of sufficient size to maintain its existence over time in spite of normal fluctuations in population levels.

Viewshed – The visible landscape from an established point.

Virgin Timberland – any area of timberland which has never been harvested for forest products.

Visual Quality Objectives (VQO) – Measurable standards for the management visual resources of the landscape. Refers to the degree of acceptable alterations of the characteristic landscape based on the importance of aesthetics. Objectives used in the Proposed Plan are:

Preservation – Provides for ecological change only.

Retention – Man's activities are generally not evident to the casual visitor.

Partial Retention – In general, man's activities may be evident but must be subordinate to the characteristic landscape.

Modification – Man's activity may dominate the characteristic landscape, but must at the same time, utilize naturally established form, line, color, and texture. Man's activities should appear as natural occurrences when viewed from foreground or middle ground.

Maximum modification – Man's activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

Visual resource – The composite of basic terrain, geological features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

Visual sensitivity level – A classification system for establishing visual landscape categories according to the relative importance of user concern and viewing distance.

Visual variety class – A classification system for establishing visual landscape categories according to the relative importance of the visual features.

Warm-water fishery – Stream and lake water which support fishes with a maximum summer temperature tolerance of about 80° F. Bluegills, catfish, and large-mouth bass are examples.

Water rights – A right to the use of water, such as irrigation, wildlife, etc.

Watershed – The area that contributes water to a drainage or stream.

Watershed condition – A description of the health of a watershed, or portion thereof, in terms of the factors that affect hydrologic function and soil productivity.

Water yield – That portion of the annual precipitation which contributes to stream flow and recharge of the ground water table.

Weeks Act – Passed in 1911, it set up the National Forest Reservation Commission, and authorized the Secretary of Agriculture to purchase lands for addition to the National Forest System, provided that such purchases were approved by the Commission and by the states in which they were made.

Wetlands – An area that is more or less regularly wet or flooded. Where the water table stands at or above the land surface for at least part of the year.

Wilderness – All National Forest lands included in the National Wilderness Preservation System; an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.

Wilderness Act – Establishes a National Wilderness Preservation System to be composed of Federally-owned areas designated by Congress, administered for use and enjoyment as Wilderness, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as Wilderness.

Wilderness Opportunity Spectrum – A system of classifying wilderness areas into management units possessing homogeneous social characteristics. The classes are:

Transition – Areas adjacent to non-wilderness high use areas, or adjacent areas with incompatible management activities, or wilderness areas that experience large numbers of day users traveling short distances into the wilderness.

Semi-Primitive – Travel principally on system trails; low incidence of encounters with others; evidence of past human use not essential part of social setting; repeated use of popular camp sites.

Primitive – Travel is cross-country or by a low density trails system; high degree of solitude.

Pristine – No trails; high degree of solitude of both man and wildlife; no perceptible evidence of past human use.

Wildfire – Any fire on wild lands other than one intentionally set for management purposes, and confined to a predetermined area.

Wildland fire use – The application of the appropriate management response to naturally ignited wildland fires to accomplish specific resource management objectives in predefined designated areas outlined in fire management plans.

Wildlife – All non-domesticated mammals, birds, reptiles, and amphibians living in a natural environment, including both game species and non-game species. Animals or their progeny, which once were domesticated but escaped captivity and are running wild (i.e., feral animals), such as horses, burros, and hogs, are not considered wildlife.

Wildlife habitat diversity – The distribution and abundance of different plant and animal communities and species within a specific area.

Withdrawal – An order removing specific land areas from availability for certain uses.

Woodland – Pinyon and juniper forests annually growing on drier sites in the low elevations (less than 8,000 feet).



## Appendix A. Program Component

<u>Program Component</u>	<u>Code Description</u>
A2	Recreation O&M
A3	Recreation Improvement
A4	Forest Recreation Research
B2	Wilderness Management
B4	Wilderness Research
C2	Wildlife & Fish O&M
C3	Wildlife & Fish Habitat Improvement
C4	Wildlife & Fish Plant Habitat Improvement
D2	Range O&M
D3	Range Improvement
D6	Range Research
E2	Roaded Timber Sales
E3	Non-Roaded Timber Sales
E4	Non-Sale Reforestation
E5	Non-Sale Stand Improvement
E6	Timber Production
E7	Utilization Improvements
E8	Timber Sales
F2	Soil, Water, Air Resource Operations
F3	Soil, Water, Air Improvements
F4	Forest Soil & Water Improvements
F7	Soil Management Research
F8	Water Resources Research
G1	Energy Mineral Management
G2	Non-Energy Mass & Geologic Management
G5	Surface Environment & Mining Research
H1	Rural Community & Human Resources
H2	Rural Community & Human Resources
H3	Rural Community & Human Resources
J2	Land Management Planning
J3	Land Ownership Management
J4	Program Development & Management Improvement

L1	Facilities
L2	FA&O/Road O&M
L3	FA&O/Road Construction/Reconstruction
L6	Research Construction
P1	Protection
P2	Forest Fire Protection
P3	Fuel Treatment Investments
P4	Forest Pest Management (State & Private)
P5	Forest Pest Management (NFS & Other Federal)
P6	Cooperative Fire Protection
P8	Fire & Atmosphere Science Research
P9	Forest Insect & Disease Research
T1	Administration
T2	General Administration
T3	General Administration
T4	Fleet Equipment Service
T5	National Programs

## Appendix B. Activity Code Index

<u>Primary Code</u>	<u>Code Description</u>
A01	Recreation Planning & Inventory
A02	Cultural Resource Management
A03	Visual Resource Inventory & Planning
A04	Visual Resource Improvement
A05	Recreation or VIS Site (Visitor Interpretive Const. Services)
A06	Recreation or VIS Site Rehabilitation
A07	Visual Information Services – Planning
A08	VIS – FSM (Full Service Management)
A09	VIS – RSM (Reduced Service Management)
A11	Developed Recreation – FSM
A13	Developed Recreation – RSM
A14	Dispersed Recreation – FSM
A15	Dispersed Recreation – RSM
A16	Recreation Management
B01	Wilderness Area – Planning & Inventory
B02	Wilderness Area – FSM
B03	Wilderness Area – RSM
C01	Fish & Wildlife Prescriptions
C02	Fish & Wildlife Impact Studies
C03	Nonstructural Wildlife Habitat Improvement
C04	Nonstructural Fish Habitat Improvement
C05	Nonstructural T&E Plant Habitat Improvement
C06	Structural Wildlife Habitat Improvement
C07	Structural Fish Habitat Improvement
C08	Structural T&E Plant Habitat Improvement
C09	Wildlife Habitat Maintenance
C11	T&E Plant Habitat Maintenance
C12	Fish & Wildlife Cooperative with State
C15	Habitat Access Controlled by Closure
D01	Range Resource Inventory & Planning
D02	Range Resource Management
D03	Range Forage Improvement
D05	Range Structural Improvement
D06	Maintenance of Range Structural Improvement
E00	Timber Resource Planning & Inventory
E03	Silvicultural Examination & Prescriptions
E04	Reforestation
E05	Timber Stand Improvement
E06	Timber Preparation
E07	Timber Harvest Administration

E08	Nursery Reforestation
E09	Genetic Forest Tree Improvement Program
F01	Soil, Water & Air Resource Planning
F02	Soil, Water & Air Resource Inventory
F03	Soil, Water & Air Resource Monitoring
F05	Soil, Water & Air Resource Improvement
F06	Soil, Water & Air Resource Improvement
G01	Mining Law Compliance & Administration
G02	Minerals Management – Oil & Gas
G03	Minerals Management – Coal
G04	Minerals Management – Geothermal
G05	Minerals Management – Uranium
G06	Minerals Management – Non-energy
G07	Minerals Management – Minerals Materials
G09	Mined Area Reclamation
G10	Mineral Character or Potential Evaluation
G11	Geological Planning & Inventory
J01	Special Use Management (Non-recreation)
J02	ROW Grants for roads & Trails
J03	Federal Energy Regulatory Commission License & Permits
J04	Withdrawals, Modification, & Revocations
J06	Property Boundary Location
J07	Property Boundary & Corner Maintenance
J09	Other Land Title Claims Management
J11	Landownership Planning/Land Classification
J13	Land Exchange
J18	ROW Acquisition
J22	Forest Land & Resource Planning
L01	Transportation System Planning & Inventory
L02	Arterial Road Pre-construction
L03	Arterial Road Construction Engineering
L04	Arterial Road Construction
L05	Arterial Road Reconstruction
L06	Collector Road Pre-construction
L07	Collector Road Construction Engineering
L08	Collector Road Construction
L09	Collector Road Reconstruction
L10	Local Road Pre-construction
L11	Local Road Construction Engineering
L12	Local Road Construction
L13	Local Road Reconstruction
L14	Timber Purchaser Road Construction
L15	Timber Road Construction Supplementation & Contribution
L16	Bridge & Major Culvert Pre-construction
L17	Bridge & Major Culvert Construction Engineering

L18	Bridge & Major Culvert Construction/Reconstruction Road Maintenance
L19	Trail Inventory & Planning
L20	Trail Reconstruction
L21	Trail Construction/Reconstruction
L22	Trail system Management
L23	FA&O Construction/Reconstruction
L24	FA&O Radio Maintenance
L26	Radio system Replacement/Expansion
L27	Dam Administration & Maintenance
L28	Timber Purchaser Road Reconstruction
L29	Portable Water Systems
L30	Construction/Reconstruction Portable Water Systems Operation &
L31	Maintenance
P01	Fire Management Planning & Analysis
P02	Fire Prevention
P03	Fire Detection
P04	Primary Initial Attack Forces
P07	Forest Fire Support & Facility Service
P10	Fuel Management Inventory
P11	Treatment of Activity Fuels
P12	Treatment of Natural Fuels
P15	Vegetation Treated by Burning
P16	Air Resource Management
P17	Air Quality & Visibility Coordination
P19	Aerial Transport of Personnel
P20	Aerial Transport of Goods
P21	Aerial Applications of Materials
P22	Aerial Platform
P24	Law Enforcement
P25	Cooperative Law Enforcement
P27	Cooperative Search & Rescue
P34	Insect & Disease Management – Surveys & Technical Assistance



## Appendix C. Implementation Schedules

Table 1 is found on page 13 of the plan.

Table 2 is found on page 19 of the plan.

Table 4 is found on page 21 of the plan.

Table 13 is found on page 21 of the plan.

Tables 3, 5, 6, 9, 10, and 11 no longer exist.

Table 7 lists the forest's highest priority capital investments (including recreation road projects) in approximate order of priority for the 1<sup>st</sup> decade. Many projects are contingent upon obtaining State Lake Improvement Funds.

**Table 7. RECREATION SITE DEVELOPMENT 1**

CONSTRUCTION/EXPANSION/RELOCATION	
Project	District
1. Rainbow Campground expansion	Springerville
2. Aspen Campground expansion Phase 1	Chevelon
3. Rim Cull-de-Sac Campgrounds construction	(4) Chevelon, Heber
4. Luna Lake Group Area expansion	Alpine
5. Aspen Campground expansion Phase 2	Chevelon
6. Big Lake Road Rehabilitation #1	Springerville
7. Canyon Point Campground expansion	Heber
8. Rim/Lakes Trailheads (2)	Chevelon, Heber
9. Blue Range Trailheads (6)	Alpine, Clifton
10. Forks-Black river Phase 1	Alpine
11. Fool Hollow Complex Phase 1	Lakeside
12. Scenic Byways Parking and Vistas	Alpine, Clifton Springerville
13. Woods Canyon Water System	Chevelon
14. Forest-wide Trailheads (5)	Springerville, Lakeside
15. Woods Canyon Paving	Chevelon, Heber
16. Lake Mogollon Campground and Reservoir	Heber
17. Forest-wide Facilities Rehabilitation	All
18. Log-landing road 249E	Springerville
19. Fool Hollow Complex Phase 2	Lakeside
20. Crescent Lake Handicapped Fishing	Springerville
21. Big Lake Road Rehabilitation #2	Springerville
22. Forest-wide Road and Parking Rehabilitation	All
23. Water and Sanitation Rehabilitation	All
24. Big Lake Multi-Family Campground Phase 1	Springerville
25. Big Lake Road Rehabilitation Phase 3	Springerville
26. Rim Interpretive Site	Lakeside
27. Sheeps Crossing Relocation	Springerville
28. Greer Valley Interpretive Trailheads	Springerville
29. Pigeon Creek Recreation Facilities & Reservoir	Clifton
30. Diamond Rock Road 276	Alpine

Project\	District
31. Forks-Black River Phase 2	Alpine
32. Rim/Lakes Campground expansions	Chevelon, Heber
33. Rim/Lakes Observation Sites	Heber
34. Williams Valley Winter Sports Site	Alpine
35. Pole Knoll Picnic Site	Springerville
36. Crescent Lake Road Rehabilitation	Springerville
37. Woodland Lake Recreation Area	Lakeside

<sup>1/</sup> These site-specific projects are subject to additional analysis based on the Region Three Integrated Resource Management Process.

The following are additional identified projects that may be implemented if funds become available:  
(Not in priority) <sup>1/</sup>

1. Al Fulton Point Campgrounds
2. Winn Campground Expansion
3. Big Lake Multi-family/Group CG Phase 2
4. Bear Canyon Lake Campground
5. Alpine R.D. Expansions/Improvements (Hannagan, KP Cienega, Blue Vista)
6. Gabaldon Campground redesign, relocate, and expansion.
7. Los Burros Campground construction
8. Carnero Lake site improvements (water rights purchase, access improvements, toilets)
9. Luna Lake Campground reconstruction and expansion
10. Luna Lake Picnic Area construction
11. Blackjack Campground construction
12. Government Springs Parking Lot reconstruction
13. Mexican Hay Lake Boating Site
14. General Crook Trailhead improvements
15. Winter Sports Access – Forest-wide
16. RIM Visitors Center.
17. Scott's Reservoir Access Improvements and Parking Area (HOST site development)
18. OFF HIGHWAY VEHICLE Parking areas and loading ramps (as determined through areas identified following the Integrated Resource Management Process)
19. Granville Campground Interpretive Trail
20. Relocate Spur Cross Trailhead
21. Construction of observation site – U.S. Highway 666 at milepost 209
22. Other Scenic Byway observation sites

**Table 7A. 10-Year Campground & Developed Recreation Roads-Capital Investment. 1/**

Priority	Name	Road No.	Miles
1	Willow Springs	149	1.4
2	Woods Canyon	105	44
3	Rim Camp roads		2.0
4	Big Lake Campground Roads	8115A, B, C, D, E, F, G	4.2
5	Bear Canyon	89A	1.0
6	Chevelon Lake	169B	2.7
7	Al Fulton	171	2.0
8	Canyon Point	238,	0.4
		238A,	0.7
		238B	1.1
9	Crescent Lake	114	1.0
10	Diamond Rock	276A	0.2
		276B	0.2
		276C	0.3
11	Black Canyon Lake	86A	0.5
12	Fool Hollow	137	1.7
		276B	0.2
		276C	0.3
13	West Fork	68A	1.0
14	Luna Lake	570	2.0
		570A	0.8
		570B	0.4
15	Alpine Divide	568	0.3
16	Winn	554	2.4
17	Lee Valley	113E	0.5
18	Big Lake Dam	113A	0.6
19	Hannagan	29B	0.5
20	KP Cienega		0.8
21	Granville	506	0.6
22	Upper blue	281A	0.4
23	Blue Crossing		0.1
24	Upper Juan Miller	475A	0.1
	Lower Juan Miller	475B	0.1
25	Scott Reservoir		0.5

1/ These site-specific projects are subject to additional analysis based on the Region Three Integrated Resource Management Process.

**Table 8. Trail Construction/Reconstruction Plan. 1/**

Trail	Length (miles)	District
<b>NEW CONSTRUCTION/RELOCATION/REDEVELOPMENT</b>		
General Crook	10.0	Chevelon/Heber
Big Lake/West fork	9.0	Springerville
Scott Res. to Blue Ridge	3.0	Lakeside
Rim Lakes Recreation Mgt. Areas	3.0	Chevelon/Heber
Billy Creek Trail	2.5	Lakeside
Pinetop/Lakeside/Show Low Lake	4.0	Lakeside
Spur Cross/Painted Bluff connector	.5	Clifton
Cypress Tree Trail	1.0	Clifton
<b>RECONSTRUCTION</b>		
General Crook	25.7	Chevelon/Heber
Trail 76 (Foote)	0.5	Alpine
Trail 70 (KP)	0.5	Alpine
Trail 94 (Mt. Baldy)	3.2	Springerville
Trail 95 (Mt. Baldy)	2.1	Springerville
Trail 310 (Baseline)	5.0	Clifton
Black Canyon Lake Trail	0.1	Heber
Willow Springs Lake Trail	0.1	Heber
Bear Canyon Lake Trail	3.4	Chevelon
Blue Ridge National Rec. Trail	3.5	Lakeside
Trail 35 (Raspberry)	3.5	Clifton
Trail 51 (Largo)	1.0	Alpine
Trail 52 (Lanphier)	1.0	Alpine
Trail 97 (So. Fork – Mex Hay)	4.0	Springerville
Trail 23 (Bonanza Bill)	2.0	Alpine
Trail 30 (Hinkle)	1.5	Alpine
Trail 35 (Raspberry)	2.0	Alpine
Trail 38 (Horse ridge)	0.7	Alpine
Trail 39 (Sawmill)	0.1	Alpine
Trail 53 (South Canyon)	1.5	Alpine
Trail 54 (WS Lake)	0.5	Alpine
Trail 55 (Cow Flat)	0.5	Alpine
Trail 55 (Cow Flat)	1.0	Clifton
Trail 56 (Red Hill)	1.5	Alpine
Trail 63 (Bear Wallow)	1.5	Alpine
Trail 65 (Upper Grant)	1.5	Alpine
Trail 73 (Steeple)	0.5	Alpine
Trail 75 (Grant)	2.8	Alpine
Trail 93 (No. fork KP)	0.5	Alpine
Trail 105 (Tutt Creek)	0.5	Alpine
Trail 306 (Grant Short-cut)	0.8	Alpine

1/ These site-specific projects are subject to additional analysis based on the Region Three Integrated Resource Management Process.

**Table 12. Wildlife Capital Investments**

Name	Cost	Priority
Hog Wallow	30,000	12
White Lake	70,000	13
St. Joseph Reservoir	15,000	8
Norton	20,000	11
Geneva Lake	30,000	6
Slade	30,000	7
White Mountain Lake	70,000	5
Carnero	100,000	2
Hay Lake	15,000	14
Long Lake	200,000	10
Horsetrap	7,000	24
Deer Lake	7,000	23
Lake #1	5,000	22
Lake #2	5,000	21
Pool Corral	70,000	9
Colter Reservoir	200,000	1
Mexican Hay Lake	150,000	3
Blevins	35,000	17
Atcheson Reservoir	20,000	16
Rogers Reservoir	50,000	15
Pulumine Draw	7,000	18
Riggs Creek	20,000	19
Pratt Lake	30,000	4
Reagan Reservoir	15,000	20

These projects involve improving wetlands for waterfowl production and wintering habitat. Improvements include nesting island construction, fencing, seeding, and dam and dike construction. Most of the projects depend on getting water rights. Other legal issues may arise that would prohibit us from doing the projects.