

Chapter 4 - Management Direction

OVERVIEW

Chapter 4 contains the management direction for the Coconino National Forest [Forest]. 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 portion of Chapter 4 describes the management prescriptions that contain the Standards and Guidelines for the Forest. The Standards and Guidelines apply until the next revision or update of the Forest Plan in 10 to 15 years. Forest Plan amendments are ongoing.

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 mission of the Forest is to manage National Forest lands and resources using the best systems available to meet the needs and desires of present and future generations, while protecting and enhancing the environment and effectively and efficiently administering Forest programs. Conflicts over allocating resources are inevitable and will increase. The management challenge is to be responsive, equitable, efficient, and understanding in making resource management 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].

The Forest is attempting to initiate a management situation that can respond to local and national demands for wood products, livestock production, water yield, minerals and building materials, 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, water, and biotic 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. Nonrenewable resources are adequately protected to ensure their future availability.

Goals have been identified for each resource element.

Outdoor Recreation

Manage the recreation resource to increase opportunities for a wide variety of developed and dispersed experiences.

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 that include foot, horse, bicycle, and motorized trails, 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 opportunities changes, guide management, and coordinate recreation with other resources.

Manage off-road driving to provide 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.

Preserve and protect non-renewable cave resources so their scientific and aesthetic value does not diminish. Conserve wildlife habitat provided by caves. Prevent contamination of important water supplies which drain into, issue from or are contained within caves. Encourage partnerships with caving organizations, scientists and outdoor recreationists. Manage caves and cave resources to provide a range of recreational opportunities. Promote cave conservation through interpretation and education.

Wilderness

Provide a wilderness management program that achieves 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 Sycamore Canyon Wilderness Class I Airshed. Treat other wildernesses in the same manner as Class I Airsheds.

Initiate the Wilderness Opportunity Spectrum (WOS) system in Forest wildernesses. Develop wilderness management direction that establishes Limits of Acceptable Change (LAC).

Wildlife and Fish

Manage habitat to maintain viable populations of wildlife and fish species and improve habitat for selected species.

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

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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 delisting **threatened and endangered** species.

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

Increase opportunities for wildlife and fish oriented recreation activities.

Riparian

Accomplish eighty percent of the riparian recovery by 2030. The remaining 20 percent will be significantly improved, but will not have all of the characteristics of a fully recovered riparian area, such as 3 age classes of woody vegetation.

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

Range

Emphasize high quality range forage and improvements. Manage grazing generally at the D intensity level.

Cooperate with private range owners and other agencies to develop coordinated range management systems of livestock grazing.

Noxious and Invasive Weeds

Prevent any new noxious or invasive weed species from becoming established, contain or control the spread of known weed species, and eradicate species that are the most invasive and pose the greatest threat to the biological diversity and watershed condition.

Timber

Manage the timber resource to provide a sustained-yield of forest products through integrated stand management. On forested lands identified as suitable for commercial timber production, design timber management activities to integrate considerations for economics, water quality, soils, wildlife habitat, recreation opportunities, visual quality, and other values. Develop and implement a sustained-yield program for firewood and other miscellaneous forest products including posts, poles, Christmas trees, and wildings. Emphasize uneven-aged management for timber cutting areas.

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

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. Consider air quality during prescribed fires especially Class I areas over wildernesses.

Minerals

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

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 benefit the resources.

Manage summer home tracts and organization camps for the public 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 and 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, and handicap access 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.

Protection

Use fire as a resource management tool where it can effectively accomplish resource management objectives. Use fire prevention and control to protect life, property, and resources.

Law Enforcement

Cooperate with State and local law enforcement agencies and provide Forest Level IV officers to properly protect forest resources, employees, visitors, and property.

Research Natural Areas, (RNA's), Botanical Areas, Geological Areas

Manage RNA's for scientific research or baseline studies. Protect potential RNA's pending decision by the Chief.

Manage specially designated areas to protect their special qualities and to provide interpretation and education.

Elden Environmental Study Area (ESA)

Provide an area for environmental educational opportunities for the public school system, youth organizations, and the general public by maintaining the ecosystem and developing interpretive facilities.

Public Affairs

Provide and promote public participation in and information about 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 preestablished 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 missions 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 & Range of Implementation

The average annual output levels are shown in **Appendix H**. 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 economies, and political decisions.

The Forest Plan is used as the basis for developing budget proposals. These proposals are developed approximately 20 months prior to the start of the subject fiscal year. This information is used by the Regional Forester and Chief in responding to various budget level alternatives. As the budget proposals move through the Administration (Department of Agriculture and OMB) and Congressional actions, some adjustments are likely. These adjustments are

based on many considerations such as National program priorities, Federal budgets, and National economic priorities.

Specific budget proposals are likely to change when the annual allocation of funding is received at the Forest level. However, the Forest Plan will be used to establish priorities at whatever budget level is received for the given fiscal year. It is the intent of the Forest and the Region to adhere to the Forest Plan Standards and Guidelines and to accomplish the balance of resource outputs over the first ten year period of the Plan. Accomplishment of the outputs may be rescheduled within the period depending on available funding and/or other factors.

The constrained budget used for preparing the Forest Plan schedule of outputs and services does not include outside sources of funding, such as donations, contributions, reimbursements, and user fees collected by state agencies and used for National Forest resource improvement (Sikes Act Habitat Improvement). It does include appropriated funds plus deposits which reduce returns to the Treasury such as K-V and BD.

Standards and Guidelines to achieve the objectives are found in the Management Prescriptions section. Objectives for the Forest are shown in **Appendix H** Tables 2 through 12.

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MANAGEMENT PRESCRIPTIONS

The 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 areas.

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, program components, activities, and 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.

Prescriptions are applied to Management Areas (MA's). A list of MA's is included in Appendix B. The MA's are marked on maps and can be identified on the ground. Data is generated by MA to estimate the capability of the MA to provide goods, services, or resource uses under each prescription.

MA's are not necessarily contiguous areas. Separate areas of the same type are found with the total of such areas defining a single MA. Each prescription is expected to have the same consequences or to produce the same average results when applied to any acre within the MA. The MA listing in Appendix B 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 Planning Inventory. Each activity has a unique code, title, and unit of measure for the work performed. An index is provided in Appendix A.

Standards and Guidelines

Standards and guidelines direct the timing and intensity of planned activities, specific policies that apply to activities in each prescription, 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, managers will 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 the suitability of applying the practices or activities is determined for that 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 do not match the Forest map of 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 management area description that most accurately depict the real situation on-the-

It is necessary to read all of the standards and guidelines for all of the program components. For example, many Standards and Guidelines that affect wildlife habitat management are under the timber program components, because they are coordination requirements for activities generated by the Timber program.

If there are numbers in the prescriptions, such as "on 80 percent of the area ...," then the intent is to apply that prescription to 80 percent of the acreage of each significantly sized project. In other words, it is not proper to say... "This timber sale is all within the 20 percent excluded by that prescription." Rather, approximately 80 percent of the sale area is managed under the prescription. It is realized that it may not be in the best interest to literally apply the exact percent figure in every project. Consequently, variations are allowed if they are well justified and documented as part of the NEPA process.

If the planned action is consistent with prescriptions, the manager performs an environmental analysis (FSH 1909.15). The 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 is unsuitable for the area, the line officer must decide whether to proceed with the project or amend the Forest Plan. If it is decided to implement the action, the District Ranger prepares an EA documenting 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 or revisions to the Plan.

Coordinating Requirements

The Standards and Guidelines (S&G's) located in this section of Chapter 4 are not specific to a management area or a particular program component.

Resource Coordination

Planned programs and projects such as timber sales, allotment management plans, and other management activities use the appropriate interdisciplinary process.

Law Enforcement

Law enforcement efforts are accomplished through cooperative efforts with other agencies and with Forest employees. The objectives of the program are to enforce Forest regulations, with special emphasis on off-road driving management, firewood theft, and cultural resource vandalism.

Integrated Resource Management

Integrated Resource Management (IRM) is an interdisciplinary approach to project design and implementation that recognizes the complex biological, administrative, and political interrelationships on the Forest. In Region 3 the IRM approach consists of a thirteen step process that closely parallels the NEPA process. The first step is review of the Forest Plan, followed by the initial determination of the parameters of the project. Subsequent steps guide the design process so that NEPA compliance is assured, citizen participation is sought and utilized, adequate environmental analysis is accomplished, and successful on-the-ground implementation is achieved.

Integrated Stand Management

Integrated Stand Management (ISM) is a concept for designing a complex timber sale by identifying the stand (or portion of a stand) to be treated and incorporating within its unique treatment prescription consideration for all the appropriate resources. ISM also recognizes that all vegetative communities within a given area are interrelated and therefore, timber stands that are proposed for treatment must be INTEGRATED with each other and with the surrounding area.

A timber sale is a complex project with the potential to enhance or impact a great number of resources and requires, for its successful completion, a sophisticated consideration of several land management objectives. To accomplish its objectives, while minimizing its impacts, a timber sale design must pass through a series of preparation phases over an appropriate period of time. Sale complexity determines the amount of time necessary for the completion of any one phase.

Cultural Resources

A complete or sample cultural resources survey is done on project undertakings. The intensity of sampling is determined by using FSM 2360.

Ground disturbing projects receive cultural resources clearance. This includes projects proposed in areas that have been previously cleared for other projects. Projects, not areas, receive clearance. Projects receive clearance without additional archaeological field work whenever sufficient prior field work has been done to clear the project.

Cultural resource reports are reviewed by the Forest Archaeologist who also determines site significance and recommends, through the Forest Supervisor, nomination of sites to the National Register of Historic Places, as prescribed in FSM 2360 and in consultation with the State Historic Preservation Officer. Pertinent reports and documentation are completed before cultural resource clearance is granted and projects proceed, unless otherwise agreed to with the SHPO and, if necessary, Advisory Council on Historic Preservation (ACHP).

Any area, even those that have been inventoried at a 100 percent level, may have cultural resource sites present that have not been identified or marked. Project administrators and operators are alert for such sites. It is the project administrator's responsibility to mark, protect, and report such unreported sites.

Cultural resource sites are located and protected from project activities according to direction in FSM 2360 and 2430. Unauthorized disturbance of cultural resource sites is handled according to appropriate laws and FSM direction.

Old-Growth

There are approximately 18,000 acres of old-growth within areas designated not available for timber management such as wilderness and RNA's on a Forest-wide basis.

FOREST-WIDE AND MANAGEMENT AREA STANDARDS AND GUIDELINES

The following Standards and Guidelines contain the specific management direction needed to implement the Forest Plan.

Forest-wide Standards and Guidelines apply to the Forest as a whole and are contained in pages 51 through 97.

Individual Management Area (MA) Standards and Guidelines are found on pages 98 through 205.

Forest Wide Management Direction

Program

Components Activities Standards and Guidelines

Recreation Planning and Inventory

Recreation

Annually maintain and update RIM data and RIM reports using information provided through campground hosts, compliance checks, facility condition inventory, and other sources.

Annually prepare/review and approve operation and maintenance plans for developed sites and schedule maintenance for facilities on a regular basis. Manage facilities to RIM Condition Class I (satisfactory).

Administer commercial public service, developed recreation operations. Ensure that there are annual inspections of equipment for public health and safety per the American National Standards Institute B77.1 - 1982.

Issue and administer dispersed recreation special-use authorizations to provide needed recreation opportunities, minimize user conflicts, and ensure public safety and resource protection.

Review the ROS inventory as a part of project planning and make necessary corrections/refinements following field checking. Use the ROS inventory to analyze impacts to ROS classes due to management activities such as timber sales, range projects, and firewood sales. ROS classes are used in developing decisions on road standards and density. Each District maintains a ROS map that is updated as projects modify ROS classes. Total acres of any ROS class are allowed to change no more than ±15 percent from the updated inventoried levels during the first decade. These are:

ROS Class	Acres
Primitive	32,457
Semi-primitive, nonmotorized	73,537
Semi-primitive, motorized	639,112
Roaded, natural	840,609
Rural	54,904
Urban	29,794

General Cave Management⁸

Known caves are inventoried and evaluated Forest-wide under provisions of the Federal Cave Resources Protection Act of 1988 to determine the resources, their condition, and significance. Newly discovered caves are scheduled for evaluation as they become known.

⁸ See Coconino National Forest Cave Resource Management Guide for specific details concerning inventory, classification, evaluation, ROS, monitoring, ethics, research and cave search and rescue.

Program

Components Activities Standards and Guidelines

Caves determined to be significant under the Act, or which are being evaluated, are exempt from locational disclosures. The location and resources of caves are also kept confidential when need is to protect archaeological resources, wildlife habitat, cave biota, geological features and paleontological deposits. An inventory is maintained of all caves.

Management priorities are assigned based on resource inventory, evaluation of current conditions, and long-term management of objectives.

A District Cave Implementation Schedule is prepared after completion of the District's cave inventory, evaluation and assignment of management priority. The Schedule includes all significant caves and other caves the District deems appropriate to include. The Implementation Schedule lists funding priorities for cave management, identifies interim protection measures when needed, identifies monitoring for each cave, and schedules Limits of Acceptable Change (LAC) and management plans when needed.

Individual cave management plans are scheduled and prepared for caves with high resource, educational, recreational value, hazardous conditions or heavy use. These plans include monitoring and guidelines for appropriate use and necessary restrictions. Plans are developed with appropriate environmental analysis and public participation, and are conducted so that locations of caves are kept confidential.

Significant caves are monitored to determine visitor impacts and the conditions of key resources. Management techniques will be adjusted, based on the results of monitoring.

Caves used, or recently used, by bat colonies are generally managed to maintain or enhance bat populations. Protection measures may include education, seasonal closures, and gating. Monitoring is used to determine population dynamics. Both monitoring and management include consultation with State and Federal wildlife agencies.

Appropriate caves are interpreted to increase public awareness of the need to protect and preserve cave resources.

Research projects within caves require a permit. Permits are issued on a case-by-case basis by the District Ranger.

There is generally some risk involved in cave exploration and risk-taking is part of the caving experience. Encourage the County Sheriff's departments to plan for cave search and rescue and to coordinate with caving organizations and the Forest.

Program

Components Activities Standards and Guidelines

Ground-Disturbing Activities

Surface land management decisions include consideration of potential impacts to all cave resources.

Any management activity planned near or within a known cave area is examined for its potential impacts to caves and karst features. This includes activities which might increase sedimentation, sterilize soil, change a cave's natural hydrology or water quality, add nutrients or other chemicals (including pesticides, herbicides and fertilizers), or modify the cave. Cave entrances and karst features are also not used as disposal sites for slash, waste rock or fill materials, and other refuse.

Maintenance of cave microclimate, hydrology, and entrance vegetation is needed in order to protect long-term cave ecology. In general, during project planning evaluate at least a 300 foot radius around cave entrances, infeeder drainages, and surface areas immediately over cave passages for the effect on cave resources.

Generally, major alterations to caves are not permitted. Following an excavation to locate an unknown cave, the condition of the original opening is mimicked so that air flow and wildlife use is not altered and the surface visual resource is maintained. Requests to locate caves using special excavation techniques (explosives, heavy machinery, removing large volumes of earth) are analyzed and considered on a case-by-case basis in compliance with the Archeological Protection Act and NEPA.

Caves of high resource values, and a suitable buffer area of approximately 1/4 mile from known cave passages, may be recommended for withdrawal from mineral entry.

Controlled source seismic surveys requiring explosives or other disruptive techniques are not conducted over or close enough to known caves to create unnatural disturbances.

Drilling is not allowed over known caves or within a suitable buffer. No sediments from erosion of access roads and drilling sites is allowed to wash or be discharged into caves or karst features. If previously undiscovered caves are encountered above the zone of saturation for the regional aquifer during drilling operations, reasonable precautions are taken to protect the cave. This includes sealing the casing above and below the cave to prevent air flow and water leakage.

Program

Components Activities Standards and Guidelines

Pursue instream flow rights when existing rights are lacking or inadequate in order to protect recreation interests.

Special Designations

Review and update implementation schedules for formally designated areas during the planning period, such as Wilson Mountain National Recreation Trail and the Verde Wild and Scenic River.

The Arizona Trail is a state-wide trail of which a portion traverses the Coconino National Forest. The trail goes from the north end of the Peaks Ranger District to the Mogollon Rim on the Mogollon Rim Ranger District. This Trail will be a non-motorized pathway. The route will use public lands to ensure public access; use existing trails, where use of the trails as part of the Arizona Trail does not cause substantial negative impacts; allow day-long, weekend, or week-long travel segments; accommodate hikers, equestrians, cross-country skiers, and back-country bicyclists where physically possible and where management permits; provide representation of the various life zones, geologic features, native vegetation, wildlife, cultural resources, and resource management practices of the Coconino National Forest; be in harmony with other federal, state, and local government entities, and private landowners; and allow for continued production of outputs from forest resources as stated in the Forest Land Management Plan. **The Forest Plan identifies a corridor, with the final trail location, design, construction, and signing to be accomplished by Forest staff and private sector/volunteer partnerships.**

Cultural Resources

Consult with Native Americans when projects and activities are planned in sites or areas of known religious or cultural importance.

Make boughs and herbaceous plant parts used for Native American religious and ceremonial purposes available under conditions and procedures that minimize restrictions, consistent with laws, regulations, and agreements with Tribes. The written authorization to the Hopi Tribe for gathering without specific individual permits is an example. This authorization does not include such items as firewood removed from the Forest or Kiva logs, which do require a permit.

The Forest complies with the National Historic Preservation Act (NHPA) in decisions involving interactions between cultural and other resources. Cultural resources are managed in coordination with the State Historic Preservation Plan (SHPO). Until evaluated, the minimal level of management for all sites is avoidance and protection.

Specific Standards and Guidelines derived from the settlement agreement for the Save the Jemez lawsuit are subject to adjustment, should that agreement be modified. In that event an amendment to the Forest Plan will be issued.

Program

Components Activities Standards and Guidelines

Project undertakings are inventoried for cultural resources and areas of Native American religious use. Inventory intensity complies with Regional policy, and the settlement agreement for the Save The Jemez Lawsuit, and is determined in consultation with the State Historic Preservation Officer (SHPO). Generally, inventory standards are:

- One hundred percent survey of all projects causing complete surface disturbance;
- When less than 100 percent survey is deemed appropriate, the specific sample fraction surveyed is determined in consultation with the State Historic Preservation Officer and is generally greater than 10 percent. Factors determining when sampling is appropriate include projects with dispersed or minimal impacts, low expected archaeological site density, ground cover, and types of archaeological sites present in the area;
- Consultation with appropriate Native American groups;
- Consultation with the SHPO, and if necessary, the Advisory Council on Historic Preservation (ACHP), before project implementation.

Program
Components Activities Standards and Guidelines

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Program
Components Activities Standards and Guidelines

Significant, or potentially significant, inventoried sites are managed to achieve a "No Effect" determination, in consultation with the SHPO and ACHP (36 CFR 800).

Monitoring during and after project implementation is done to document site protection and condition.

Management strives to achieve a "No Effect" determination.

When sample surveys, rather than 100 percent survey coverage, are done for project clearances, survey locations and sample intensity are based on areas of greatest project impact, likely locations for cultural resource sites based on archaeological experience, land management planning, dispersion of sample coverage, certain topographic features specified in the Save the Jemez lawsuit settlement agreement, and likely areas based on the Forest site density predictions.

Identified sites are evaluated for their National Register eligibility when they are severely damaged, when they will be impacted by an undertaking, or information about the uniqueness, commonness, and characteristics of their site class are sufficiently known to make an informed decision. Sites for which determinations of eligibility have not been made are managed as if they are eligible, unless consultation with the SHPO indicates otherwise.

For each full-time professional cultural resource specialist employed by the Forest, at least two site nominations, one archaeological district nomination, or one thematic or multiple resource nomination will be made each year to the National Register of Historic Places. Or, alternatively, the Forest will coordinate with other Forests to prepare a joint district, thematic, or multiple resource nomination.

Inventoried sites allocated to management categories, and/or eligible or potentially eligible for the NRHP or potentially eligible for the NRHP are systematically revisited by regularly scheduled patrols, and by cultural resources specialists to assess natural deterioration, vandalism, or pilfering. Inspections are made at least biannually of properties that have been listed in or nominated to the National Register. Sites most susceptible to natural deterioration and/or human disturbance are monitored frequently. Rapid natural deterioration, or susceptibility to such, requires stabilization, restoration, and/or data recovery. Vandalism or pilfering requires protective measures such as signing, remote sensing, increased patrolling, investigations, stabilization, restoration, and/or data recovery. Specific sites or areas may be closed to off-road driving and withdrawn from mineral entry. Law enforcement is planned and implemented to minimize resource damage and user conflicts. Signing is appropriate to inform and educate the public and minimize direct law enforcement activity. Aggressively pursue violations.

Program

Components Activities Standards and Guidelines

Continue to interpret cultural resources through lectures, tours, papers, reports, publications, brochures, displays, films, trails, signs, and other opportunities.

Develop a program to complete 100 percent coverage of the Forest's cultural resource inventory by 2000.

The first priorities for cultural resources protection, enhancement, and interpretation are those sites that are easily accessible, have major interpretive potential, or are in major need of repair. Priority sites for signing are the C. Hart Merriam Base Camp, Honanki Cliff Dwellings, Elden Pueblo, Sacred Mountain, Palatki Cliff Dwellings, and Clear Creek Ruins. Priority sites for repair and stabilization are Honanki Cliff Dwellings, Palatki Cliff Dwellings, Sacred Mountain, Clear Creek Cliff Dwelling, and General Springs Cabin. Priority sites for developing interpretive brochures are Elden Pueblo, Sacred Mountain, Red Tank Draw Petroglyphs, Honanki Cliff Dwellings, Palatki Cliff Dwellings, and Clear Creek Ruins.

Priorities are to:

- Survey to clear projects.
- Survey to fill in gaps in existing inventory coverage.
- Survey areas of known high site densities.
- Survey areas that would do the most to answer current archaeological questions.

Computerize cultural resource site information by 1990.

Maintain a form for tracking compliance of each undertaking with the requirements of the National Historic Preservation Act.

Stabilize or repair damaged National Register sites or other sites funded by Regional priority.

Continue to develop the Elden Pueblo Interpretive Site and the cooperative education program with the Museum of Northern Arizona.

Encourage universities to conduct summer field schools to assist in cultural resource survey and excavation work and to provide the Forest with scientific knowledge.

Periodically focus media attention on Elden Pueblo and/or other sites to educate the public and further volunteer interest in resource management. Work with community organizations, businesses, and other agencies to promote Arizona Archaeology Week. Feature significant finds and significant damage in the media to increase public awareness of benefits and problems.

Program
Components Activities Standards and Guidelines

General Crook National Historic Trail

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 Sitgreaves National Forests. Evaluate and nominate qualified historic sites to the National Register of Historic Places by preparing and submitting the proper forms.

Use of motorized vehicles, except vehicles designed to travel over-the-snow, such as snowmobiles, on any portion of the route not already designated and designed for general vehicle travel is prohibited. Emphasize foot and horse travel recreation activities. Provide adequate signing to advise publics of motorized restrictions.

Manage resource activities to meet Visual Quality Objective (VQO) of foreground Retention, considering the historic qualities of the characteristic landscape.

Coordinate trail management, use, and development with other resource management considerations.

Within 2 years of Congressional designation as a National Historic Trail, formulate a comprehensive trail implementation schedule 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 Trail that are related to significant interpretive and recreation points of interest on or adjacent to the Trail. Emphasize protection for the historic value of the Trail route. Develop one representative visual logo for the entire Trail. Revise and expand current publications in cooperation with local sponsors.

Following is management direction for each section of the trail.

Prescott NF- 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 is developed.

Prescott NF - Dewey - Coordinate with Arizona State Parks and Transportation Departments to construct roadside marker. All subsequent roadside markers to follow similar coordination. Use trail logo.

Program

Components Activities Standards and Guidelines

Prescott NF Junction Cherry Road/FR 372 to Camp Verde Township - Manage 200 foot corridor to preserve evidences of historical roadway and landscape character, including related historic markers and water holes. Maintain and/or construct mile markers and intervisible rock cairns in cooperation with Adopt-A-Trail volunteer groups.

Coconino NF- Camp Verde Township to Clear Creek Campground on Forest Highway 9 - Provide roadside markers (use trail logo) in cooperation with local support. Continue to support interpretive programs at Fort Verde State Park.

Coconino NF- Clear Creek Campground to the 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, and intervisible rock cairns in cooperation with Adopt-A-Trail volunteer groups. Maintain cooperative agreement with Arizona State Parks for maintaining roadside markers at "Thirteen Mile Rock" and affiliated trailhead parking. Seek cooperative support from State and volunteer sources to expand this site as a developed interpretive loop trail route, using the parallel mule and wagon routes. Jointly sponsor a special trail brochure for self-guiding use as one to four day hiking recreation experiences. Design and install interpretive signs at Clear Creek Campground that relate to local historic value of trail for interested motorists. Study development potential of interpretive handicapped facilities for trail section near Clear Creek Campground.

Coconino, Tonto and Sitgreaves NFs - Long Valley Ranger District Boundary to Baker Butte to the Road past Woods Canyon Lake to Junction with Highway 260 - Manage 200 foot corridor to preserve evidence of historic roadway and landscape character, Nationalincluding related historic trees, markers, grave sites, and water holes. ForestsManage overnight camping within corridor to protect the historic roadway and related features. Maintain and/or install intervisible markers in cooperation with Adopt-A-Trail volunteer groups. Maintain markers throughout entire corridor, including sections routed along existing roads. Provide junction signs 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 and cultural significance of the General Crook route and other recreational opportunities of the Highline and side connecting trails in cooperation with Arizona State Parks. Adopt-A-Trail groups develop a special interpretive trail and handicap access section adjacent to Highway 87. Study development of interpretive facilities at significant historic sites.

Program

Components Activities Standards and Guidelines

Sitgreaves NF - Junction of Highway 260 and FR 139 (near Clay Springs) to terminate at Fort Apache - In cooperation with Arizona State Parks and Transportation Departments, construct roadside markers at known key points along this section. Seek cooperation of the White Mountain Apache Tribe for placement of an historic marker to indicate the eastern terminus of the trail.

Visitor Information Services--Standard Service Level Management

Develop and implement a VIS program by the fifth year of the decade, including, but not limited to, displays for Forest Service offices and selected VIS sites.

Maintain VIS sites/facilities on a 5-year program where at least 20 percent of the facilities are to Level I standards. Other facilities are maintained at not less than Level 3 standards.

Train receptionists to implement their part of the VIS program and monitor the effectiveness of the program. Provide programs at VIS sites where public benefits warrant, during the high use season. Provide patrol for public safety at VIS sites. Repair and maintain handicap trail and fishing site at Cave Springs Campground, using Volunteer Program.

Develop, implement, and maintain the Forest Recreation Opportunity Guides (ROG) during the first decade.

Provide timely reprints of major brochures and guides. Write and develop new information as needed to increase public awareness of recreation opportunities and hazards. Review printed information annually to determine needed updates.

Dispersed Recreation--Standard Service Level Management

Dispersed recreation areas are managed at standard service level.

Manage areas for public safety, resource protection, compliance checks, and capacity monitoring. Dispersed areas are kept clean for aesthetics, health, and safety. Areas damaged due to use are closed and restored as necessary.

Evaluate outfitter-guide needs for the Forest during the first decade. Solicit outfitter-guide service for significant public needs within 2 years after identification.

Maintain cross-country ski and snow play areas for public health and safety, using volunteers and permittees, as well as Forest personnel.

Evaluate the need for additional snowmobile areas and/or trails.

Evaluate the need for additional cross-country ski and snow play areas in the first decade.

Program

Components Activities Standards and Guidelines

Initiate Code-A-Site inventory system Forest-wide to track and prevent potential resource damage due to overuse of dispersed areas.

Off-Road Driving Management

Annually review and update the Off-road Driving Implementation Schedule; amend the implementation schedule as needed to prevent resource damage and/or user conflicts. Areas are closed to off-road driving when adverse resource impacts occur, when conflicts with the minimum management requirements occur, or if areas are too sensitive to withstand driving. The annual implementation schedule will provide for removal of forest products on administered sales.

By the second year of the decade prepare a Forest-wide inventory of off-road driving opportunities and use. Based on the inventory, by the fourth year of the decade update the Off-road Driving Implementation Schedule, and develop and sign an appropriate series of loop trails in various parts of the Forest to disperse use and to provide a variety of experiences in coordination with the ROS management classes.

Prepare an ROG or other literature describing and explaining the off-road driving program. Review annually and update as needed.

Work with representatives of the spectrum of motorized users (including 2, 3, & 4 wheeled vehicles) in developing, designating, and providing information on off-road driving opportunities. This will have special emphasis in MA 13, the Cinder Hills, but will be applied over the major part of the Forest.

Monitor motor vehicle use to determine the effectiveness of the Off-road Driving Implementation Schedule. Repair damage where cost effective and unacceptable environmental damage is occurring. Implement appropriate measures to prevent or minimize damage.

Areas closed to off-road driving at the beginning of the planning period are identified on the Off-road Driving Management Plan Map. Restrictions may be year-round or seasonal. There may be other restricted areas in the future that are not yet identified. Opportunities for recreational off-road driving will be considered in the road closure planning process. For example, existing roads which have eroded to a rock surface and are not likely to continue to erode may be left open and managed as motorized trails to provide a challenging driving experience when determined appropriate through an environmental analysis. These trails are signed for off-road vehicles and are not part of the regular road system. They are not included when calculating the average road density per mile, but should be considered in evaluating wildlife habitat. The following criteria are used to evaluate the need for future closures or restrictions:

- Soils that are receiving, or are expected to receive, damage to the extent that soil productivity will be significantly impaired.

Program
Components Activities Standards and Guidelines

- Slopes exceeding 40 percent where high probability for damage exists.
- Riparian areas being threatened or damaged.
- Meadows likely to be or being damaged.
- Areas adjacent to stream courses where potential for sedimentation is high.
- Areas within water courses or wetlands (permanently or intermittently wet).
- Where the Visual Quality Objectives (VQO) of Preservation, Retention, or Partial Retention are jeopardized.
- Areas of important cultural resource sites vulnerable to damage that are being threatened or damaged.
- Tree plantations less than 10 years old that are likely to be damaged.
- Habitat for threatened, endangered, or sensitive species that is threatened.
- Key wildlife areas being threatened or damaged.
- Areas important to wildlife reproduction, such as, fawning or nesting areas, where disturbance is causing, or likely to cause, significant stress and reduction of reproductive success.
- Restrictions or closures needed to meet road management objectives.
- Areas within municipal watersheds.
- Areas where user conflict must be resolved to ensure public safety.
- Areas considered to be dangerous for winter off-road driving activities.
- Dispersed recreation areas where conflicts exist.

Manageability will be an important criteria in establishing boundaries of areas with restrictions.

Other areas may be seasonally closed to provide opportunities for recreation in a setting without vehicular disturbance such as temporarily changing the ROS class social and managerial settings toward the primitive end of the spectrum. Initially, the Pine Grove and Rattlesnake areas, of approximately 12,600 and 11,100 acres, respectively, are closed annually from August 15 through December 31. These areas are monitored and, based on evaluation of monitoring results, maintained, added to, or cancelled.

Motor vehicle use will be seasonally restricted in designated cross-country ski areas and in big game winter range where there is a conflict.

Bicycle Use

Coordinate with local organized user groups to prepare a ROG for bicycles as use increases in the future.

Bicycle use on Forest roads/trails will be regulated if significant conflicts arise.

Law enforcement is planned and implemented to minimize resource damage and user conflicts. Signing is appropriate to inform the publics and help minimize the need for direct law enforcement activities.

Program
Components Activities Standards and Guidelines

Implement off-road driving restrictions in areas where roads are closed or obliterated and restrictions are necessary to prevent reopening of the roads by motor vehicle users.

Focus media attention on off-road driving management at least annually to enlist public cooperation. Feature volunteer organizations working to improve management.

Visual Resource Planning and Inventory

Revise and update the visual resource inventory during the first decade. Inventory the visual absorption capacity and the existing visual quality level of the Forest in the first decade. Projects are planned to meet or exceed visual quality objectives (VQO).

Review the VQO inventory as a part of project planning and make necessary corrections/refinements following field checking. Use VQO inventory to analyze impacts to VQO classes due to management activities such as timber sales, range projects, and firewood sales. Use the current Forest Visual Resource Management Inventory that lists VQO Forest-wide in conjunction with Forest Plan MA Map and descriptions to plan projects. Acceptable Forest-wide variation is ± 15 percent in each VQO class and relates to the changes from the updated inventory, except no change is allowed in Preservation.

VQO	Percent of Net Forest Acres
Preservation	8%
Retention	13%
Partial Retention	11%
Modification and Maximum Modification	68%

Allow only one classification movement downward unless a larger movement is justified after doing an environmental analysis for emergency situations such as removal of fire damaged timber or I&DC control needs.

Prepare a viewshed corridor implementation schedule during the first decade for the Interstate highways, U.S. Highways 89, 89A, and 180; Arizona State Highway 87; **State Route 260**; Forest Highway 3, and designated vista areas.

Signing is used for information, management, and safety purposes.

Program

Components Activities Standards and Guidelines

Seek special funding such as S.E.A.M. or donations for such visual resource improvement projects as abandoned mining claims and borrow pits within areas with VQO of foreground Retention or partial Retention that are identified as needing rehabilitation. Improve visual resources through borrow pit rehabilitation in conjunction with other pit uses such as timber sales and mineral sales. Use borrow pits as burial areas for compatible materials such as rock, soil, and slash. Improve visual resources through range or wildlife tank rehabilitation for tanks that do not provide reliable water, following transfer of water rights to reliable sites.

Recreation or VIS Site Construction/Expansion/Season Extension

Prepare concept plans and design review narratives for the Forest's prioritized list of planned developed sites. The list serves as a management guideline, although the Forest's priority list may change as funding dictates or management needs change.

Prepare detailed site plans for the sites scheduled in the first decade.

When opportunities occur outside of the normal appropriations process (e.g., State or local governmental funding, volunteers, or other partnerships) to accomplish additional projects listed beyond the first decade, proceed with planning and accomplishment. If projects are not listed, the appropriate environmental analyses will be done and a decision made whether or not to do unlisted projects.

Trailheads are located to screen and protect water sources and to prevent harassment to wildlife that use the waters.

Consider bear habitat requirements during project planning for developed recreation site expansion or construction.

The following are the Forest's highest priority improvements, listed in order for completion in the first decade. Funding levels may require adjustment of priorities. In addition there is an ongoing program of site rehabilitation including replacement/reconstruction of facilities such as toilets, tables, parking spurs, and portions of water systems. This is included within the constrained Forest Plan budget.

Site	Type	New Units	Additional PAOT
Upper Lake Mary Boat Ramp, Parking, Sanitation	New Construction	18	150
Narrows Picnic Ground	New Construction	20	100

Program
Components Activities Standards and Guidelines

Site	Type	New Units	Additional PAOT
Lower Lake Mary, Parking, Sanitation, area control	New Construction	24	80
Kachina Peaks Trailheads (3)	New Construction	0	150
Crescent Moon Campground	New Construction	60	300
Blue Ridge Reservoir Boat Ramp	New Construction	0	100
Knoll Lake Campground	Expansion	20	100
Bonito or Pine Grove Campground	Expansion	20	100
Mogollon Rim Campground	New Construction	50	250
Crook Trail Access Points (3)	New Construction	0	150
Total			1,480

The following are long-term recreational improvements, that are not prioritized at this time. They are listed in alphabetical order. Development of specific facilities could occur before those prioritized based on opportunities for partnerships and sources of funding.

Site	Type	New Units	Additional PAOT
Ashurst Campground	Expansion	56	280
Banjo Bill	Convert to Day Use	0	0
Bonito Group Use	New Construction	2	200
Bootlegger	Convert to Day Use	0	0
Bull Pen Campground	New Construction	50	250
Clear Creek Campground	Expansion	18	90

Program
Components Activities Standards and Guidelines

Site	Type	New Units	Additional PAOT
Mount Elden or Schultz Pass Primitive Horse Camp	New Construction	10	50
Elden Pueblo Cultural Resource Interpretive Site	Parking Lot and Interpretative Signing	0	150
Kelly Canyon Snowplay Area (Parking)	New Construction	0	150
Kinder Springs Group Area	New Construction	2	200
Lake Mary South End Boat Launch	New Construction	0	50
Long Lake Campground	New Construction	30	150
Long Lake Boat Ramp	New Construction	0	50
Manzanita Campground *	Expansion	8	40
Moqui Group Use Campground	New Construction	50	250
Mormon Lake Day Use Fishing Site (Parking)	New Construction	0	45
Pine Flat Campground	Expansion	20	100
Red Rock-Secret Mountain Trail heads (2)t	New Construction	0	105

* Expansion of Manzanita and Pine Flat Campgrounds is in conjunction with conversion of Banjo Bill and Bootlegger to day-use, in order to maintain the same overnight capacity of Oak Creek Canyon. This is per the Sedona-Oak Creek Plan.

Program
Components Activities Standards and Guidelines

Site	Type	New Units	Additional PAOT
Rockledge Fish & Boat Launch Site (Parking Site)	New Construction	0	45
Sycamore Canyon Wilderness	Reconstruction Trailhead Improvement	0	100
Verde River Access Parking	New Construction	0	100
Winter Cabin Trailhead	New Construction	0	50

Wildlife and Fish Operations and Maintenance

Standard

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. Follow approved recovery plans.

Wildlife and Fish

Inventory and evaluate wildlife and fish habitat. Use the best available resource data and technical expertise to identify habitat objectives and prepare implementation schedules for key habitats.

The riparian standards apply to areas meeting the riparian definition even though the sites may not have been large enough to be mapped as a discrete unit.

On identified big game winter ranges, treatments are designed to enhance the specified wildlife species. These areas are managed primarily for the welfare of the wildlife species using the area. Where forage is identified as a limiting factor for big game populations, seek opportunities to make available additional forage and implement where determined appropriate through analysis with the IRM and NEPA process.

T&E Operations and Maintenance

Inventory, evaluate, and prepare recovery schedules for proposed, T&E, and sensitive plant and animal species in the first decade or as species are proposed. Monitor approved schedules, reproductive success, and effects of management activities at occupied threatened, endangered, and sensitive species sites. Reintroduce T&E species in accordance with recovery plans.

Program

Components Activities Standards and Guidelines

Evaluate potential resource impacts on T&E and sensitive species habitat by projects and activities through a biological assessment (FSM 2670) and conduct appropriate consultation (FSM 2670) when necessary. Provide appropriate protection or enhancement.

Activities determined to cause disturbance, including public use, are prohibited in the vicinity of occupied peregrine falcon nesting habitat between March 1 and August 15. This seasonal restriction applies to occupied nesting habitat unless the site is determined to be unoccupied. It may be necessary to post signs and/or fence areas to provide protection.

Program

Components Activities Standards and Guidelines

Hedeoma diffusum and Senecio franciscanus are managed by the direction presented in the management plans prepared for each species. Hedeoma diffusum is covered by the Hedeoma diffusum Management Plan and Senecio franciscanus by the San Francisco Peaks Alpine Tundra Management Plan, which are both adopted by the Forest Plan.

Habitat locations for listed plant and animal species remain confidential to prevent unnecessary disturbances or theft. Provide appropriate law enforcement to protect habitat for listed species.

Identify areas where spotted owls occur and protect occupied nesting territory. Complete Forest spotted owl surveys in Decade 1.

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.

Protected areas include delineated protected activity centers; 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, research natural areas, wild and scenic rivers, and congressionally recognized wilderness study areas.

Restricted areas include all mixed-conifer, pine-oak, and riparian forests outside of protected areas.

Other forest and woodland types include all ponderosa pine, spruce-fir, woodland, and aspen forests outside protected and restricted areas.

Survey all potential spotted owl areas including protected, restricted, and other forest and woodland types within an analysis area plus the area 1/2 mile beyond the perimeter of the proposed treatment area.

Establish a protected activity center at all Mexican spotted owl sites located during surveys and all management territories established since 1989.

Allow no timber harvest except for fuelwood and fire risk abatement in established protected activity centers. For protected activity centers destroyed by fire, windstorm, or other natural disaster, salvage timber harvest or declassification may be allowed after evaluation on a case-by-case basis in consultation with US Fish and Wildlife Service.

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.

Limit human activity in protected activity centers during the breeding season..

Program

Components Activities Standards and Guidelines

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.

Monitor changes in owl populations and habitat needed for delisting.

Guidelines:

General

Conduct surveys following Region 3 survey protocol.

Breeding season is March 1 to August 31.

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 Protected Activity Center 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.

Protected Activity Center boundaries should not overlap.

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

Road or trail building in protected activity centers 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 sub-permit 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, **except for the Clark PAC where trees less than 16 inches diameter will be harvested.**

Treat fuel accumulations to abate fire risk.

- Select for treatment 10% of the protected activity centers where nest sites are known in each recovery unit having high fire risk conditions. Also select another 10% of the protected activity centers 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 protected activity center. 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 (**or less than 16 inches in the Clark PAC**), mechanical fuel treatment and prescribed fire to abate fire risk in the remainder of the selected protected activity center outside the 100 acre "no treatment" area.
- 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.
- Select and treat additional protected activity centers 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 non-selected protected activity centers 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 woody 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 protected activity centers treated for fire risk abatement. (See monitoring guidelines)

Program

Components Activities Standards and Guidelines

Steep Slopes (Mixed conifer and pine-oak forests outside protected activity centers 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-leaved 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)

Reserved Lands (Wilderness, Research Natural Areas, Wild and Scenic Rivers, and Congressionally Recognized Wilderness Study Areas): Allow prescribed fire where appropriate.

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 area and an additional amount of area at 150 basal area. 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 stands 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.

Program
Components Activities Standards and Guidelines

This table has been modified to contain only information pertinent to the Coconino National Forest.

Variable	Mixed Conifer		Pine-Oak
Restricted Area %	10%	+15%	10%
Stand Averages for:			
Basal Area	170	150	150
18 inch + trees/ac	20	20	20
Oak Basal Area	NA	NA	20
Percent total existing			
12-18"	10	10	15
18-24"	10	10	15
24+ "	10	10	15

Attempt to mimic natural disturbance patterns by incorporating natural variation, such as irregular tree spacing and various patch sizes, into management prescriptions.

Maintain all species of native trees in the landscape including early seral species.

Allow natural canopy gap processes to occur, thus producing horizontal variation in stand structure.

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.

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.

Save all trees greater than 24 inches dbh.

In pine-oak forests, retain existing large oaks and promote growth of additional large oaks.

Encourage prescribed and prescribed natural fire 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.

Program

Components Activities Standards and Guidelines

Retain substantive amounts of key habitat components:

- Snags 18 inches in diameter and larger
- Down logs over 12 inches midpoint diameter
- Hardwoods for retention, recruitment, and replacement of large hardwoods

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.

Domestic Livestock Grazing: Implement forest plan forage utilization standards and guidelines to maintain owl prey availability, maintain potential for beneficial fire while inhibiting potential destructive fire, maintain and restore riparian ecosystems, and promote development of owl habitat. Strive to attain good to excellent range conditions.

Old-growth: Except where other wise noted, implement forest plan old-growth standards and guidelines to maintain and promote development of owl habitat.

Other Forest and Woodland Types

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.

Guidelines for Specific Recovery Units

This section of the guidelines has been excluded because it does not apply to the Coconino National Forest.

Program

Components Activities Standards and Guidelines

Monitoring Guidelines

Monitoring and evaluation should be collaboratively planned and coordinated with involvement from each national forest, USFWS Ecological Services Field Office, USFWS Regional Office, USFS Regional Office, Rocky Mountain Research Station, recovery team, and recovery unit working groups.

Population monitoring should be a collaborative effort with participation of all appropriate resource agencies.

Habitat monitoring of gross habitat changes should be a collaborative effort of all appropriate resource agencies.

Habitat monitoring of treatment effects (pre and post treatment) should be done by the agency conducting the treatment.

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.

Range-wide: Track gross changes in acres of owl habitat resulting from natural and human caused disturbances. Acreage changes in vegetation composition, structure, and density should be tracked, evaluated, and reported. Remote sensing techniques should provide an adequate level of accuracy.

In protected and restricted areas where silvicultural or fire abatement treatments are planned, monitor treated stands 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.

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 quadrats randomly allocated to habitat strata. Quadrats should be defined based on ecological boundaries such as ridge lines and watersheds. Quadrat boundaries should not traverse owl territories. Twenty percent of the quadrats will be replaced each year at random.

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

Program

Components Activities Standards and Guidelines

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 a 1/2 mile beyond the boundary.

Establish, and delineate on a map, a post-fledging family area that includes six nesting areas per pair of nesting goshawks for known nest sites, old nest sites, areas where historical data indicates goshawks have nested there in the past, and where goshawks have been repeatedly sighted over a two 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 through out 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.

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.

Within the ranges of the Kaibab pincushion cactus, Pediocactus paradinei, and the Arizona leatherflower, Clematis hirsutissima arizonica, 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.

Program

Components Activities Standards and Guidelines

Guidelines:

General

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, stream banks, and channels should be prevented.

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.

Inventory

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.

Complete at least one year of survey, but two 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 that territory.

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 un-inventoried areas (VSS 1-3) will be managed to post-fledging family area (PFA) specifications while in that 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.

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 a VSS 3, based on the predominant VSS class, but in actuality a combination of VSS 4 & 5 predominate the area. For those situations, use the complete inventory methods.

Home Range Establishment

Post-fledging family areas (PFA) will be approximately 600 acres in size. Post-fledging family areas will include the nest sites and consist of the habitat most likely to be used by the fledglings during their early development.

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Establish a minimum of three nest areas and three replacement nest areas per post-fledging family area. 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 post-fledging family area.

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.

Manage for nest replacement sites to attain sufficient quality and size to replace the three suitable nest sites.

Management Scale

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.

Vegetation Management - Landscapes Outside Goshawk Post-fledging Family Area's

General: The distribution of vegetation structural stages for ponderosa pine, mixed conifer and spruce-fir forests is 10% grass/forb/shrub (VSS1), 10% seedling-sapling (VSS2), 20% young forest (VSS 3), 20% mid-aged forest (VSS4), 20% mature forest (VSS 5), 20% old forest (VSS6). NOTE: The specified percentages are a guide and actual percentages are expected to vary + or - up to 3%.

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 - 2.5 mile spacing across the landscape.

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 two groups of reserve trees per acre with six 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.

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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 one 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. One 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 per acre, 3 downed logs per acre, 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.

Vegetation Management - Within Post-fledging Family Areas

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

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+%.

Mixed Conifer: Canopy Cover for mid-aged (VSS 4) to old forest (VSS 6) should average 60+%.

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+%.

Woodland: Maintain existing canopy cover levels.

Vegetation Management - Within Nesting Areas

General: Provide unique nesting habitat conditions for goshawks. Important features include trees of mature to old age with high canopy cover.

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.

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Preferred treatments to maintain the desired structure are to thin from below with non-uniform spacing and use of handtools 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.

Spruce-fir, Mixed Conifer and Ponderosa Pine Cover Types: The nesting area contains only mature to old forest (VSS 5 & 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.

Woodland: Maintain existing canopy cover levels.

Human Disturbance

Limit human activities in or near nest sites and post-fledging family area's during the breeding season so that goshawk reproductive success is not affected by human activities.

The breeding season extends from March 1 through September 30.

Low intensity ground fires are allowed at any time in all forested cover types, but high intensity crown fires are not acceptable in the post-fledging 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 intensity 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.

Ground Surface Layer (All forested cover types)

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.

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.

Limit dozer use for piling or scattering of logging debris so that the forest floor and herbaceous layer is not displaced or destroyed.

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T&E Habitat Maintenance

Give priority to maintaining structures for threatened and endangered species.

T&E Plant Habitat Maintenance

Determine whether structural improvements are needed. Maintain structural improvements in operable condition or replace.

Protect occupied Cimicifuga arizonica habitat. Restrict ground disturbing activities within the habitat and provide shade needed for perpetuation of the species. Fence and/or relocate trails where necessary to protect occupied habitat.

Wildlife and Fish Habitat Maintenance

Determine the need for structural improvements and maintain those needed in operable condition or replace.

Wildlife and Fish Coop. With State, Federal Agencies, and Other Groups

Consult and cooperate with Arizona Game and Fish Department (AGFD) to at least achieve habitat management goals and objectives specified in the Arizona Wildlife and Fisheries Comprehensive Plans and strategic plans. Work with AGFD to fully consider opportunities for increasing habitat capacity above the objectives specified in the Comprehensive Plans and strategic plans. Where habitat capacity can reasonably be increased above the objectives specified in the Comprehensive Plan without adversely affecting other resources and uses, work with AGFD to fully consider these opportunities. Implement where determined appropriate through the environmental analysis process. Cooperate with the Fish and Wildlife Service and other agencies and organizations as the need arises. Cooperate with AGFD in evaluating proposals for reintroducing extirpated species into suitable habitat and on fish stocking and public access for fishing. Cooperate with the AGFD to prevent and/or remove unapproved introduced species.

In cooperation with AGFD pursue the possibility of a Sikes Act program to provide user funds for habitat improvement.

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Components Activities Standards and Guidelines

Evaluate each planning activity to determine public involvement needs and objectives. Aggressively pursue public cooperation in achieving the objectives of wildlife and fish habitat management by enlisting the support of interested groups or individuals who are willing to help inform and involve the public.

Provide timely public information about closures, fire danger, and other needed information to the AGFD for use in preparation of annual hunt brochures and in weekly news releases during hunting season.

Manage animal damage in cooperation with other agencies and cooperators to prevent or reduce damage to other resources. Direct control toward preventing damage or removing only the offending animal or animals necessary to meet land management objectives.

Nonstructural Wildlife Habitat Improvement

Improve vegetation conditions through seeding a mixture of species of grass, forbs, forage, and browse species desirable to wildlife.

Improve forage conditions by using prescribed fire where environmental analysis shows beneficial effects and in line with approved burning plans.

Manage forage to increase threatened and endangered species and management indicator species where it is determined appropriate through the IRM and NEPA process.

T&E Nonstructural Wildlife Habitat Improvement

Improve T&E and sensitive species habitat. Improvement projects give priority to recovery of T&E species. Conform to approved recovery plans.

Structural Wildlife Habitat Improvement

Develop wildlife waters where needed in accordance with approved plans and fence where necessary to protect wildlife values. Waters in openings shall be located not more than one-quarter mile from the edge of an opening.

Construct raptor perch, roost, and nest structures where applicable to improve habitat.

Install structures, such as gates or barriers, necessary to manage roads to limit or restrict access into key big game winter range and bald eagle nesting and wintering areas. Follow with appropriate administration and enforcement.

Range Resource Planning and Inventory

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 1/4 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 1/4 mile from water and less than 20 acres. Within key forage monitoring areas, select appropriate key species to monitor average allowable use.

In consultation with US 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 following table during the forage growing season.

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

Range Condition †	Continuous Season-long	Defer 1 year in 2	Defer 1 year in 3	Defer 2 years in 2	Rest 1 year in 2	Rest 1 year in 3	Rest 2 years in 3	Rest Over 2 years 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

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 or 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

* 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 or 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 that encompasses the composition, density, and vigor of the vegetation and physical characteristics of the soil.

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.

Range Resource Planning and Inventory

Range

Range Administration--Receive applications for grazing permits, issue and validate permits, and prepare annual permittee plans as per FSM 2230.

Manage allotments at the C through D level of Management Intensity in existing allotment management plans (AMP). Where appropriate economically and environmentally, implement E Level (MIH 1309.11). No new high stock

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density stock control grazing cells, are initiated until monitoring and evaluation of the Red Hill Cell has been completed in 1989. New cells are predicated on the results of the Red Hill Cell monitoring evaluations.

Permittees are responsible for maintenance of structural improvements as defined in the AMP or the annual operating plan. Maintenance of improvements continues until replacements are built, then the permittee is responsible for maintaining the replacement.

Some State, private, and non-Forest Service lands within the Forest may be excluded from grazing; some lands are grazed under private agreement, and/or waived to the Forest Service for management. (FSM 2230)

Cooperative and technical assistance are provided on state and/or private lands as requested to increase yield or quality of forage for domestic livestock use in accordance with FSH 2209.22 and 2209.23.

Range cooperation with agencies and groups is encouraged. Coordinate range activities with outside, local, State and Federal agencies, and groups.

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

Do production and utilization surveys at least every 9 to 13 years for capacity determinations.

Permitted use and capacities are maintained in balance for the allotments by increasing or decreasing numbers of livestock, by changing the management intensity levels, and by initiating changes in livestock class, season of use, and rotation patterns.

Conduct annual allotment inspections to Regional standards as set in FSH 2209.21.

Revise and update AMP'S at least every 10 years to the Regional standards in FSH 2209.21. Management systems are designed to provide multiple-use management. **The integrated resource management (IRM) approach is used during the environmental analysis of AMP's. The scoping portion of IRM will include an interdisciplinary analysis with input from potentially affected and interested parties. Issues that are significant and need to be included in further analysis will be identified. As a minimum the following areas will be considered to determine whether they contain significant issues: range condition, riparian condition, watershed condition, economic feasibility, practicality of implementation, wildlife habitat, recreation opportunity spectrum, timber management, and resource access and travel management.**

Permitted use and capacity are assigned based on full capacity range only.

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Manage grazing use to maintain or enhance condition classes of full capacity rangelands.

Full capacity rangeland in unsatisfactory condition that has potential for improvement is treated through appropriate structural and nonstructural range improvements and pasture stocking rate adjustments as described in the AMP'S.

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

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.

Place cattleguards where problem gates exist. Priority for cattleguard placement is in the following order: National Forest boundary; allotment boundary; and interior allotment division fences. Where problem gates are located on the boundary with non-Forest Service in-holdings, the Counties, cities, and private landowners are encouraged to install cattleguards.

Waterlots are left open to wildlife for free access except when controlling livestock distribution through water accessibility and when soil moisture conditions adversely effect fence stability.

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 facilities. Bubblers are used to prevent freezing.

Salt is used to help achieve proper livestock grazing distribution. Permanent salt is not placed within 1/4 of a mile of the edge of any riparian area or tree plantation. Temporary salting may be approved if it will help to achieve a specific management objective for enhancement of riparian areas.

No livestock trailing is allowed except within a permittee's own grazing allotment(s). Exceptions require Forest Supervisor approval and are based on documented results of an environmental analysis.

Reconstruction of Range Structural Improvements

Analyze range structural improvements to determine whether they are needed during the preparation of the AMP'S. Reconstruct only those improvements that are needed. Remove improvements no longer needed and restore the area as appropriate, e.g., old fence is picked up and removed, discontinued fences are completely removed, and ineffective stock tanks returned to production following transfer of water rights.

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Reconstruct range structural improvements to appropriate construction standards or better according to FSM 2244, and FSH 2209.22. Maintain range structural improvements in operable condition according to FSM 2244, FSH 2209.22, and FSM 2320.

Inventory earthen tanks having current water rights that are not contributing to management because of poor location, inefficient placement, or in closed allotments and not needed by wildlife, during the first decade. Exchange the old sites for new sites with similar capacity and transfer the water rights. The old tanks are filled in, reshaped, and returned to production.

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

When existing allotment boundary, Forest boundary, and water lot fences need to be reconstructed or new fences are built, they shall consist of four wires, with the top wire being at least 38 inches but no more than 42 inches above the ground. The bottom wire will be smooth twisted and at least 18 inches above the ground. Highway right-of-way fences will meet highway fence standards.

Interior fences in an allotment are generally three wire fences with the bottom wire smooth and conform to the above height restrictions. Install antelope passes, let-down fences, electric fences, or elk jumps wherever necessary to improve wildlife travelways.

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 level identified for the Management Area. Comply with construction standards set in FSM 2240, 2320, and FSH 2209.22.

Evaluate proposed earthen stock tank sites for location, adequacy, soil suitability, efficient use of the water resource, 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.

Range Forage Improvement

Establish woody riparian vegetation as defined in FSH 2509.23 in wet meadows and other riparian areas. Control livestock grazing through management and/or fencing to establish vegetation and eliminate overuse.

Manage all seeding projects to avoid concentrating livestock use in riparian and other sensitive areas.

Noxious and Invasive Weeds Standard

Incorporate measures to control invasive weeds into project planning, implementation, and monitoring.

Guidelines

Use the Appendix B “Design Features, Best Management Practices, Required Protection Measures, and Mitigation Measures” in the “Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds on the Coconino, Kaibab, and Prescott National Forests within Coconino, Gila, Mojave, and Yavapai Counties, Arizona” (2004) for specific mitigation measures. Deviance from Appendix B does not trigger the need for a Forest Plan Amendment; however Required Protection Measures from Section 7 consultation (Endangered Species Act) must be followed. If

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as a result of environmental analysis, Best Management Practices or Mitigation Measures are modified, document the reason(s) in a NEPA decision.

Timber Resource Management Planning and Inventory

Timber

Annually update the 10-Year Timber Offering Schedule and records (FSM 2410).

Reinventory the timber resource each decade.

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Silvicultural Examination and Prescription

Complete compartment examination and prescriptions each decade. Certify projects that meet the treatment prescription objectives (FSM 2400 and FSH 2409.26d).

Insect and Disease Management

Monitor insect and disease activities on all lands annually, including both suitable and unsuitable. Evaluate the extent to which insect and disease control measures are needed to protect either the suitable or unsuitable areas.

Habitat requirements for threatened, endangered, and sensitive species take precedence over insect and disease control.

Cuts are designed to eliminate or reduce dwarf mistletoe infections to manageable levels.

Use pesticides when they are legally available, environmentally acceptable, and are the most cost-efficient means of preventing or suppressing damaging pest outbreaks.

Assist individuals in analyzing trees with insects and disease problems and refer them to the appropriate agency (State Land Department and/or State and County Extension Services) for technical assistance.

Integrated Stand Management (ISM)

Establish and maintain stand diversity through ISM to provide suitable habitat for wildlife in lands suitable for timber production, while maintaining or enhancing timber resource production and timber age class distribution (regulation). See specific management areas for Standards and Guidelines.

10,000-Acre Blocks (10K Blocks)

Combine compartments to form an identifiable block approximately 10,000 acres in size. A range of 8,000 to 12,000 acres is acceptable. Individual blocks may be larger or smaller if approved by the Forest Supervisor.

Standards and Guidelines are applied on a 10K Block basis rather than on an individual timber sale or project basis.

Minimum Management Requirements are exceeded where it is good multiple-use management to do so, such as greater density of snags adjacent to meadows, riparian areas, and key water sources.

Wildlife habitat objectives for each 10K Block are evaluated on an individual stand basis as well as for the entire block.

Evaluate the need for wildlife forage in the 10K Blocks using the Habitat Capability Index, other available data and professional judgement and, where needed, adjust prescriptions to obtain it. These areas are stands of up to 10 acres with reduced GSL

Old-Growth

Standards:

Until the forest plan is revised, allocate no less than 20 percent of each forested ecosystem management area to old-growth as depicted in the table below.

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 acres.

Guidelines:

All analyses should be at multiple scales - one scale above and one scale below the ecosystem management areas. The amount of old-growth 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 percent 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.

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.

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.

Forested sites should meet or exceed the structural attributes to be considered old-growth in the five primary forest cover types in the southwest as depicted in the following table.

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

Forest Cover Type, Name	Piñon;Juniper		Interior		Aspen	Mixed-Species		Englemann Spruce Sub	
Forest Cover Type, SAF Code	239		237		217	210,211,216,219		206,209	
Site Capability Potential Break Between Low and High Site			55 Minor			50 Douglas-fir		50 Englemann Spruce	
Site	Low	High	Low	High	All	Low	High	Low	High
1. Live Trees in Main Canopy:									
Trees/Acres	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 Tree Diameters (Yes or No)	ND	ND	ND	ND	No	ND	ND	ND	ND
3. Dead Trees									
Standing									
Trees/Acre	0.5*	1	1	1	ND	2.5	2.5	3	4
Size DBH/DRC	9"	10"	14"	14"	10"	14"	16"	12"	16"
Height (feet)	8'	10'	15'	25'	ND	20'	25'	20'	30'
Down									
Pieces/Acre	2	2**	2	2	ND	4	4	5	5
Size (Diameter)	9"	10"	12"	12"	ND	12"	12"	12"	12"
Length (Feet)	8'	10'	15'	15'	ND	16'	16'	16'	16'
4. Tree Decadence									
Trees/Acre	ND	ND	ND	ND	ND	ND	ND	ND	ND
5. Number of tree canopies	SS/MS	SS/MS	SS/MS	SS/MS	SS	SS/MS	SS/MS	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

Piñon Pine: *Dead limbs help make up dead material deficit.
**Unless removed for firewood or fire burning activities

Spruce-fir: *In mixed corkbark fir and Englemann spruce stands where Englemann spruce is less than 50 percent composition in the stand
** In mixed corkbark fir and Englemann spruce stands where Englemann spruce is less than 50 percent composition in the stand

ND is not determined; SS is single-storied; and MS is multi-storied

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Minimum Management Requirements are exceeded where it is good multiple-use management to do so, such as greater density of snags adjacent to meadows, riparian areas, and key water sources.

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Water Resource Planning

Watershed/Soil/Air Participate in nonpoint assessments with the State of Arizona as required by sec. 319 (a)(1) of the Clean Water Act (amended 1987).

Evaluate requests for weather modification through the environmental analysis process.

Ensure compliance with PL 92-500 "Federal Water Pollution Control Act" and Arizona Water Quality Standards through the implementation of Best Management Practices (BMP) to prevent water quality degradation.

Best Management Practices:

Use project monitoring information to evaluate BMP'S currently used to reduce nonpoint pollution from activities on the Forest. BMP'S include project planning as well as on the ground measures. By 1995, develop guidelines for implementation of BMP'S on the Forest. In the interim period, a general list of BMP'S has been included below. Apply these practices, depending on individual project and site requirements, to reduce nonpoint source pollution and protect riparian areas.

Filter Strips

Plan for appropriate filter strips adjacent to streamcourses and/or riparian areas, as determined through the IRM process. A filter strip is an area of vegetation and forest litter located adjacent to streamcourse and/or riparian areas for the purpose of filtering sediment, providing bank stability, and in tree/shrub ecosystems providing shade for fisheries habitat. The ability of the strip to trap and filter sediments is a function of the amount and type of material on the ground, and width and slope of the strip. The ability of the strip to provide shade over perennial streams is dependent on the height of the vegetation and orientation of the stream with respect to the sun. Filter strip widths provided below are for average ground cover conditions. Significant topographic changes, such as abrupt canyon edges may be used as boundaries for filter strips, as long as ground disturbing activities beyond the canyon walls do not influence water quality. The table below should be used as a guide for determining filter strip width. Erosion hazard is defined as the risk of erosion and sedimentation that is based on slope, soil type, and the amount and type of material on the ground that is able to trap eroded material.

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FILTER STRIP TABLE - NONRIPARIAN STREAMCOURSES

Erosion Hazard	Filter Strip Slope Distance
Severe	1.5 chains on each side of streamcourse
Moderate	1.0 chains on each side of streamcourse
Slight	0.5 chains on each side of streamcourse

- Limited skidding may occur within the filter strip of nonriparian streamcourses as long as the ability to function as a filter strip is maintained.
- Landings, decking areas, machine piling, skid trails, and roads (except at designated crossings) are planned outside of the filter strip of nonriparian streamcourses.

FILTER STRIP TABLE - RIPARIAN STREAMCOURSES

Erosion Hazard	Filter Strip Slope Distance
Severe	2.0 chains on each side of streamcourse
Moderate	1.5 chains on each side of streamcourse
Slight	1.0 chains on each side of streamcourse

- Directional falling and end-lining of logs out of the filter strip without crossing the streamcourse may occur.
- Landings, decking areas, machine piling, limited skidding, skid trails, and roads (except at designated crossings) are planned outside of the filter strip of riparian streamcourses.

Streamcourses

- Designate stream courses and riparian areas to receive protection during projects such as timber sales and road work. As a minimum, those streams shown on 7-1/2 minute quads as stream courses are evaluated for the need to be designated stream courses.
- Existing wood debris in stream channels is not disturbed unless designated for removal as a special project to improve stream channel conditions.
- Logging and other debris that gets into stream channels is removed to above the high water mark before winter rains and snows begin except when an environmental analysis shows that the debris can be effectively used to improve fisheries habitat.
- Locate new roads out of stream courses and water-collecting features such as swales. Relocate roads out of bottom positions and obliterate poorly located segments as they are identified.
- Provide adequate road drainage to prevent concentrated flow and sedimentation.
- Maintain at least 80 percent of the potential crown cover in the riparian area.
- Plan projects, parts of projects, and/or management practices for soil and water resources improvement where watershed condition is unsatisfactory. Incorporate plans for soil and water improvements into project planning for other resources.

Program

Components Activities Standards and Guidelines

Use the following BMP techniques to minimize sedimentation from road construction and reconstruction:

- Outsloped road surface;
- Leadout ditches and relief culverts;
- Energy dissipators on culverts;
- Vegetating cut and fill slopes;
- Riprap installation;
- Rolling grade.

Water Resource Inventory

Conduct watershed condition inventory as outlined in R-3 Hydrology Note 20, dated February 19, 1984, (as updated) by 2000. Complete 60 percent of the inventory during the first decade.

Annually update inventory of gully systems and sheet erosion.

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Program
Components Activities Standards and Guidelines

Inventory riparian communities and areas capable of supporting riparian species by the end of the first decade. Channel condition and aquatic habitat condition will be included in the survey. Plan and design projects in areas of unsatisfactory or degraded condition to promote channel and streambank stability and to improve flow and timing of water. Meet or exceed eighty percent of Regional requirements above the Rim and ninety percent below the Rim by 2030. Manage to achieve at least 25 percent of the currently unsatisfactory riparian areas will be in satisfactory condition by 2000.

As information is available, develop inventory of important groundwater recharge areas. Evaluate management practices to assure that recharge potential is maintained.

Assure compliance with Executive Order 11990, protection of wetlands:

- Locate roads out of wetlands.
- Locate skid trails and decks out of wetlands.

Assure compliance with Executive Order 11988, floodplain management:

- Conduct flood hazard evaluations (100 year flood plain) on all potential land exchanges.
- Design structures built in drainages to meet appropriate flood occurrence intervals.

Inspect areas proposed to be treated with chemical agents such as pesticides and herbicides to ensure that surface or ground water contamination does not occur.

Water Resource Monitoring

Cooperate with the University of Arizona and Northern Arizona University in carrying out the Memorandum of Understanding for work to be continued on the Beaver Creek watersheds.

Evaluate the need to monitor water quality from areas disturbed by management and use activities. Conduct monitoring where needed to assure compliance with the Arizona State Water Quality Standards and P.L. 92-500.

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). Conduct monitoring as necessary to assure compliance with standards for aquatic life and wildlife where known problems are occurring.

Evaluate watershed condition for its effect on turbidity.

Conduct snow surveys as per cooperative agreement with Soil Conservation Service.

Program
Components Activities Standards and Guidelines

Water Uses Management

Maintain close working relations with the City of Flagstaff to ensure coordination, cooperation, and compliance with permit conditions for the Inner Basin, Upper and Lower Lake Mary, Lake Mary Well Field, and Woody Mountain Well Field.

Take action to legally protect Forest uses of needed waters.

File for water rights on appropriable waters following State procedures. Complete all documentation required for the adjudication process by dates specified by the courts.

Evaluate current and proposed water uses to promote efficient use of Forest Water resources.

Take action to obtain instream flow water rights for fish, wildlife, recreation, and channel maintenance purposes:

- For nonappropriable water uses, check for compliance with Arizona Revised Statutes and R-3 guidelines.
- Participate in State water right adjudications.
- Secure water rights through purchase or severance-and-transfer when additional sources are needed.
- Maintain and update annually an inventory of all water uses on the Forest (WURR).

Water Resource Improvement

Complete Watershed restoration implementation schedule by 2005 to improve all unsatisfactory ecosystems and watersheds. These action plans cover all activities and uses and are supplemental to Forest Plans.

Maintain current satisfactory watershed conditions and improve any unsatisfactory conditions to satisfactory by 2020.

Implement resource improvement projects that are cost-effective and/or are beneficial for maintaining and improving water quality, quantity, and soil productivity. Priority is given to vegetative versus structural measures. On those areas where grazing occurs, projects are only done where there is an approved AMP. Treated areas are protected by grazing management, fencing, and/or other methods, until recovery is satisfactory. On those areas where grazing occurs, management will be evaluated and modified if necessary to be consistent with the objectives of the improvement project. In project planning evaluate the need for planting nonpalatable herbaceous and woody vegetation to discourage concentration of elk and livestock.

Program

Components Activities Standards and Guidelines

Implement emergency fire rehabilitation measures where necessary to protect soil and water resources from intolerable losses or to prevent unacceptable downstream damage.

Enhance watershed condition by obliterating roads causing resource damage. A total of 400 miles of roads will be obliterated by the end of the first decade (average of 40 miles annually).

Water Resource Improvement Maintenance

Evaluate the need for maintenance and, where appropriate, do maintenance to protect investments in water resource improvement projects as needs are identified.

Terrestrial Ecosystem Survey

Conduct Terrestrial Ecosystem Survey to standards, policies, and guidelines as defined in 2550 TES Handbook and National Cooperative Soil Survey, by the Regional Zone TES team during the first decade.

Soil information from a Level 3 TES is intended for:

- Broad resource, land management, and activity planning at Regional, Forest, and District levels.
- Low investment, extensive land management projects such as timber sales and range allotment analysis that do not require site specific, precise, highly detailed soil interpretations.
- The initial identification of areas that will require additional specific soil information necessary for project level work as outlined in the Plan.

Conduct an on-site soils investigation for soil disturbing projects which require site specific, precise, highly detailed soil information which is beyond the scope of what is provided in a Level 3 T.E.S., such as terrestrial ecosystem information concerning inclusions and other miscellaneous areas which is important for site specific projects. Site specific projects would include but are not limited to site preparation, campgrounds, trails, and pit tanks.

Mining Law Compliance and Administration

Minerals

Process plans of operation under 36 CFR 228 expeditiously. Seek to

achieve approval of the proposed operation plan or a modified plan within 30 days of the receipt of the proposed operation plan.

Conduct mining claim validity examinations and initiate contest action when there are conflicts between claims believed to be invalid and planned Forest management or when unauthorized occupancy/use is occurring on a mining claim.

Program
Components Activities Standards and Guidelines

Recommend to the Department of Interior the mineral withdrawals, retentions, revocations, and modifications identified under activity J04 by 1988. These withdrawals are all the Forest special areas currently identified as justifying a mineral withdrawal. During Forest Plan implementation it is possible that additional withdrawal candidate areas will be identified. Any such candidates will be subject to public review and FLPMA procedures.

Evaluate and administer proposed mineral operations in a manner that does not result in a de facto withdrawal. Monitor the implementation of surface resource activities and the application of Standards and Guidelines to determine if de facto withdrawals are occurring.

Notices of Intent, Operating Plans, and EA's/EIS's are used to manage the beneficial and adverse effects from mining activities.

Conduct environmental analysis for mineral projects. Apply Standards and Guidelines recognizing the distinction between temporary or short-term impacts usually associated with exploration activities and the long-term impacts usually associated with mineral development. Emphasize planning to avoid or repair adverse effects on riparian-dependent resources, channel morphology, and/or streambank stability.

Mineral projects meet NEPA requirements. Future EA'S/ EIS'S from other resource areas receive appropriate input from minerals resource. Surface resource projects and plans which have potential for conflict with the development of the minerals resource, such as wildlife implementation schedules, T&E recovery schedules, viewshed corridor plans, and ROS plans will receive input from a Forest Service mineral resource specialist regarding potential impacts on mineral exploration and development and on ways to avoid unnecessary conflicts between surface and mineral resources. Input will also be solicited from the interested and affected publics including, as appropriate, mining claimants, Arizona Department of Mines and Mineral Resources, Arizona mining and prospecting associations, and leasable energy companies.

Minerals Management – Leaseable

There will be no surface occupancy where listed endangered species exist, on slopes greater than 40 percent, on areas where the VQO is foreground Retention, on the Montezuma Castle Backdrop Area, or the portion of Deadman Wash basin adjacent to Wupatki National Monument. On a case-by-case basis, minor exceptions, such as a buried pipeline, may be considered provided the overall foreground Retention VQO is met.

Minerals Management--Oil and Gas

Accept, evaluate, and where appropriate, approve, and administer Forest Service preliminary prospecting permits for geophysical and geochemical prospecting operations.

Program

Components Activities Standards and Guidelines

Review and recommend stipulations to BLM for oil and gas lease applications.

Cooperate with Department of Interior in oil and gas leasing operations, including surface reclamation efforts.

In sensitive areas, in conformance with R-3 standards and guidelines for oil and gas leasing, request inclusion of R-3 Supplement C, Limited Surface Use Stipulation.

Minerals Management--Geothermal

In the first decade, allow further USGS studies to determine whether a geothermal resource exists.

Maintain maps of potential geothermal areas. Process prospecting permits and lease applications. Any lease issued must comply with pertinent regulations and policy guidelines.

Minerals Management--Uranium

Maintain maps of potential mineral locations, data base information, and mining claim information. Process operating plans according to 36 CFR 228 expeditiously.

Minerals Management--Nonenergy

Maintain map of potential mineral locations, data base information, and mining claim information. Process prospecting permits and lease applications expeditiously.

Manage the adverse effects of leasing in areas of high resource sensitivity. Use same criteria as detailed under Mining Law Compliance and Administration.

Minerals Management--Common Variety Minerals

Maintain a list of common variety mineral material source pits. Process applications expeditiously for common variety mineral removal permits.

In-service projects requiring mineral materials will consider environmental concerns, multiple-use objectives, economic costs, and savings opportunities. Project-level environmental analysis will consider environmental potential of new sources as well as existing sources. Project-level environmental 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. Resource considerations will be evaluated at the same time. If other sources are considered, the extra economic costs, environmental concerns, and multiple-use objectives are identified and considered in the decision to select a material source.

Program

Components Activities Standards and Guidelines

Implement the rock resource management direction for aggregate surfacing material by 1992. Conduct geological investigations of aggregate material sources for project planning and for road construction maintenance.

Meet the demand from State, County, and City agencies for aggregate material. This may be accomplished on a free-use basis when they qualify under the requirements of 36 CFR 228.

When possible, coordinate mineral material sources to provide other uses, such as snow play areas. Locate and design new mineral material sources or reopen old ones in a manner consistent with the assigned VQO for the area. Foreground Retention areas will generally not be selected. Involve the Forest Landscape Architect in planning and review phases of pit use and development.

Mineral Reservation and Outstanding Rights

Evaluate and respond within 60 days or less after receipt of a complete operating plan for surface occupancy unless there is a specific reason to extend the time. Work cooperatively with proposed operations of private mineral rights to reduce impacts on National Forest resources. In sensitive resource areas, protect resources by investigating mineral rights using methods such as title searches, BLM record searches, and Zone Geologist involvement.

Mineral Character or Potential Evaluation

Maintain a 1/2" - 1 mile scale Forest map inventory of Forest mineral potential. Obtain mineral reports from Zone Geologist for land exchange cases.

Mining Area Reclamation

Prepare a mined area, reclamation implementation schedule in the first decade. Implement 20 percent of the top priority work in the second decade.

Geological Planning and Inventory

Include a geologist or minerals specialist as part of the interdisciplinary process in the next Forest Plan update.

Forest Land and Resource Planning

LMP/Special Uses/Lands

Develop and maintain the Forest Land Management Plan.

Program
Components Activities Standards and Guidelines

Resource areas provide support to land management planning through input of resource data, technical expertise, and technology transfer between other agencies and organizations in order to define and implement standards and guidelines.

Work with Rocky Mountain Forest and Range Experiment Station (RMFRES) personnel to find appropriate ways to make research results available to and understandable by field personnel.

Coordinate with out-service requests for non-disturbing activities as a part of the program for the Beaver Creek Watershed Biosphere Reserve.

Special-Use Management (Nonrecreation)

Process special-use applications within 60 days or less of receipt. Processing can include referral back to the applicant to provide additional information relevant to the environmental analysis. In these cases a decision may not always be reached within 60 days, but an appropriate action will be taken.

Special-use applications are processed and approved by priority. Top priority is for those that benefit the public interest, the National Treasury, or the National Forest. Require applicants to do the appropriate part, or all of the scoping, data collection, analysis, and documentation of analysis as needed for the NEPA process.

Urban expansion needs are evaluated and appropriate action taken to meet community needs on public lands where environmentally acceptable and logical to do so.

Government agencies with permanent or long-term, high-investment use of Forest land will generally be required to acquire the land for such uses as landfills, airports, and sewage facilities. Exceptions will be made only when it is clearly in the overriding public interest.

Landfills are generally not permitted on the Forest. However, when exceptions are made, they are operated to use the land as efficiently as possible by maximizing the depth of the pit, compaction of the trash, and/or otherwise using methods to minimize the surface area required.

Evaluate requests for transmission corridors based on public need, economics, and environmental impacts of the alternatives. Use existing corridors to capacity with compatible utilities where additions are environmentally and visually acceptable before evaluating new routes. Overbuilding and underbuilding are considered for additions.

New corridors will avoid wildernesses, RNA's, geological and botanical areas, Elden Environmental Study Area, and the ponderosa pine and mixed conifer vegetation types. New corridors will be evaluated for their potential impacts on T&E habitats.

Program
Components Activities Standards and Guidelines

New corridors are managed to maintain current resource protection and outputs to the degree possible.

Powerlines and towers are built (construction or reconstruction) to specifications compatible with raptor use.

Inspect special-use authorizations for compliance when authorizations are reissued. Inspect electronic sites annually. Other authorizations are inspected through a documented "self-inspection" system implemented by the Ranger or Forest Supervisor whenever an acceptable inspection program can be implemented in this way. If a "self-inspection" system cannot or should not be implemented, then inspections will be made on a priority basis or, if not critical, on an opportunity basis.

New proposals for electronic sites are evaluated on a case-by-case basis for compatibility with other uses and are limited to the existing developed sites (see Forest Electronic Sites Inventory, Appendix C). Nontraditional uses are evaluated and, where appropriate, approved to consolidate users at existing sites, or if necessary, at new sites selected to reduce resource impacts. They are identified and documented through the NEPA process.

Consider use of fire lookouts for electronic sites if certain criteria are met. These include but are not limited to:

- Applicable Visual Quality Objectives will be met;
- Plowing of snow for access during winter months would be performed by the permittee(s), or access by over-the-snow equipment would be required;
- Radiation levels at the lookout tower must not exceed Federal standards;
- The integrity of the tower must not be compromised if antennas are placed on it;
- No antennas will be allowed to obscure the lookout's line-of-sight for detection.

Proposals for increased development by Lowell Observatory on the Anderson Mesa site use the NEPA process and have a site development plan. Construction/reconstruction of FR128 considers observatory needs.

Emphasize coordination of research projects from entities, such as universities, that want authorizations. Ensure protection of resource values and eliminate duplication of projects.

There is a charge for new authorizations whenever appropriate. Convert free-use to charge authorizations when fees are justified. Otherwise, fees are reviewed in accordance with schedules in FSM and FSH.

Authorizations are terminated or suspended when authorization conditions are not met and the holder refuses to comply.

Program
Components Activities Standards and Guidelines

Evaluate all existing special uses during the first decade to determine whether continued use is justified. If not justified, take actions to terminate on a Forest priority basis.

Appropriate multiple special-use authorizations to a single person, organization, or agency are consolidated into master authorizations in the first decade.

In evaluating proposed apiary permit sites, minimize conflicts between the bears and the bees. Individual sites should be at least 3 miles apart to ensure available forage. Locate hives far enough from livestock/wildlife waters, developed recreation sites, and known concentrated dispersed recreation sites to avoid conflict caused by excessive concentrations of bees.

Right-of-Way Grants for Roads and Trails

Process special-use applications for roads and trails within 60 days or less of receipt. Processing can include referral back to the applicant to provide additional information relevant to the environmental analysis. In these cases a decision may not always be reached within 60 days, but an appropriate action will be taken.

Right-of-way grants are processed by priority, first priority being the public interest and National Forest needs. Generally, only one access road is approved to a parcel of private property whether there are one or many owners. Where there are multiple landowners to be served by the access, issue right-of-way to either local government, an improvement district, or a homeowners association with authority to collect funds for road maintenance. In evaluating requests for access to private land across National Forest fully use the NEPA process including evaluation of all reasonable alternatives (from an engineering and environmental standpoint) regardless of the applicant's stated preference, including those across non-National Forest land. Grant rights-of-way and authorization for road construction only on locations and to plans and specifications that effectively protect National Forest, and other affected ownerships, lands and resources. Counties are encouraged to apply for easements on roads that they maintain. Special-use authorizations to the State for public highways are converted to easements on a priority basis. Counties and cities are issued easements for access to new subdivisions.

Easements for new or reconstructed State or County roads are applied for immediately upon completion of construction, at which time temporary special-use authorizations terminate.

Withdrawals, Modifications, and Revocations

Existing withdrawals were reviewed in accordance with FLPMA and part of the Forest Plan process. Sensitive areas, those requiring special protection, were reviewed and recommended for withdrawal when

Program

Components Activities Standards and Guidelines

appropriate. Examples of these areas are important cultural resource sites, campgrounds, Oak Creek Canyon Scenic Area, and administrative sites. The following list includes the currently identified areas needing a withdrawal in the first decade:

- Forest Road 545 between US 89 and Sunset Crater Volcano National Monument
- Bonito Campground
- Visitor's Center for Sunset Crater Volcano National Monument
- Forest Road 545 located in T25N, R9E
- Snow Bowl Ski Area
- Cave Spring Forest Camp
- Call of the Canyon Recreation Area
- Chavez Crossing Forest Camp
- Oak Creek Vista Recreation Area
- Bell Rock Vista Recreation Area
- Rocky Gulch Research Natural Area
- Casner Canyon Research Natural Area
- Mogollon Rim Botanical Area
- Verde Valley Botanical Area
- Fern Mountain Botanical Area
- Fossil Springs Botanical Area
- Camp Verde Sewer Plant
- Clear Creek Ruins
- Sacred Mountain District
- Winona Village
- Elden Pueblo
- C. Hart Merriam Base Camp
- Honanki
- Nuvakwewtaqa District
- Tuzigoot Phase Pueblos
- Hackberry Basin
- General Crook Road
- Jack Smith Pre-eruptive Pithouse Group District
- Ridge Ruin District
- LeBarron Pit House
- Doney Park Ball Court
- Strawberry Crater District
- Old Caves Pueblo
- Turkey Hill Pueblo
- Medicine Fort
- Palatki District
- Hartwell Canyon District
- Late Pueblos of Anderson Mesa
- **San Francisco Mountain / Mount Elden Area**

Program
Components Activities Standards and Guidelines

Listed below are the withdrawal continuations, modifications, and revocations which will be recommended to the U.S. Department of Interior:

Withdrawal	Total Acres	Continued	Modified	Revoked	Acres to be Revoked
EO 2046	80	X			
EO 2128	80	X			
SO 10/26/1906	320			X	320
SO 11/23/1906	550	X			
SO 10/23/1907	120	X			
SO 6/22/1908	90	X			
SO 7/10/1908	27.50		X		6
PLO 1091	138.125	X			
PLO 1161	881.81		X		367.36
PLO 1229	1,163.54		X		283.75
PLO 1349	240	X			
PLO 1390	1,072.5		X		1032.5
PLO 1418	320.12	X			
PLO 1545	20	X			
PLO 1583	1,140	X			
PLO 1628	213.6	X			
PLO 1810	28		X		10
PLO 1849	225	X			
PLO 2458	15,094.92		X		unknown*
PLO 3138	102.86	X			
PLO 3152	11,142.45	X			
PLO 3263	5,900.81		X		320
PLO 3264	40	X			
PLO 3686	150	X			
PLO 3858	310	X			
PLO 4144	670.40	X			
PLO 4687	1,103.48		X		unknown
PLO 5209	333.12	X			
PLO 5350	1,023.93	X			
Total					2,339.61

Land Status Maintenance

Maintain current Forest land status records.

Property Boundary Location

Survey and post National Forest landline in conformance with national standards (approximately 26 miles per year). Priorities are:

- Where proposed projects are adjacent to private land;
- Areas of known and potential trespass;
- Backlog, including wilderness boundaries.

* Final acreage will be determined later.

Program
Components Activities Standards and Guidelines

Request BLM resurveys where development is occurring or complex ownership patterns.

On sites adjoining private land and in Oak Creek Canyon, recreation and cultural resource sites are surveyed and posted as the lands are surveyed.

Use cooperative agreements with adjacent private landowners to share costs of survey whenever possible and desirable.

Enforcement

Document known unauthorized occupancies as they are discovered.

Use Small Tracts Act where appropriate to resolve encroachments.

Decide how to handle new cases as discovered. Assign priorities, as follows: (1) cases where permanent impairment of resources is occurring or is imminent; (2) cases needed to support other resource management activities; or (3) cases that can be easily resolved. In the first decade resolve at least one-third of the documented existing unauthorized occupancies at the time of Plan approval.

Enforce provisions of 36 CFR (Part 261) and Title 18 USC (prohibitions).

Landownership Planning/Land Classification

The Forest has 8 ownership categories for potential land acquisition. The Land Exchange Program operates under several authorities and can be employed to acquire lands that meet the acquisition criteria. The following criteria are applied to a specific parcel of property to determine if lands are appropriate for acquisition.

- Wilderness and Other Administratively Designated Areas -- These include wilderness, undeveloped lands contiguous to wildernesses, geological, archaeological, historical, and botanical areas, Experimental Forests, research natural areas, and administrative sites. Criteria are:
 - Acquire private lands within administratively designated areas.
 - Acquire private lands with development potential adjacent to designated areas.
 - Acquire private lands to achieve ownership patterns to meet management objectives consistent with an area's designation, the applicable standards and guidelines, and the Forest Plan implementation schedule.

Program

Components Activities Standards and Guidelines

- Communities -- There are lands adjacent to or within the communities such as Flagstaff, Sedona, Cottonwood, and Camp Verde. Criteria are:
 - Non-National Forest lands in and adjacent to the communities will generally not be acquired.
 - National Forest lands identified as needed and suitable for community expansion will not be committed to uses incompatible with prospective community needs.

- Recreation Use and Development Areas -- These are lands within existing or potential recreation sites or locations of concentrated public use. Criteria are:
 - Acquire private lands to achieve a landownership pattern that adequately provides for present and foreseeable public needs, such as recreation development, landscape protection, pollution prevention, access to water and public properties, and open space.
 - Acquire private lands or the control of unique or outstanding natural features or significant waters.

- Municipal Watersheds -- These are designated areas where communities obtain municipal water supplies by special authorization, such as Woody Well Field, Peaks Inner Basin, and Lake Mary Well Field. Criteria are:
 - Cooperate with municipalities and water companies to achieve an ownership pattern necessary to protect and improve the watershed.
 - Acquire non-public lands within a watershed to improve or correct management activities incompatible with maintenance of watershed condition and water quality.

- State and Federal Lands Not Administered by the Forest -- These are State lands administered by the Arizona State Land Department, State Parks, Game and Fish Department, or National Guard, and National Monuments administered by the Park Service. Criteria are:
 - Favor landownership adjustments with Agencies where consolidation of ownership provides for more cost efficient management and enhances public use.
 - Retain blocks of contiguous Forest lands adjoining State or Federal lands unless there are logical and mutually beneficial management reasons.

- Small and Scattered National Forest Ownerships -- These are scattered, or highly fractured Forest ownerships, such as the Doney Park, Cosnino and Winona areas. Criteria are:
 - Consolidate the ownership patterns to achieve efficient Forest management. Acquire private lands with multiple-use values.

Program

Components Activities Standards and Guidelines

- Wildlands with Large Non-Forest Ownerships -- These are Forest lands in checkerboard patterns or otherwise intermingled with large private landowners. Criteria are:
 - Acquire into Forest ownership to achieve cost efficient management of Forest lands and to maintain them as Forest type lands.
 - Review acquisition and base-in-exchange plans when private land uses change from wildland and undeveloped uses towards more intensive uses.
 - Pursue acquisition where special resource needs such as key wildlife habitat or key public recreation sites are identified.
 - Acquire threatened and endangered species habitat if adjacent Forest lands do not provide adequate habitat.
 - Acquire riparian habitat, where adjacent riparian areas are in Forest ownership.

- Wildlands with Small Non-Forest Ownership -- These areas where ownership patterns vary from occasional scattered private holdings to small privately held tracts. Criteria are:
 - Acquire where necessary to correct or discourage land uses not compatible with adjacent Forest uses.
 - Acquire where ownership consolidation substantially improves management, is cost efficient, and enhances public use.
 - Special consideration is given to cooperators, such as range permittees, City, County, and State, where acquisition would not be in the best interest of continuing their existing operations.
 - Acquire where special resource needs such as key wildlife habitat or key public recreation sites are identified.
 - Acquire threatened and endangered species habitat if adjacent Forest lands do not provide adequate habitat.
 - Acquire riparian habitat, where adjacent riparian areas are in Forest ownership.

Lands offered by the United States in a land exchange are tentatively classified as base-in-exchange. Currently, the Forest has 21,133 acres classified as base-in-exchange. Because local and physical conditions may change during the life of this plan, other lands may be considered for exchange. They will generally meet one or more of the following criteria:

- Lands needed to meet the needs of expanding communities;
- Isolated tracts or scattered parcels that cannot be efficiently managed;
- Lands that provide consolidation of the public lands;
- Lands that will improve management, benefit specific resources, or increase management efficiency;
- Lands that are necessary to meet overriding **local, regional, and national** public needs;
- Lands within the boundaries of incorporated communities or annexed thereto.
- **Review base-in-exchange plans when private land uses change from wildland and undeveloped uses towards more intensive uses.**

Program
Components Activities Standards and Guidelines

Reclassification must include appropriate public involvement through the NEPA process. The lands classified should be in accordance with local jurisdiction plans and needs.

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 in such a way that they conflict with Forest management objectives and practices.

Land Exchange

Accept land exchange proposals on an opportunity basis. Process by priorities agreed to by Forest Supervisor and Regional Forester.

Prohibit encumbrances, such as special-uses, or activities on base-in-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-in-exchange lands.

Land exchange proposals for the base-for-exchange lands between Cosnino and Velvet Valley Subdivisions will not be accepted for three years following approval of the Forest Plan, unless they are from a local government or other entity that proposes to manage the area as a community area, greenbelt, or for other recreation use according to the wishes of the local residents. If an agreement has not been entered into for such an exchange after three years, other exchange proposals will be considered.

Specific direction on base-for-exchange land in the Sedona area is contained under Sedona Area wide direction as a result of Amendment 12.

Land Acquisition (L&WCFA)

The land purchase program is authorized by the Land and Water Conservation Fund Act (L&WCFA). The following lands are eligible for acquisition with L&WCFA funds:

- Congressionally designated areas;
- Threatened and endangered species habitat;
- Recreation acquisition composites and inholdings.

Program
Components Activities Standards and Guidelines

The goals of the composite program are to acquire:

- Lands needed for construction of public recreation facilities;
- Lands needed for dispersed recreation and open space;
- Protection of public recreation resources;
- Prevention of private usurpation of public resources and facilities on nearby public land.

The following properties are also classified as eligible for acquisition with L&WCFA funds:

- Bull Pen Ranch properties on West Clear Creek -- 90 acres;
- Upper Beaver Creek properties on Wet Beaver Creek -- 300 acres;
- San Francisco Mountain properties including Hart Prairie, Viet Springs, and Dry Lake Hills--1,700 acres;
- Secret Mountain properties including those at the base of the Red Rock-Secret Mountain Wilderness in T.18N., R.4E.,--618 acres, and T.18N., R.5E.,--225 acres.

Lands eligible for acquisition with L&WCFA funds can also be acquired by exchange or donation. They will be acquired by these if the opportunity occurs and it is appropriate.

Rights-of-Way Acquisition

Acquire rights-of-way to support other resource management activities with emphasis on the timber program.

Road Maintenance and Management

Transport/Facilities

Operate and maintain roads in accordance with objectives as specified in road prescriptions. Roads not needed for industry, public, and/or administrative use are closed and put to bed or returned to resource production through obliteration. Obliteration includes restoring the original land contour to the degree practical, scarifying, providing proper drainage, and revegetating with appropriate species.

Maintain access roads to the lowest standard necessary for two-wheel drive pickups for removal of green firewood.

Temporary closures using gates or barriers are implemented on roads unsafe for traffic until the hazard is corrected.

Seasonally close roads using gates or barriers where the road structural support is inadequate when the ground is wet, and for resource protection or management.

Program
Components Activities Standards and Guidelines

New timber sale roads designated for closure have gates, barriers and signs planned as a cost of the project. Roads planned for closure or obliteration will be signed to inform users of the temporary existence of the road. Turn-arounds are planned and developed at the point of closure.

Manage road densities to achieve an average of 1.1 mile of open road per section in the woodland zone, such as pinyon-juniper, desert, and grassland vegetation types and an average of 2 miles of open road per section in the ponderosa pine/mixed conifer zone. These densities reflect all system roads in maintenance categories 2 through 5, but do not include Federal, State, and County systems. Temporary roads that are only for short-term use and will then be fully obliterated and long term closure roads are not a part of the calculated density. In calculating densities by vegetative type do not include areas having legal or administrative restrictions on roads, e.g., wilderness and research natural areas.

Road densities are based on road density objectives, the resources served, user types, and topography to meet the objectives for management of resources served, using guidance from R3 publication Skidding Distance Versus Road Cost Optimization for Timber Sales.

Provide road signs for public service, direction, information, and safety.

Route markers on roads accepting or encouraging passenger car use will be wooden with the numbers displayed horizontally. Route markers on roads recommended for high clearance vehicles will be fiberglass posts with the numbers displayed vertically.

Inspect road bridges on a 2-year cycle.

Focus media attention on road management at least twice annually.

Trail Planning and Inventory

Develop and implement the Forest trail implementation schedule by the end of the first decade including trail right-of-way needs. See Transportation System and Utilities Corridor Map for the locations of planned routes.

Annually maintain and update Forest trail implementation schedules and the Forest Trails Inventory and Condition Survey. Perform trail assessments at least every 5 years.

Program
Components Activities Standards and Guidelines

Trail System Management

Conduct trail condition surveys, prepare trail maintenance schedules, and sign trails on a "safety first" basis. Maintain trails to planned standards. Promote the Adopt-a-Trail Program. Trail maintenance intensity and schedules are related to the ROS class.

Coordinate with State, County, and communities' park departments to connect Forest trails with parks and green-belt corridors, when it is mutually beneficial, provides better public service and development is compatible with other resource management.

Protect General Crook National Recreation Trail chevrons and route markers and historic mile post markers.

Horse and pack stock are not allowed on these trails:

- Elden Lookout Trail;
- Oldham Trail, the portion between Buffalo Park and the El Paso natural gas pipeline;
- Mount Humphrey's Trail and the Weatherford Trail above Doyle Saddle;
- Fay, Wilson Mountain, West Fork of Oak Creek, Devil's Bridge, and Boynton Canyon Trails within the Red Rock-Secret Mountain Wilderness.

See the Plan maps for specific locations.

FA&O Facility Maintenance

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

Meet State regulations in water sampling and testing on systems subject to the jurisdiction of the Arizona Department of Health Services. Perform sanitary surveys on a 5-year cycle.

Perform routine inspections of lagoons three times per year. Inspect landfills at least two times per year.

Pursue exchange of the existing Sedona Administrative Site for office, warehouse, and parking facilities.

Dam Administration and Management

Ensure that all Class A dams are inspected by a qualified engineer on a 3-year cycle.

Wideband System Operations and Maintenance

Maintain the Forest-wide band communication systems and update on a scheduled basis.

Program
Components Activities Standards and Guidelines

Telephone System Operations and Maintenance

Maintain the Forest telephone system and update when cost effective.

Telephone System Planning

In Decade 1, plan for acquiring and installing a Forest Service-owned system for all stations.

Transportation System Planning and Inventory

Construct/reconstruct roads in accordance with FSM 7700 and FSH 7709.11.

Arterial, collector, and constant service local roads are surfaced.

Intermittent and short-term roads that are used longer than the dry weather season are constructed with enough surfacing to provide for erosion control and structural support for planned use.

In the transportation plan, road densities, construction/reconstruction standards, location, maintenance structures, types of roads, and closure or obliteration are planned to meet the project objectives, minimize resource impacts, ground disturbance, and provide for user safety.

Construct/reconstruct access roads to lowest standard and density necessary for removing firewood to minimize resource impacts and ground disturbance and provide for user safety. Use road maintenance fund deposits from firewood permits to help achieve needed maintenance.

Locate new roads out of riparian areas and water collecting features such as swales. **However, in wet meadows existing roads may also be reconstructed and maintained in accordance with Best Management Practices as defined in the Standards and Guidelines.** Relocate or eliminate roads that are presently in these locations. Obliterate the poorly located segments. Cross streamcourses perpendicular to the flow to minimize bank disturbance and sediment production.

C02, F03 Focus media attention on road obliteration and closures biannually. Emphasize road management and resource/wildlife protection as the overriding Forest policy.

Program
Components Activities Standards and Guidelines

FA&O Construction/Reconstruction

Determine FA&O facility needs by evaluating each District's space requirements based on the organization needed to meet Forest resource protection and management objectives and administrative needs:

- Long Valley – Office expansion - 1989
- Blue Ridge – Office Expansion – 1991
- Blue Ridge – Housing – 2 residences – 1993

Existing facilities retained are reconstructed on a maximum 50-year cycle. Provide adequate handicap access to and use of facilities.

Telephone System Construction

In Decade 1, install Forest Service-owned system for all stations.

Fire Management Planning and Analysis

Protection

Continue fire management analysis and planning for activities such as presuppression, detection, suppression, prevention, and fuel treatment.

As an integral part of annual fire management planning, send a letter explaining our annual prescribed fire program and objectives to key persons and/or agencies at least one month prior to the start of the prescribed fire season. Emphasize the positive aspects of managed fire to the public.

In the first decade write implementation schedules for using prescribed fire, including both planned and unplanned ignitions, in each of the fire management zones. The overall objectives for the fire management zones are contained in the Forest Plan.

Prepare fuel treatment plans for projects that generate slash.

Coordinate fuel treatment plans with other resources with input provided by other resource specialists.

Manage smoke from prescribed fires to meet legal standards and to provide for public safety.

Fire Prevention

Improve fire prevention with emphasis on the Flagstaff fire zone. Strengthen fire prevention analysis by stressing thorough investigation of person-caused fires. Adjust prevention program to reduce fires based on identified causes. During the primary fire season(s) daily schedule prevention personnel and activities on a Forest-wide basis to meet the highest prevention needs based on the prevention plan analysis of fire starts, causes, and potential. Hold a news conference in the spring to inform the press about the coming fire season. Focus media attention on fire prevention throughout the fire season.

Program
Components Activities Standards and Guidelines

Work with homeowners associations and homeowners in the Urban Interface to plan and implement measures to reduce wildfire threats to life and property such as:

- Treating vegetation and fuels near homes.
- Providing road ingress and egress for emergency evacuation of personnel.
- Providing road access suitable for use by fire engines including places to turn engines around.
- Providing information to homeowners on measures they can take to reduce the threat of wildfire to their property.
- Providing adequate sources of water for use by fire engines for hose lays, to refill engines, and/or watertenders.

Fire Detection

Use lookouts (fixed detection points) as the primary method to detect fires. Aerial patrols or detection flights supplement fire lookouts when conditions warrant.

Fire Suppression

Fire suppression objectives guide the actions of the fire dispatcher and the initial attack Incident Commander in selecting appropriate methods to suppress a fire.

Fire suppression objectives are established for five suppression zones.

Small acreage objectives are specified where resource values are high and/or a fire in that location is a threat to life or property. In these situations, high intensity suppression methods are used, such as, air tankers, dozers, and large commitments of ground forces. Large acreage objective means that resource values at risk are lower, and suppression methods that are less costly and less damaging to the resource are used.

Suppression objectives are used to guide the selection of suppression methods. In all cases, when a fire is declared a wildfire, it will be suppressed. Suppression action will be fast, energetic, and thorough, regardless of the size of the fire.

The objectives by suppression zone are as follows:

- Urban Interface - The suppression objective is to hold fires to 10 acres or less per fire start. This zone is the urban interface and an area up to 10 miles long in a southwesterly direction from urban areas. Fires pose a threat to life and property. The zone has high priority for fuel treatment dollars. Prescribed fire, using planned ignitions, is used to accomplish fuel treatment and resource management objectives. Suppression tactics are selected that have the least impact on the land and meet the suppression objective.

Program
Components Activities Standards and Guidelines

- Commercial Timber Lands - The suppression objective is to hold fires to 100 acres or less per fire start. This zone consists of the remainder of the commercial timber land. Prescribed fire using both planned and unplanned ignitions is used to accomplish fuel treatment and resource management objectives. Suppression action gives top priority to protecting life and property, resource protection, and protection to private in-holdings and other landownership.
- PJ and Desert Grasslands - The suppression objective is to hold fires to less than 1,000 acres per fire start, to minimize suppression costs, and to provide for maximum personnel safety. In ponderosa pine stringers or other identified important wildlife habitat the suppression objective is 300 acres per fire or less. This zone consists of grassland, desert shrub, pinyon/juniper, some unsuitable and noncommercial timber land other than designated wildernesses. Prescribed fire using planned and unplanned ignitions is used to accomplish fuel treatment and other resource management objectives. Suppression action gives top priority to protecting life and property, and protection to private in-holdings and other landownership. Suppression methods are chosen that minimize impact on soils, water, and other resources.
- Wilderness - Fires that are not a threat to areas outside the wilderness are allowed to burn naturally provided that prescribed conditions are met. Prescribed conditions to be met are found in Standards and Guidelines specific to wildernesses (MA 1).
- Oak Creek Canyon - The suppression objective is to hold fires to 10 acres or less and minimize threat to life and property when fires are a threat. When fires are not a threat to people or improvements, the suppression objective may be increased to 300 acres. Fires that are not a threat to people and/or improvements are managed to minimize cost and provide for maximum personnel safety. The threat to people and/or improvements is determined by the District Ranger, District FMO, or initial attack Incident Commander.

When fires are reported a determination is made whether the fire is a prescribed fire or a wildfire. Prescribed fires are monitored to assure that they remain in prescription. Wildfires are suppressed using methods that are appropriate to each individual situation.

Strategies and tactics for suppressing a wildfire include the adoption of one or more of the following suppression strategies:

- Confine - Natural barriers or environmental factors limit the spread of the fire. Control lines are not constructed.
- Contain - Control lines are established around the perimeter of a fire and the fire is allowed to burn itself out without additional expenditures for mop up.
- Control - Fire is surrounded by control lines and then mopped up to totally extinguish fire. Control will normally be used during critical fire season.

Program
Components Activities Standards and Guidelines

An implementation schedule for the use of the confine, contain, and control strategies is prepared and implemented in the first year of the decade. The implementation schedule includes delegations of authority to those individuals who will make decisions concerning the use of suppression strategies.

The decision to adopt a suppression strategy other than control will only be made by individuals who have authority delegated to them by the Forest Supervisor.

During fires, make information promptly available to the media. Provide information, photo opportunities, and guides upon request. Government transportation, including helicopters, may be used to transport media representatives as appropriate.

Assign initial attack forces to project work that can be accomplished without impairing their ability to meet the suppression objectives. Priority is given to fire preparedness and fuels management projects that are necessary in order to allow suppression objectives to be met. Project work in other resource areas is allowed provided that dispatch objectives for the fire crew can be met.

Fuel Treatment

The first priority for fuel treatments is to allow and reasonably assist the public to remove available and accessible firewood. Aggressively enlist media support to inform the public about available firewood prior to fuel treatments. Firewood areas are well signed to direct people to them. Road maintenance and management are coordinated to provide access. Burning is generally deferred 2 years to allow for firewood removal.

Plan fuel treatments on an area basis. Fuel treatment objectives are met on the area as a whole and not necessarily on each acre.

Plan fuel treatments that have the least impact on the site, meet resource management needs, are cost effective, and meet fuel treatment objectives.

Snags and downed logs that are necessary to meet wildlife management

objectives for the area are identified and fire lined to protect them. They are also monitored during burning to protect them. T&E and sensitive species are also protected by lining and monitoring. Any unburned islands inside the perimeter of the fire of one-quarter to 2 acres are left unless they are a threat to the management of the fire or prevent achievement of the fuel treatment objectives.

Suppress fires that threaten habitat of threatened and endangered, or sensitive species.

Limit the treatment of natural fuels to areas where fuel buildups are a threat to life, property, adjacent to old-growth areas, or specifically identified high resource values.

Program
Components Activities Standards and Guidelines

Maintain existing fuelbreaks and construct additional fuelbreaks that are necessary for protecting life and property.

Annually review the smoke management implementation schedule and update as needed. Include a quality assurance section in the plan during the first year of the Plan implementation.

Fuel treatment projects include pretreating fuels to meet specified air quality standards and mop-up to control residual smoke, whenever necessary.

Prescriptions for the use of prescribed fire for any purpose include measures to minimize smoke production when projects will impact smoke sensitive areas.

Monitor and document the effects on smoke sensitive areas of smoke from prescribed burning during the burning season. The purpose is to prevent smoke intrusions. Adjust the burning program as needed based upon the monitoring. The initial monitoring will be by aerial observation, photography from observation points, and ground observations. Monitoring may be daily or less frequent depending upon the amount of burning and atmospheric conditions.

Evaluate potential for smoke intrusions on airports, highways, and roads. Employ appropriate measures to provide for public safety by keeping smoke off of these types of facilities to the degree possible. Keep smoke warning signs posted on roads. If an intrusion occurs take cooperative action with appropriate law enforcement personnel to provide for public safety.

Review and make recommendations to the State on air quality and visibility redesignation proposals in the first decade.

Law Enforcement

Cooperative Law Enforcement

Provide law enforcement at a level that protects human health and safety, property, and resource values in coordination with appropriate law enforcement agencies. Train and maintain at least one level IV Law Enforcement Officer per District. Train and maintain enough Level II Officers to meet each District's needs.

Permit only Level II and IV trained Law Enforcement Officers with authorization from the Forest Supervisor to issue violation notices.

Assign only Level IV Law Enforcement Officers to cases involving significant personal risks.

Program
Components Activities Standards and Guidelines

Use public education and cooperation as the primary prevention method. Advertise and maintain a 24-hour contact point for the public to report suspected violations. Make an appropriate response to each public report including feedback to the person making the report.

Use cooperative law enforcement agreements to get assistance from local law enforcement agencies to protect people and property while on the Forest.

Enforce laws firmly, reasonably, and uniformly. Emphasize courteous personal contact. Take action according to FSM 5355 instruction.

Help prevent occupancy trespass and other law violations by patrols, especially in the urban interface.

Work cooperatively with Coconino, Yavapai and Gila Counties and DPS Law Officers to enforce drug laws.

Search and rescue operations are conducted in support of the County Sheriff, or when necessary, initiated and conducted independently.

Forest law enforcement activities are coordinated with other law enforcement agencies.

General Administration

Maintain a low ratio of overhead support to on-the-ground costs. Wherever possible, identify general administration support costs directly to the administration benefiting programs. Any Special Emphasis Program overhead is paid by the benefiting functional program dollars.

Maintain an aggressive and pro-active public affairs program, Forest-wide, to establish and maintain informed consent for resource management objectives.

Respond positively and promptly to media requests for information. Provide guides, photo opportunities, and timely information including video to requesting media. Stories and information developed by the Forest Service are shared equally with all media. Stories developed independently by the media are theirs alone and are not to be randomly shared with other media. Respond positively and promptly to internal requests for information. Provide pictures, articles, fact sheets, news letters, and video to employees to keep them informed and involved in the decision making process.

Be a Super Host to each member of the public.