

# Glossary of Commonly Used Terms

## A

**accessibility:** The relative ease or difficulty of getting from or to someplace, especially the ability of a site, facility, or opportunity to be used by persons of varying physical and mental abilities.

**activity:** A measure, course of action, or treatment that is undertaken to directly or indirectly produce, enhance, or maintain forest and rangeland outputs or achieve administrative or environmental quality objectives.

**adit:** A horizontal or nearly horizontal passage driven (excavated) from the surface to access the ore body for mining purposes. Sometime referred to as a tunnel; however, a tunnel is technically different in that it is open to the surface at both ends.

**affected environment:** The relationship of the physical environment to the changes that will or may take place as a result of human activity.

**age-class distribution:** An age-class is a distinct aggregation of trees originating from a single natural event or regeneration activity, or a grouping of trees, e.g., a 10-year age class, as used in inventory or management. An age-class distribution is the location and/ or proportionate representation of different age classes in a forest.

**air pollution:** The presence of substances in the atmosphere, particularly those that do not occur naturally. The substances are generally contaminants that substantially alter or degrade the quality of the atmosphere. The term is often used to identify undesirable substances produced by human activity, that is, anthropogenic air pollution. Air pollution usually designates the collection of substances that adversely affect human health, animal, and plants; deteriorates structures; interferes with commerce; or interferes with the enjoyment of life.

**air quality (PSD) class:** Three broad classifications established by the Clean Air Act to help prevent significant deterioration of air quality for all areas of the country that are known (or assumed) to be attaining National Ambient Air Quality Standards.

**Class I:** Geographic area designated for the most stringent degree of air quality protection from future degradation of air quality. These congressionally-designated areas include wilderness areas over 5000 acres in size that were established as of August 7, 1977.

**Class II:** Geographic area designated for a moderate degree of protection from future air quality degradation. Any area that is not a Class I area is considered Class II.

**Class III:** Geographic areas designated for the least protection from future air quality degradation. No Class III areas have been designated to date.

**allocation:** The assignment of management prescriptions or combination of management practices to a particular land area to achieve the goals and objectives of the alternative.

**allowable sale quantity (ASQ):** The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Forest Plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

**alternative:** In forest planning, a mix of policies, plans, or projects proposed for decision making designed in response to public issues or management concerns.

**analysis area:** A collection of lands, not necessary contiguous, sufficiently similar in character, that they may be analyzed at the forest plan level.

**aquatic ecosystem:** System that includes: streams, lakes, the stream channel, lake and estuary beds, water, biotic community, and associated habitat features.

**aquatic habitat types:** The classification of instream habitat based on location within channel, patterns of water flow, and nature of flow controlling structures. Habitat is classified into a number of types according to location within the channel, patterns of water flow, and nature of flow controlling structure. Riffles are divided into three habitat types: low gradient riffles, rapids, and cascades. Pools are divided into seven types: secondary channel pools, backward pools, trench pools, plunge pools, lateral scour pools, dammed pools, and beaver ponds. Glides, the third habitat type, are intermediate in many characteristics between riffles and pools. It is recognized that as aquatic habitat types occur in various parts of the country, additional habitat types may have to be described. If necessary, the regional fishery biologist will describe and define the additional habitat types.

**arterial roads:** Roads that provide service to large land areas and usually connect with public highways or other forest arterial roads to form an integrated network of primary travel routes. The location and standard are often determined by a demand for maximum mobility and travel efficiency rather than specific resource management service. They are usually developed and operated for long-term land and resource management purposes and constant service. These roads generally serve areas more than 40,000 acres.

**authorized use:** Specific activity or occupancy, including a ski area, historical marker, or oil and gas lease, for which a special authorization is issued.

## B

**basal area (BA):** the area, in square feet, of the cross section of a single tree measured at 4.5 feet above ground, usually expressed as square feet per acre.

**best management practice (BMP):** A practice, or a combination of practices determined to be the most effective and practical means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.

**biodiversity:** The variety of life, including the variety of gene pools, species, plant and animal communities, ecosystems, and the processes through which individual organisms interact with one another, and their environments.

**biological control:** The use of natural means, or agents, to control unwanted pests. Examples include introduced or naturally occurring insects, bacteria, or fungi that act as predators, parasites, or disease agents of pests. Biological controls may sometimes be alternatives to mechanical or chemical means.

## C

**canopy cover:** The percent of a fixed area covered by the crown of an individual plant species or delimited by the vertical projection of its outermost perimeter. Small openings in the crown are included. Used to express the relative importance of individual species within a vegetation community, or to express the canopy cover of woody species. Canopy cover may be used as a measure of land cover change or trend. Often used for wildlife habitat evaluations.

**canopy:** The cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth.

**capability:** The potential of a land area to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and a given level of management intensity. Note: capability depends upon the current condition and site conditions including climate, slope, land form, soil and geology, and the application of management practices and protection from fire, insects, and disease.

**clearcutting:** The harvesting in one cut of all trees on an area for the purpose of creating a new stand. The area harvested may be a patch, stand, or strip large enough to be mapped or recorded.

**collector road:** Roads that serve smaller land areas and are usually connected to a forest arterial or public highway. They collect traffic from forest local roads or terminal facilities. The location and standard are influenced by long-term multi-resource service needs, and travel efficiency. Forest collector roads may be operated for constant or intermittent service, depending on land-use and resource management objectives for the area served by the facility. These roads generally have two or more local roads feeding into them and generally serve an area exceeding 10,000 acres.

**commercial thinning:** Any type of thinning producing merchantable material at least equal to the value of the direct cost of harvesting.

**commodity:** Tangible or physical output, such as timber, livestock, minerals, water, etc.

**common variety minerals:** Common Variety Mineral Materials (CVMM) - Authority for the disposal of mineral materials is provided by the Materials Act of July 31, 1947 (30 U.S.C. 601 et seq.), as amended. Common variety mineral materials include sand, gravel and building stone. On the Ouachita National Forest in Arkansas, per Section 323 of P.L. 100-446 (10=9/27/1988) it also includes deposits of quartz mineral. This includes quartz crystal used for esthetic purposes, high quality chemically pure quartz used for high-tech industrial purposes, novaculite, Tripoli, and other forms of quartz mineral. Common variety mineral materials are also referred to as "Salable" minerals and are available for sale by the Forest Service under contracts and permits issued by District Rangers.

**concern level:** A particular degree or measure of viewer interest in the scenic qualities of the landscape as viewed from travelways and use areas, rated level 1 (highest concern) to 3 (lowest concern).

**construction:** The displacement of vegetation, soil and rock, and the installation of man-made structures involved in the process of building a facility.

**Continuous Inventory of Stand Conditions (CISC):** the USDA Forest Service, Southern Region's forest stand database containing descriptive and prescriptive data about mapped stands of forest land.

**conversion (forest management):** A change from one forest type to another in a stand on land that has the capability of both forest types.

**coppice:** A method of regenerating a stand in which all trees in the previous stand are harvested and the majority of regeneration is from stump sprouts or root suckers.

**critical habitat:** Habitat as defined by the U.S. Fish and Wildlife Service to be essential to meet the needs of an endangered species.

**cultural resources:** Physical remains of districts, sites, structures, buildings, networks or objects that were used by humans. They may be historic, prehistoric, archaeological, architectural or spiritual in nature. Cultural resources are non-renewable.

## D

**decommission:** To stabilize or restore a road to a more natural state without any further maintenance. The entrance is obscured and the wheel tracks or pathway is no longer continuous and suitable for travel. The travel way has been removed from the transportation system. Decommissioning may include one or more of the following:

- a. Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation
- b. Blocking the entrance to a road; installing water bars
- c. Removing culverts, reestablishing drainage-ways, removing unstable fill, pulling back road shoulders, and scattering slash on the roadbed
- d. Completely eliminating the roadbed by restoring natural contours and slopes
- e. Other methods designed to meet the specific conditions associated with the unneeded road

**defined stream channel:** A channel which exhibits evidence of annual scour and that is at least one foot wide and three inches deep.

**demand:** The amount of an output that users are willing to take at specified price, time period and condition of sale.

**den trees:** Living or dead trees with cavities used by wildlife.

**desired condition:** An expression of resource goals that have been set for a unit of land. Written as a narrative description of the landscape as it appears when goals have been achieved.

**developed recreation area:** Relatively small, distinctly defined area where facilities are provided for concentrated public use. Examples include campgrounds, picnic areas, and swimming areas.

**developed recreation:** Recreation that requires facilities that in turn result in concentrated use of an area. Examples of recreation areas are campgrounds and ski areas; facilities in these areas might include roads, parking lots, picnic tables, toilets, drinking water, and buildings.

**diameter at breast height (dbh):** the standard method for measuring tree diameter at 4.5 feet from the ground.

**dispersed recreation:** A general term referring to recreation use outside a developed recreation site, this includes activities such as scenic driving, rock climbing, boating, hunting, fishing, backpacking, and recreation in primitive environments.

**disturbance (ecology):** Any relative discrete event in time that disrupts the ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment.

**diversity:** The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

**dominant:** Trees with crowns extending above the general level of the main canopy of even-aged groups of trees. They receive full light from above, and partly from the sides.

## E

**early seral:** Typically denotes age class; used interchangeably with early successional habitat and grass/forb/shrub stage. Vegetative condition typically characterized by low density to no canopy cover and an abundance of herbaceous ground cover. May include forest 0 to 10 years of age, maintained openings, pastures, or open woodlands.

**early successional:** Typically denotes structural class; used interchangeably with early seral habitat and grass/forb/shrub stage. Vegetative condition typically characterized by low density to no canopy cover and an abundance of herbaceous ground cover. May include forest 0 to 10 years of age, maintained openings, pastures, balds, or open woodlands.

**ecosystem management:** An ecological approach to natural resource management to assure productive, healthy ecosystem by blending social, economic, physical and biological needs and values.

**ecosystem:** A complete interacting system of organisms and their environment.

**effects:** Results expected to be achieved, or actually achieved, relative to physical, biological and social (cultural and economic) factors resulting from the achievement of outputs. Examples of effects are tons of sediment, pounds of forage, person-years of employment, income, etc. There are direct effects, indirect effects and cumulative effects.

**endangered species:** Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act.

**endemic:** Species restricted to a particular geographic area. Usually limited to one or a few small streams or a single drainage.

**environment:** All the conditions, circumstances, and influences surrounding and affecting the development of an organism, or group of organisms.

**environmental analysis:** An analysis of alternative actions and their predictable short and long-term environmental effects, which include physical, biological, economic, social and environmental design factors and their interaction. (36 CFR 219.3)

**environmental impact statement:** A disclosure document revealing the environmental effects of a proposed action, which is required for major federal actions under Section 102 of the National Environmental Policy Act, and released to the public and other agencies for comment and review. Final Environmental Impact Statement (FEIS) is the final version of the statement disclosing environmental effects required for major federal actions under Section 102 of the National Environmental Policy Act.

**environmental impact:** Used interchangeably with environmental consequence or effect.

**epidemic:** Applied to a population of pests that build up, often rapidly, to highly abnormal and generally injurious levels.

**erosion:** The wearing away of the land surface by the action of wind, water, or gravity.

**essential habitat:** Habitat in which threatened and endangered species occur, but which has not been declared as critical habitat. Occupied habitat or suitable unoccupied habitat necessary

for the protection and recovery of a federally designated threatened or endangered species.

**evapotranspiration:** The transfer of water vapor to the atmosphere from soil and water surfaces (evaporation), and from living plant cells (transpiration).

**even-aged management:** The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Managed even-aged forests are characterized by a distribution of stands of varying ages (and, therefore, tree sizes) throughout the forest area. The difference in age between trees forming the main canopy level of a stand usually does not exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and harvested. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands. (36 CFR 211.3)

**even-aged:** A forest (stand) composed of trees having no, or relatively small, differences in age.

**existing road:** Roads, owned or administered by various agencies, which are wholly or partly within or adjacent to and serving the National Forests and other areas administered by the Forest Service, or intermingled private lands (ref: FSM 7705.21). These roads may or may not be included on the current Forest transportation inventory, but are evident on the ground as meeting the definition of a road.

**existing wilderness:** Those areas already designated as wilderness by Congress.

## F

**facility:** A single or contiguous group of improvements that exists to shelter or support Forest Service Programs. The term may be used in either a broad or narrow context; for example, a facility may be a ranger station compound, lookout tower, leased office, work center, separate housing area, visitor center, research laboratory, recreation complex, utility system, or telecommunications site.

**federally listed:** Any plant or animal species listed as threatened or endangered under the Endangered Species Act.

**felling:** The cutting down of trees.

**Final Environmental Impact Statement (FEIS):** The statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act and released to the public and other agencies for comment and review.

**fire condition class:** Based on coarse scale national data, classes measure general wildfire risk:

**Class One:** Fire regimes are usually within historical ranges. Vegetation composition and structure are intact. The risk of losing key ecosystem components from the occurrence of fire is relatively low.

**Class Two:** Fire regimes on these lands have been moderately altered from their historical range by increased or decreased fire frequency. A moderate risk of losing key ecosystem components has been identified.

**Class Three:** Fire regimes on these lands have been significantly altered from their historical return interval. The risk of losing key ecosystem components from fire is high. Fire frequencies have departed from historical ranges by multiple return intervals. Vegetation composition, structure, and diversity have been significantly altered.

**fire regime:** A generalized description of the role a fire plays in the ecosystem. It is characterized by fire frequency, predictability, seasonality, intensity, duration, scale (patch size), and regularity or variability. Five combinations of fire frequency exist.

**fire use:** The combination of wildland fire use and prescribed fire application to meet resource objectives.

**firewood:** Wood that is used for fuel. Synonymous with fuelwood.

**floodplains:** The lowland and relatively flat area adjoining inland waters, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year, and soil inundated by the 100-year flood.

**forage:** All browse and non-woody plants that are available to livestock or game animals used for grazing or harvested for feeding.

**foreground:** The area between the viewer and the middle ground in a landscape; generally from 0 to 1/2 mile distance.

**Forest and Rangeland Renewable Resources Planning Act of 1974:** An act of Congress requiring the preparation of a program for the management of the national forests' renewable resources, and of land and resource management plans for units of the National Forest System. It also requires a continuing inventory of all National Forest System lands and renewable resources.

**forest health:** The perceived condition of a forest derived from concerns about factors as its age, structure, composition, function, vigor, presence of unusual levels of insects or disease, and resilience to disturbance.

**forest land:** Land at least 10 percent occupied by forest trees of any size, or formerly having had such tree cover, and not currently developed for non-forest use. Lands developed for non-forest use including areas for crops, improved pasture, residential, or administrative areas, improved roads of any width, adjoining road clearing, and power line clearing of any width.

**Forest Service Handbook (FSH):** A handbook that provides detailed instructions for proceeding with specialized phases of programs or activities for Forest Service use.

**Forest Service Manual (FSM):** Agency manuals that provide direction for Forest Service activities.

**Forest Supervisor:** The official responsible for administering the National Forest System lands in a Forest Service administrative unit. This may consist of two or more national forests or all the forests within a state. The Supervisor reports to the regional forester.

**forest type:** A descriptive term used to group stands of similar composition and development because of given ecological factors, by which they may be differentiated from other groups of stands.

**forest:** an area of trees with overlapping crowns.

**forest-wide standard:** A performance criterion indicating acceptable norms, specification, or quality that actions must meet to maintain the minimum considerations for a particular resource. This type of standard applies to all areas of the forest regardless of the other management prescriptions applied.

**fuel break:** Any natural or constructed barrier used to segregate, stop, and control the spread of fire, or to provide a control line from which to work.

**fuel loading:** The amount of fuel (flammable natural materials) expressed quantitatively in terms of weight of fuel per unit area.

**fuels management:** The planned treatment of fuels to achieve or maintain desired fuels conditions.

**fuels:** Any materials that will carry and sustain a forest fire, primarily natural materials, both live and dead.

## G

**goal:** A concise statement that describes a desired condition to be achieved. It is expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed. (36 CFR 219.3)

**goods and services:** The various outputs, including on-site uses, produced from forest and rangeland resources. (36 CFR 219.3)

**grassland:** Areas on which vegetation is dominated by grasses, grass-like plants, forbs, and/or cryptogams (mosses, lichens, and ferns), provided these areas do not qualify as built-up land or cultivated cropland. Examples include tall grass and short grass prairies, meadows, marshes, pasturelands, and areas cut for hay.

**grazing:** Consumption of range or pasture forage by animals.

**ground water:** Subsurface water in a saturated zone or geologic stratum.

**group selection:** An uneven-aged regeneration method in which trees are removed periodically in small groups. Uneven age classes for trees are established in small groups. The width of groups is about twice the height of the mature trees, with small opening providing microenvironments suitable for tolerant regeneration, and the larger openings providing conditions suitable for more intolerant regeneration.

**growing season:** The months of the year a species of vegetation grows, from leaf emergence to leaf fall.

## H

**habitat:** The native environment of an animal or plant in which all the essentials for its development, existence, and reproduction are present.

**harvest method:** A procedure by which a stand is logged. Emphasis is on meeting logging requirements rather than silvicultural objectives.

**herbicide:** A pesticide used for killing or controlling the growth of plants.

**hydric soils:** Soils developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season.

**I**  
**infestation:** The attack by macroscopic organisms in considerable concentration. Examples are infestations of tree crowns by gypsy moth, timber by termites, soil or other substrates by nematodes or weeds.

**instream flow:** The volume of surface water in a stream system passing a given point at a given time.

**integrated pest management (IPM):** The maintenance of destructive agents, including insects at tolerable levels, by the planned use of a variety of preventive, suppressive, or regulatory tactics and strategies that are ecologically and economically efficient and socially acceptable.

**intermediate stand treatments:** A collective term for any treatment designed to enhance growth, quality, vigor, and composition of the stand after establishment of regeneration and prior to final harvest. Types include thinning, release and improvement cuttings.

**intermittent service road:** A road developed and operated for periodic service and closed for more than one year between periods of use.

**interpretive services:** Visitor information services designed to present inspirational, educational, and recreational values to forest visitors in an effort to promote understanding, appreciation, and enjoyment of their forest experience.

**invasive species:** A species that can move into an area and become dominant either numerically or in terms of cover, resource use, or other ecological impacts. An invasive species may be native or non-native.

**L**  
**land acquisition:** Obtaining full landownership rights by donation, purchase, exchange, or condemnation.

**land exchange:** The conveyance of non-federal land or interests in the land in exchange for National Forest System land or interests in land.

**landing:** A cleared area in the forest to which logs are yarded or skidded for loading onto trucks for transport.

**land line location:** Legal identification and accurate location of national forest property boundaries.

**landscape character:** Particular attributes, qualities, and traits of a landscape that give it an image and make it more identifiable or unique. Levels include Natural Evolving, Natural Appearing, Pastoral/Agricultural, Historic, Transitional, Suburban, and Urban.

**landscape:** An area composed of interacting ecosystems that are repeated because of geology, land form, soils, climate, biota, and human influences throughout the area. Landscapes are generally of a size, shape, and pattern that are determined by interacting ecosystems.

**leasable minerals:** See minerals (leasable).

**lease:** A contract between the landowner and another granting the latter the right to search for and produce oil, gas, or other mineral substances (as specified in the document) on payment of an agreed rental, bonus, or royalty. This right is subject to the terms, conditions, and limitations specified in the document.

**leave tree:** A tree (marked to be) left standing for wildlife, seed production, etc, in an area where it might otherwise be felled.

**logging:** The cutting and removal of trees from a forest.

## M

**management action:** A set of management activities applied to a land area to produce a desired output.

**management area:** An area with similar management objectives and a common management prescription.

**management direction:** A statement of multiple-use goals, objectives, and standards for attaining them. Management direction is expressed forest-wide, by management prescription, and by management area.

**management emphasis:** The multiple-use values to be featured or enhanced within a given management prescription or management area.

**management indicator species (MIS):** An animal or plant selected for use as a planning tool in accordance with 1982 NFMA regulations (36 CFR 219.19). These species are used to help set objectives, analyze effects of alternatives, and monitor Forest Plan implementation. They are chosen because their population changes are believed to indicate the effects of management on selected biological components.

**management practice:** A specific action, measure, course of action, or treatment undertaken on a forest.

**management prescription:** Management practices and intensity selected and scheduled for application on a specific area to attain multiple use and other goals and objectives. (36 CFR 219.3)

**management type:** The tree species or species group that should be grown on a specific site, whether or not it presently occupies the site that best suits the particular site soil, aspect, elevation, and moisture provided by the area and the forest plan's objectives.

**mast:** The fruit of trees such as oak, beech, sweet chestnut and also the seeds of certain pines; for example, shortleaf and loblolly pines, particularly where considered as food for livestock and certain kinds of wildlife.

**mature forest:** A broad term for the stage at which most forest components have attained full development, particularly in height and seed production.

**mesic:** Sites or habitats characterized by intermediate moisture conditions, i.e., neither decidedly wet or dry.

**mineral entry:** All National Forest System lands which (1) were formerly public domain lands subject to location and entry under the U.S. mining laws, (2) have not been appropriated, withdrawn, or segregated from location and entry, and (3) have been or may be shown to be mineral lands, are open to prospecting for locatable, or hardrock, minerals.

**mineral exploration:** The search for valuable minerals on lands open to mineral entry.

**mineral materials:** Materials such as road aggregate, landscaping rock, rip-rap, and other earthen construction materials. These materials are used to build and maintain trails, roads, and campgrounds; to restore riparian and aquatic habitat; to repair flood damage, etc.

**mineral resource:** A known or undiscovered concentration of naturally occurring solid, liquid, or gaseous material in or on the earth's crust in such form and amount that economic extraction of a commodity is currently or potentially feasible.

**mineral soil:** Weathered rock materials without any vegetative cover.

**minerals, leasable:** Coal, oil, gas, phosphate, sodium, potassium, oil shale and geothermal steam on public domain and acquired status lands, and hard rock minerals on acquired lands.

**minerals, locatable:** Hard rock minerals on public domain status land. May include certain nonmetallic minerals and uncommon varieties of mineral materials.

**minimum level:** The minimum level of management which complies with applicable laws and regulations, including prevention of significant or permanent impairment of the long-term productivity of the land, and which would be needed to maintain the land as a National Forest, and to manage uncontrollable outputs, together with associated costs and inputs.

**mining claims:** That portion of the public estate held for mining purposes in which the right of exclusive possession of locatable mineral deposits is vested to the locator of a deposit.

**mitigation:** Actions to avoid, minimize, reduce, eliminate, or rectify the impact of a management practice.

**modified seed tree:** A timber harvest cut designed to obtain natural regeneration from seed trees left for that purpose. Approximately 10-20 sq. ft. of pine and hardwood basal area per acre are retained in the overstory. Seed trees are retained indefinitely. This cut will establish a two-aged stand. This treatment differs from a traditional seedtree by retaining a mix of hardwoods and pines in the overstory after regeneration.

**modified shelterwood:** A timber harvest cut designed to establish natural regeneration and develop a two-aged stand. Approximately 20-40 sq. ft. of pine and hardwood basal area per acre are retained in the overstory. After seedlings are established, the overstory may be thinned again, to a density that will provide for the development of regeneration. The remaining large trees are retained indefinitely. This treatment differs from a traditional shelterwood by retaining a mix of hardwoods and pines in the overstory after regeneration.

**monitoring and evaluation:** The evaluation on a sample basis of Forest Plan management practices to determine how well objectives have been met, as well as the effects of those management practices on the land and environment.

**monitoring:** The periodic evaluation on a sample basis of Forest Plan management practices to determine how fully objectives have been met, how closely management standards have been applied, and what effects those practices had on the land and environment.

**motorized equipment:** Machines that use a motor, engine, or other non-living power source. This includes, but is not limited to such machines as chain saws, aircraft, generators, motor boats, and motor vehicles. It does not include small battery or gas powered hand carried devices such as shavers, wristwatches, flashlights, cameras, stoves, or other similar small equipment.

**multiple use:** Management of all the various resources of the National Forest system so that they are utilized in the combination that will best meet needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources and services; and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of the uses that will give the greatest dollar return or the greatest unit output. (36 CFR 219.3)

## N

**National Environmental Policy Act (NEPA):** An Act, to declare a National policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the nation; and to establish a Council on Environmental Quality.

**National Forest Land and Resource Management Plan (Forest Plan):** A plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and establishes management standards and guidelines for the National Forest System lands of a given national forest.

**national forest land:** Ouachita National Forest lands for which the Forest Service is assigned administrative responsibility.

**National Forest Management Act (NFMA):** A law passed in 1976 amending the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of Regional and Forest Plans, and regulations to guide that development.

**national forest system (NFS):** All national forest lands reserved or withdrawn from public domain of the United States and acquired through purchase, exchange, donation, or other means. National Grasslands and land utilization projects administered under Title III of the Bankhead–Jones Farm Tenant Act (50 Stat. 525, 7 U.S.C. 1010–1012), and other lands, waters, or interests that are administered by the Forest Service, or are designated for administration through the Forest Service as a part of the system.

**national forest system land:** Federal land that has been legally designated as national forests or purchase units, and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

**National Recreation Trails:** Trails designated by the Secretary of the Interior or the Secretary of Agriculture as part of the national system of trails authorized by the National Trails System Act. National recreation trails provide a variety of outdoor recreation uses, in or reasonably accessible, to urban areas.

**National Register of Historic Places:** The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archaeological resources. Properties listed in the National Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the US Department of the Interior.

**National Wild and Scenic Rivers System:** Rivers with scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values designated by Congress under the Wild and Scenic Rivers Act of Oct. 2, 1968, for preservation of their free-flowing condition.

**National Wilderness Preservation System:** All lands covered by the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

**natural plant community:** an association of plant species which are endemic to an area and whose characteristics have not been adversely affected by human disturbance.

**natural regeneration:** Renewal by self-sown seed or by vegetative means (regrowth).

**net public benefits:** An expression used to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued. Net public benefits are measured by quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principles of multiple use and sustained yield.

**no surface occupancy (NSO):** Use or occupancy of the land surface for fluid mineral exploration or development is prohibited to protect the identified resource values.

**non-commercial thinning:** The thinning of commercial-size trees without a subsequent sale of associated wood products. Also called a pre-commercial thinning.

**non-motorized recreation:** A recreational opportunity provided without the use of any motorized vehicle. Participation in these activities is accomplished through the use of foot, or horseback travel. Motorized vehicle equipment may be authorized for administrative purposes of resource management.

## O

**objective:** A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals. (36 CFR 219.3)

**obligate species:** a plant or animal species which occurs naturally only in a specific type of habitat.

**obliterate (road):** Eliminate transportation features and reclaim the land occupied by such facilities by restoring as nearly as practicable the natural hydrologic function of the watershed and the natural productive potential of the soil.

**occupancy trespass:** The illegal occupation or possession of National Forest land or property.

**off-highway vehicle (OHV):** Any vehicles capable of being operated off established roads.

**old growth forests:** an ecosystem distinguished by old trees and related structural attributes. Old growth encompasses the later stages in a variety of characteristics including tree size, accumulation of large dead woody material, number of canopy layers, species composition, and ecosystem function. Old growth is not necessarily virgin or primeval. It can develop over time following human disturbances, just as it does following natural disturbances. Old growth encompasses both older forests dominated by early seral species and forests in later successional stages dominated by shade tolerant species.

**old growth:** A stand of trees that is usually well past the age of maturity as defined by the culmination of mean annual increment and often exhibit characteristics of decadence. These characteristics may include, but are not limited to: low growth rates, dead and dying trees, snags, and down woody material.

**open road density:** Calculated by converting the acres within the allocation of a contiguous block into square miles (total acres/640 acres) and then dividing that figure into the linear measure of open roads within the block. Open roads forming the boundary of a contiguous management prescription block contribute half of their length to open road density calculations. An open road is a motorized travelway (including designated motorized trails) used on a regular basis.

**operating plan:** A written plan, prepared by those engaged in mining activity on the forests, and approved by a forest officer for prospecting, exploration, or extraction activities that are slated to take place on National Forest System land.

**outstanding mineral rights:** Instances in which the minerals in federally: owned lands were severed prior to the transaction in which government acquired the land. Such rights are not subject to the Secretary of Agriculture's rules and regulations. Removal or extraction of these minerals must be allowed in accordance with the instrument severing the minerals from the surface and under applicable state and local laws and regulations. See also Reserved Mineral Right.

**overstory:** That portion of trees in a two: or multi-layered forest stand that provides the upper crown cover.

## P

**partnership:** Voluntary, mutually beneficial and desired arrangement between the Forest Service and another or others to accomplish mutually agreed-on objectives consistent with the agency's mission and serving the public's interest.

**personal use:** The use of a forest product, such as firewood, for home use as opposed to commercial use or sale.

**persons-at one-time (PAOT):** A recreation capacity measurement term indicating the number of people that can use a facility or area at one time.

**person-year:** About 2,000 working hours that may be filled by one person working during the course of one year or several people working a total of 2,000 hours.

**planning period:** One decade. The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

**policy:** A guiding principle upon which is based a specific decision or set of decisions.

**possible old growth:** areas with the highest probability of being existing or future old growth based on the preliminary inventory criteria.

**precommercial thinning:** The selective felling or removal of trees in a young stand primarily to accelerate diameter increment on the remaining stems, maintain a specific stocking or stand density range, and improve the vigor and quality of the trees that remain.

**preferred alternative:** The alternative recommended for implementation as the Forest Plan based on the evaluation completed in the planning process.

**prescribed burning:** Controlled application of fire to wildland fuels in either their natural or modified state, under such conditions of weather, fuel moisture, soil moisture, etc. as allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to further certain planned objectives of silviculture, wildlife management, grazing, fire hazard reduction, etc. NOTE: It seeks to employ fire scientifically to realize maximum net benefits with minimum damage and at acceptable cost.

**prescribed fire:** Any fire ignited by management actions to meet specific objectives including disposal of fuels, and controlling unwanted vegetation. The fires are conducted in accordance with prescribed fire plans, and are also designed to stimulate grasses, forbs, shrubs, or trees for range, wildlife, recreation, or timber management purposes.

**prescription:** See Management Prescription, and Silvicultural Prescription.

**proclamation boundary:** The boundary contained within the presidential proclamation that established the national forest.

**program:** Sets of activities or projects with specific objectives, defined in terms of specific results and responsibilities for accomplishments.

**project:** A work schedule prescribed for a project area to accomplish management prescriptions. An organized effort to achieve an objective identified by location, activities, outputs, effects, time period, and responsibilities for execution.

**proposed action:** In terms of the National Environmental Policy Act, the project, activity, or decision that a federal agency intends to implement or undertake. The proposed action described in the Environmental Impact Statement is the Forest Plan.

**public access:** Usually refers to a road or trail route over which a public agency claims a right-of-way for public use.

**public water supply:** A system for the provision to the public of piped water for human consumption if the system serves 15 or more service connections or which regularly serves 25 or more individuals.

**public:** The people of an area, state or nation that can be grouped together by a commonality of interests, values, beliefs or lifestyles.

## R

**range allotment:** A designated area of land available for livestock grazing upon which a specified number and kind of livestock may be grazed under a range allotment management plan.

**range management:** The art and science of planning and directing range use to obtain sustained maximum animal production, consistent with perpetuation of the natural resources.

**Ranger District:** Administrative subdivision of the Forest, supervised by a District Ranger who reports to the Forest Supervisor.

**reconstruction:** Work that includes, but is not limited to, widening of roads, improving alignment, providing additional turnouts, and improving sight distance that improve the standard to which the road was originally constructed. Also undertaken to increase the capacity of the road or to provide greater traffic safety.

**record of decision:** A document separate from, but associated with an environmental impact statement that publicly and officially discloses the responsible official's decision on the alternative assessed in the environmental impact statement chosen to implement.

**Recreation Opportunity Spectrum (ROS):** A method for classifying types of recreation experiences available, or for specifying recreation experience objectives desired in certain areas. Classes include:

**Primitive (P):** An area characterized by having essentially unmodified natural environment of 5,000 or more acres. Interaction between users is very low; evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted. There is a high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of outdoor skills in an environment that offers a high degree of challenge and risk.

**Semi-Primitive Non-Motorized (SPNM):** Area characterized by a predominantly natural or natural-appearing environment of 2,500 or more acres. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present but are subtle. Motorized use is not permitted. There is a moderately high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk.

**Semi-Primitive Motorized (SPM):** Area characterized by a predominantly natural or natural-appearing environment of 2,500 or more acres, with a moderately high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk. Motorized use is permitted.

**Roaded Natural (RN):** Area characterized by a predominantly natural or natural-appearing environment with a low probability of experiencing isolation from the sights and sounds of man. Interaction between users may be low to moderate, but with evidence of other users prevalent. Conventional motorized use is provided for in construction standards and design of facilities. Opportunities for both motorized and non-motorized forms of recreation may be provided.

**Rural (R):** Area characterized by a substantially modified natural environment with a low probability of experiencing isolation from the sights and sounds of man. A considerable number of facilities are designed for use by a large number of people. Facilities for intensified motorized use and parking are provided.

**Urban (U):** Area characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Vegetative cover is often manicured. Sights and sounds of humans, on-site, are predominant. Facilities for highly intensified motorized use and parking are available with forms of mass transit often available to carry people throughout the site.

**recreation:** Any socially desirable leisure activity in which an individual participates voluntarily and from which he derives satisfaction.

**recreational opportunity:** Availability of a real choice for a user to participate in a preferred activity within a preferred setting, in order to realize those satisfying experiences which are desired.

**reference condition:** The characteristic composition, structure, and disturbance regime of an ecosystem under its historic range of variability. For terrestrial ecosystems, reference conditions may be used to calculate Fire Regime Condition Class (FRCC); reference conditions can be also used for baseline measurements for both terrestrial and aquatic systems.

**reforestation:** The natural or artificial restocking of an area with forest trees.

**regeneration cutting:** Any removal of trees intended to assist regeneration already present or to make regeneration possible.

**regeneration:** The re-establishment of forest cover by seeding, planting, and natural means (also called reforestation). Also used as a noun referring to the young trees themselves.

**region:** An administrative unit within the National Forest system. The United States is divided into nine geographic regions. Each region has a headquarters office and is supervised by a Regional Forester. Within each region are located National Forests and other lands of the Forest Service.

**Regional Forester:** The official responsible for management of National Forest land within a USDA Forest Service region.

**release:** release treatments are used to reduce stem density, remove non-native species, and improve species competition.

**research natural area:** An area set aside by the Forest Service specifically to preserve a representative sample of an ecological community, primarily for scientific and educational purposes. Commercial exploitation is not allowed and general public use is discouraged.

**reserved mineral rights:** Refers to those cases wherein the minerals were severed from the surface during the transaction whereby the government acquired the land. These rights are subject to the Secretary of Agriculture's rules and regulations that were applicable at the time of the transaction.

**resource:** An aspect of human environment which renders possible, or facilitates the satisfaction of, human wants, and the attainment of social objectives.

**restoration:** The process of modifying an ecosystem or repairing damage, such that natural processes will again function in the repaired system to achieve a desired, healthy and functioning condition.

**retention:** A visual quality objective in which human activities are not evident to the casual forest visitor.

**revision:** To make the plan new or up-to-date. Plan revision must be considered and approved in accordance with the requirements for the development and approval of a forest plan. Revisions take place every 10-15 years, but may occur more frequently if conditions or public demands change significantly.

**right-of-way:** A right of use across the lands of others. It generally does not apply to absolute purchase of ownership.

**riparian areas:** Areas with three-dimensional ecotones of interaction that include terrestrial and aquatic ecosystems that extend down into the groundwater, up above the canopy, outward across the floodplain, up the near-slopes that drain to the water, laterally into the terrestrial ecosystem, and along the watercourse at a variable width.

**riparian ecosystem:** A transition between the aquatic ecosystem and the adjacent terrestrial ecosystem identified by soil characteristics (alluvial soils inundated by a 100-year flood, wetland soils) and distinctive vegetative communities that require free and unbound water.

**riparian:** Land areas directly influenced by water. They usually have visible vegetative or physical characteristics showing this water influence. Streamside, lake borders, and marshes are typical riparian areas.

**ripping:** A process where the soil is mechanically sliced or broken to improve tilth, aeration, and permeability.

**road construction:** Activity that results in the addition of forest system or temporary road miles.

**Road Maintenance Levels:** Levels are described as follows:

- a. Level 1: Road normally closed to vehicle traffic.
- b. Level 2: Road open for limited passage of traffic but not normally suitable for passenger cars.
- c. Level 3: Road open for public traffic including passenger cars, but may not be smooth or comfortable.
- d. Level 4: Road suitable for all types of vehicles, generally smooth to travel and dust may be controlled.
- e. Level 5: Road is smooth and dust free, and the surface is skid resistant, if paved.

**road reconstruction:** Activity that results in improvement or realignment of an existing system road defined as follows:

**road improvement:** Activity that results in an increase of an existing road's traffic service level, expansion of its capacity, or a change in its original design function.

**road realignment:** Activity that results in a new location of an existing road or portions of an existing road, and treatment of the old roadway.

**road:** A motor vehicle path more than 50 inches wide, unless classified and managed as a trail. It may be classed as a system or non-system road.

**roads analysis process (RAP):** Roads analysis is an integrated ecological, social, and economic science based approach to transportation planning that addresses existing and future road management options. The intended effects are to ensure that decisions to construct, reconstruct, or decommission roads will be better informed by using a roads analysis. Roads analysis may be completed at a variety of different scales, but generally begins with a broad forest-scale analysis to provide a context for future analyses.

**runoff:** The total stream discharge of water from a watershed including surface and subsurface flow, but not groundwater. Usually expressed in acre-feet.

**rural:** A recreation opportunity spectrum classification for areas characterized by a substantially modified natural environment. Sights and sounds of man are evident. Renewable resource modification and utilization practices enhance specific recreation activities or provide soil and vegetative cover protection.

## S

**sapling:** A usually young tree that is larger than a seedling, but smaller than a pole. Size varies by region.

**Scenery Management System (SMS):** A system for the inventory and analysis of the aesthetic values of the National Forest Lands. It replaces the Visual Management System (VMS) as defined in Agricultural Handbook #462.

**scenic attractiveness:** The scenic importance of a landscape based on human perceptions of the intrinsic beauty of landform, rockform, waterform, and vegetation pattern. Classified as A (Distinctive), B (Typical or Common), or C (Undistinguished).

**scenic integrity objective (SIO):** A desired level of excellence based on physical and sociological characteristics of an area. Refers to the degree of acceptable alterations to the valued attributes of the characteristic landscape. Objectives include Very High, High, Moderate, and Low.

**Very High (VH):** Generally provides for only for ecological changes in natural landscapes and complete intactness of landscape character in cultural landscapes.

**High (H):** Human activities are not visually evident to the casual observer. Activities may only repeat attributes of form, line, color, and texture found in the existing landscape character.

**Moderate (M):** Landscapes appear slightly altered. Noticeable human-created deviations must remain visually subordinate to the landscape character being viewed.

**Low (L):** Landscapes appear moderately altered. Human-created deviations begin to dominate the valued landscape character being viewed but borrow from valued attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed.

**scenic integrity:** A measure of the degree to which a landscape is visually perceived to be "complete." The highest scenic integrity ratings are given to those landscapes which have little or no deviation from the character valued for its aesthetic appeal. Scenic integrity is used to describe an existing situation, standard for management, or desired condition.

**sediment:** Solid mineral and organic material that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice.

**sedimentation:** The deposition of detached soil and rock material transported by or suspended in water.

**seed tree:** An even-aged regeneration method where in a single cut, the removal of all merchantable trees in a stand, except for a small number of widely dispersed trees retained for seed production, and to produce a new age class in a fully-exposed microenvironment.

**seep:** A wet area where a seasonal high water table intersects with the ground surface. Seeps that meet the definition of a wetland are included in the Riparian Corridor.

**sensitive species:** Those species that are placed on a list by the Regional Forester for which population viability is a concern.

**seral stage:** a developmental, transitory stage in the ecological succession of a biotic community.

**shaft:** A vertical excavation from the surface or within a mine, of limited area compared with its depth; made for finding or mining ore, lowering and hoisting miners, ventilation, and other purposes in an underground mining operation.

**shelterwood:** A regeneration method of regenerating an even-aged stand in which a new age class develops beneath the partially shaped microenvironment provided by the residual trees. The sequence of treatments can include three distinct types of cuttings: (1) an optional preparatory harvest to enhance conditions for seed production; (2) an establishment harvest to prepare the seed bed, and to create a new age class; and 3) a removal harvest to release established regeneration from competition with the overwood.

**silvicultural system:** A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. Systems are classified according to the method of carrying out the fellings that remove the mature crop, and provide for regeneration and according to the type of forest thereby produced.

**silviculture:** The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands. Silviculture entails the manipulation of forest and woodland vegetation in stands and on landscapes to meet the diverse needs and values of landowners and society on a sustainable basis.

**single-tree selection:** A regeneration method of creating new age classes in uneven-aged stands in which individual trees of all size classes are removed uniformly throughout the stand to achieve desired stand structural characteristics.

**site index:** A numerical evaluation of the quality of land for plant productivity.

**site preparation:** The removal of competition and conditioning of the soil to enhance the survival and growth of seedlings or to enhance the germination of seed.

**site:** An area considered in terms of its physical and/or biological environment, e.g., riparian zone, a homogenous stand of vegetation, a campground, etc.

**skid trail:** A temporary pathway through the woods formed by loggers dragging (skidding) logs from the stump to a log landing or skid road, without dropping a blade and without purposefully changing the geometric configuration of the ground over which they travel.

**skidding:** A term for moving logs by dragging from stump to roadside, deck, or other landing.

**slash:** The residue left on the ground after harvesting, sanitation operations, windstorm or fire. It includes unutilized logs, uprooted stumps, broken or uprooted stems, tops, branches, leaves, etc.

**snag:** A dead or partially dead (more than 50 percent) hardwood or pine tree which is used by many species for perching, feeding, or nesting.

**soil productivity:** The capacity of a soil to produce a specific crop such as fiber, forage, etc., under defined levels of management. It is generally dependent on available soil moisture and nutrients and length of growing season.

**source water:** Untreated water from streams, rivers, lakes, or underground aquifers which is used to supply private wells and public drinking water.

**southern pine beetle:** One of the many species of pine bark beetles that are present in the forest at all times. When environmental and forest conditions become favorable, the beetle populations can increase and cause substantial timber losses over extensive areas in a relatively short period of time.

**Southern Region:** The Forest Service organizational unit consisting of thirteen Southeastern states and Puerto Rico.

**special interest area:** Areas supporting some unique biological element(s) such as novaculite glades, acid seeps, etc., that have been or will be protected.

**special use authorization:** A permit, term permit, or easement that allows occupancy, use, rights, or privileges of National Forest System land.

**special-use permits:** Special uses are permits issued by the Forest Service for various land uses.

**spring:** A water source located where water begins to flow from the ground due to the intersection of the water table with the ground surface. Generally flows throughout the year. Springs that are the source of perennial or intermittent streams are included in the Riparian Corridor.

**stand improvement:** A term comprising all intermediate cuttings made to improve the composition, structure, condition, health, and growth of even-aged, two-aged, or uneven-aged stands.

**stand:** A contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

**standard:** A principle requiring a specific level of attainment, a rule to measure against.

**stocking:** The degree of occupancy of land by growing stock trees, measured by basal area or number of trees per unit area and spacing compared with a minimum standard: which varies by tree size and species or species group: to the occupancy that is required to fully utilize the growth potential of the land.

**stream:** A water course having a distinct natural bed and banks; a permanent source which provides water at least periodically; and at least periodic or seasonal flows at times when other recognized streams in the same area are flowing.

**suitability:** The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices.

**suitable for timber production:** National Forest System land allocated by a Forest Plan decision to be managed for timber production on a regulated basis. *Regulated basis* means a systematic relationship between tree growth and timber harvest such that a specific timber volume objective level can be sustained indefinitely.

**suitable:** Land that is to be managed for certain resource values on a regulated basis.

**suppression (fire suppression):** Any act taken to slow, stop or extinguish a fire. Examples of suppression activities include line construction, backfiring, and application of water or chemical fire retardants.

## T

**temporary road:** A road authorized by contract, permit, lease, other written authorization, or emergency operation, not intended to be part of the forest transportation system and not necessary for long-term resource management.

**ten (10)-year entry:** This is the average length of time between regeneration harvests. This is considered only an average, with actual entries allowed to vary from 8 to 12 years. Entry is defined as when the timber is sold.

**tentatively suitable:** Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils, productivity, or watershed conditions; (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvest; and (d) adequate information is available to project responses to timber management activities.

**terrestrial:** of, or pertaining to, land as distinct from water.

**thinning:** A cutting made to reduce stand density of trees primarily to improve growth, enhance forest health, or to recover potential mortality.

**threatened species:** Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Designated as a threatened species in the Federal Register by the Secretary of Interior.

**timber production:** The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use. For purposes of forest planning, timber production does not include the production of fuelwood or harvests from unsuitable lands. (36 CFR 219.3, 1982 rule)

**timber stand improvement:** A term comprising all intermediate cuttings made to improve the composition, constitution, condition, and increment of a timber stand.

**timber:** A general term applied to tree stands that provide a wood fiber product, specifically sawed lumber five by five inches or more in width and depth.

**topography:** The configuration of a land surface including its relief, elevation, and the position of its natural and human-made features.

**trail:** A general term denoting a way for purposes of travel by foot, stock or trail vehicle. (A trail vehicle is one which is 40 inches or less in width and is designated for trail use.)

**trailheads:** The parking, signing, and other facilities available at the terminus of a trail.

**transportation system:** All roads needed to manage and administer the Forest resources. A road network.

**trespass:** The invasion of the property or rights of another without owner's consent.

**two-aged stand:** A stand composed of two distinct age classes that are separated in age by more than 20 percent of rotation.

## U

**undefined channel:** upper stream reach characterized by not being scoured to produce a channel at least one foot wide and three inches deep

**understory:** The trees and other vegetation growing under a more or less continuous cover of branches and foliage formed collectively by the upper portion (overstory) of adjacent trees and other woody growth.

**uneven-aged management:** The manipulation of a forest for a continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of age or diameter (size) classes to provide a sustained yield of forest products. Managed uneven-aged forests are characterized by trees of many ages, or sizes intermingled singly or in groups. Trees are harvested singly or in small groups with the process of regeneration of the desirable species occurring either continuously or at each harvest. Each harvest usually includes thinning and cultural treatments to promote growth and maintain or enhance stand structure. The basic method for control (regulation) is some expression of volume (such as basal area), stand structure, and maximum tree size.

**uneven-aged:** a stand of trees in which the individual trees originated over a long period of time and, thus, differ widely in age; a regeneration system designed to produce such a stand.

**unsuitable forest land (not suited): Primary** - Forest land that is not managed for timber production because (a) the land has been withdrawn by Congress, the Secretary, or the Chief; (b) the land is not producing or capable of producing crops of industrial wood; (c) technology is not available to prevent irreversible damage to soils, productivity, or watershed conditions; (d) there is no reasonable assurance that lands can be adequately restocked within 5 years after final harvest, based on existing technology and knowledge, as reflected in current research and experience; (e) there is at present, a lack of adequate information to responses to timber management activities; or (f) timber management is inconsistent with or not cost efficient in meeting the management requirements and multiple-use objectives specified in the Forest Plan.

**Secondary** – Forest land that is not capable of sustaining a particular use without environmental, cultural and/or visual degradation beyond acceptable levels or land that has been withdrawn by Congress, the Secretary or the Chief.

## V

**viable population:** Population of plants or animals that has the estimated numbers and distribution of reproductive individuals to ensure its continued existence is well distributed in the planning area.

**viewshed:** The total landscape seen, or potentially seen, from all or a logical part of a travel route, use area, or waterbody.

**visual resource:** The composite of basic terrain, geological features, water features, vegetative patterns, and land-use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

## W

**waterbars:** A change in the grade of a roadbed, trail surface, or fireline used to divert water off the surface to prevent it from eroding ruts and possibly carrying sediment to a stream.

**watershed:** The entire area that contributes water to a drainage system or stream.

**wetlands:** Those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats and natural ponds.

**wild and scenic river:** A river or section of river designated as such by congressional action under the Wild and Scenic Rivers Act of Oct. 2, 1968, as supplemented and amended, or those sections of a river designated as wild, scenic, or recreational by an act of the legislature of the state or states through which it flows. A river can be classified under the following three categories:

**wild river:** Free of impoundments and generally inaccessible except by trail, and within watersheds or shorelines that are essentially primitive.

**scenic river:** Free of impoundments but accessible by roads, and within watersheds or shorelines that are still largely primitive and undeveloped.

**recreational river:** Readily accessible by roads, with some development along their shorelines and may have undergone some impoundment or diversion in the past.

**wilderness:** Area designated by congressional action under the 1964, 1975, 1980 and 1983 Wilderness Acts. Wilderness is defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation. Wilderness areas are protected and managed to preserve their natural conditions, which generally appear to have been affected primarily by the forces of nature with the imprint of human activity substantially unnoticeable; have outstanding opportunities for solitude or for a primitive and confined type of recreation; include at least 5,000 acres or are of sufficient size to make practical their preservation, enjoyment, and use in an unimpaired condition; and may contain features of scientific, educational, scenic, or historical value as well as ecologic and geologic interest.

**wildland fire:** Any non-structural fire on wildlands other than one intentionally set for management purposes. Confined to a predetermined area. Not to be confused with "fire use," which includes prescribed fire.

**wildland-urban interface:** The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

**wildlife habitat improvement:** The manipulation or maintenance of vegetation to yield desired results in terms of habitat suitable for designated wildlife species or groups of species.

**wildlife stand improvement (WSI):** Habitat improvements involving the manipulation of either the overstory or understory crown canopy which benefit wildlife, fish, or threatened and endangered animals and plants.

**wildlife:** All non-domesticated mammals, birds, reptiles, and amphibians living in a natural environment, including game species and non-game species. Animals, or their progeny (i.e., feral animals: including horses, burros, and hogs), that once were domesticated, but escaped captivity, are not considered wildlife.

**withdrawal:** An order removing specific land areas from availability for certain uses.

**withdrawn:** National Forest System lands segregated or otherwise withheld from settlement, sale, location, or entry under some or all of the general land laws.

**woodlands:** an open stand of trees with crowns not usually touching (generally forming a 25 to 60 percent cover).

# Glossary of Commonly Used Acronyms and Abbreviations

## Scientific

$\mu\text{g}/\text{m}^3$       Microgram(s) per cubic meter

## A

AGFC      Arkansas Game and Fish Commission  
AQI      Air Quality Index  
AQRV      Air Quality Related Values  
ARPA      Archaeological Resources Protection Act  
ASQ      Allowable Sale Quantity

## B

BA      Basal Area  
BMP      Best Management Practice

## C

CCF      Hundred Cubic Feet  
CFR      Code of Federal Regulations  
CSU      Controlled Surface Use  
CUS      Control of Undesirable Species

## D

DBH      Diameter at Breast Height  
DEIS      Draft Environmental Impact Statement

## E

EF      Experimental Forest  
EIS      Environmental Impact Statement  
EPA      Environmental Protection Agency

## F

FIA      Forest Inventory and Analysis  
FEIS      Final Environmental Impact Statement  
FY      Fiscal Year

**H**

HMA Habitat Management Areas

**I**

IMR Implementation Monitoring Review

IPM Integrated Pest Management

**M**

MA Management Area

MIS Management Indicator Species

**N**

NAAQS National Ambient Air Quality Standards

NEPA National Environmental Policy Act

NF National Forest

NFMA National Forest Management Act

NFS National Forest System

NRA National Recreation Area

**O**

ODWC Oklahoma Department of Wildlife and Conservation

OHV Off-Highway Vehicle

ONF Ouachita National Forest

**P**

PET Proposed, Endangered, and Threatened (Species)

PETS Proposed, Endangered, Threatened, and Sensitive Species

**R**

RCW Red-cockaded Woodpecker

RD Ranger District

RNA Research Natural Area

ROS Recreation Opportunity Spectrum

ROW Right-of-Way

**S**

SERA	Syracuse Environmental Research Associates
SHPO	State Historic Preservation Officer
SIO	Scenic Integrity Objective
SMA	Streamside Management Area
SMS	Scenery Management System
SPB	Southern Pine Beetle
SPM	Semi-Primitive Motorized
SPNM	Semi-Primitive Non-Motorized

**T**

THPO	Tribal Historic Preservation Office
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**U**

USDA	U.S. Department of Agriculture
USDI	U.S. Department of Interior
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

**W**

WUI	Wildland Urban Interface
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# Appendix A – Approved Communication Sites

Approved Communication Sites for the Forest and sites for which plans are under development:

Bee Mountain Electronic Site  
Mena RD, Polk County, AR  
NW1/4 of SE1/4 Section 13, T3S R31W  
This site is unoccupied and may be abandoned.

Buck Knob  
Oden RD, Scott County AR  
T1S. R28W, Sec. 1

Cove Mountain  
Fourche RD. Perry, Co. AR  
T3N, R21W, Sec. 14

Crystal Mountain  
Winona RD, Saline County, AR  
T2N, R18W, Sec. 8  
This site is unoccupied and may be abandoned.

Danville Electronic Site  
Fourche RD, Yell Co. AR  
T 4N, R23W, Sec. 12

Dutch Creek  
Fourche RD, Yell County, AR, 2.3 Ac.  
T4N, R23W, Sec. 12  
Microwave, mobile radio

Eagle Mountain  
Mena RD, Polk Co. AR  
SW1/4 Sec. 30 T3S, R29W

High Peak  
Caddo RD. Montgomery Co. AR  
T3S, R24W, Sec. 19

Kiamichi Mountain (Three Sticks Historical Monument)  
Kiamichi RD, LeFlore Co. OK  
T2N, R25E, Sec. 29

Federal Aviation Agency, VORTAC Site  
Choctaw RD, LeFlore Co. OK  
Sect. 6, T2N, R26E

Ouachita Pinnacle  
Jessieville RD, Garland Co. AR  
T1N, R21W, Sec. 15

Paron Elec. Site  
Winona RD, Saline Co, AR  
T2N, R18W, Sec. 11

Poteau Mtn. (Bates)  
Poteau RD. Sebastian Co. AR  
T4N, R32W, Sec. 34

Rich Mtn. #1  
Mena RD, Polk Co. AR  
NW1/4 Sec. 17, T1S, R31W

Rich Mtn. #2  
Mena RD, Polk Co. AR  
NW1/4 Sec. 6, T2S, R30W

Tall Peak  
Mena RD, Polk Co. AR  
SE1/4 SE1/4, Sec. 24, T4S, R28W

Tiak Tower  
Oklahoma RD, McCurtain Co., OK  
T8S, R25E, NWNE, Sec. 29  
Site plan under development

Union Hill  
Cold Springs RD, Scott Co. AR  
T4N, R27W, NWNE, Sec. 36

White Oak Mtn.  
Cold Springs RD., Scott Co. AR  
T4N, R28W, Part of the NE NW, Sec. 26

Sycamore  
Choctaw RD, LeFlore Co. OK  
T3N, R23E, Sec. 33

Slatington Peak  
Caddo RD. Montgomery Co. AR  
NW1/4 NW1/4 Sec. 4, and NE1/4 NE1/4 Sec. 5, T4S, R27W  
Currently unoccupied, but will be retained for future development.

Hodgen  
Choctaw RD, Leflore Co. OK  
T3N, R25E, Sec. 2  
Site plan under development.

# Appendix B – Minerals

## **Oil and Gas Lease Stipulations:**

Stipulations are applied by the Forest Service during the formal consent process to evaluate the National Forest lands under lease consideration by the Bureau of Land Management. A uniform format for oil and gas lease stipulations was developed by the Rocky Mountain Regional Coordinating Committee comprised of the USDI Bureau of Land Management (BLM), USDA Forest Service and various representatives from the legal, industry, and environmental communities. The stipulations attached by the Forest Service are based on the management objectives established through the Forest Plan. Stipulations developed by the Committee and adopted by the BLM and Forest Service are as follow:

- No Surface Occupancy (NSO): Use or occupancy of the land surface for fluid mineral exploration or development is prohibited to protect identified resource values. The NSO stipulation includes stipulations which may have been worded as "No Surface Use/Occupancy," "No Surface Disturbance," "Conditional NSO" and "Surface Disturbance or Surface Occupancy Restriction (by location)."
- Controlled Surface Use (CSU): Use and occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. CSU is used for operating guidance, not as a substitute for the NSO or Timing stipulations.
- Timing Limitation (Seasonal Restriction): Prohibits surface use during specified time periods to protect identified resource values. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project specific mitigation measures would be insufficient.
- Lease Notice: Provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A Lease Notice also addresses special items the lessee should consider when planning operations, but does not impose new or additional restrictions. Lease Notices attached to leases should not be confused with Notices to Lessees (43 CFR 3160.0-5). Standard Lease Notices made part of all leases:
  - All or part of the leased lands may contain animal or plant species classified under the Endangered Species Act of 1973, as amended. Other species may have been identified as sensitive in accordance with Forest Service Manual 2670 and be listed on the current Regional Forester's List of Sensitive Plant and Animal Species. Further information concerning the classification of these species may be obtained from the authorized Forest Officer. Exploration and development proposals may be limited or modifications required if activity is planned within the boundaries of a threatened, endangered or sensitive plant or animal species location as it then exists. All activities within these areas must be conducted in accordance with existing laws, regulations, and the Forest Land and Resource Management Plan guidelines.
  - All or part of the leased lands may be classified as wetlands in accordance with Executive Order 11990, "Protection of Wetlands" or a floodplain in accordance with Executive Order No. 11988, "Floodplain Management." Additional

management requirements for the protection of riparian areas are contained in 36 CFR 219.27(e) and the National Forest Management Act of 1976. All activities within these areas may require special measures to mitigate adverse impacts to the resource values. They must comply with the above referenced executive orders, regulations, laws and be in accordance with the Forest Land and Resource Management Plan guidelines.

## **Minerals Operational Guidance**

### **All Minerals**

- Administer federal mineral resource program to meet demands for energy and non-energy minerals consistent with management prescription, multiple use objectives and in accordance with Washington Office policies and existing laws.
- Facilitate orderly and environmentally sound exploration, development, and production of mineral and energy resources.
- For non-energy mineral resources, and mineral material authorizations, emphasize authorizations of minerals needed for environmental protection, public infrastructure, flood protection, erosion control, and watershed restoration.
- Require appropriate mitigation and reclamation of environmental disturbance for all mineral exploration and development proposals to achieve the planned uses specified in the Forest Plan, when those lands are no longer needed for mineral operations. Reduce environmental effects from past mineral-related activity.

### **Federal Leasable Minerals – General**

- Following exploration and production operations, the permittee is responsible for reclaiming disturbed sites in accordance with an approved reclamation plan. Reclamation shall meet the requirements of 36 CFR 228. Plans will consider opportunities to enhance the desired condition of the particular management prescription.

### **Federal Leasable Minerals - Oil and Gas**

- The Regional Forester consents to lease those lands on the Forest, which have not been statutorily withdrawn, subject to standard lease terms. This consent is valid until the Forest Service provides the Bureau of Land Management written notification that consent is withdrawn or amended.
- Operations will comply with environmental protection standards from several sources: Forest Plan standards for the management prescription where the operations will occur; lease terms and conditions; federal Onshore Oil and Gas Orders; Oil and Gas Resources regulations (36 CFR 228 E); Conditions of Approval in Applications for Permits to Drill; and Federal and State requirements and regulations promulgated to establish performance standards for protecting soil, water, riparian, and aquatic resources and for reclamation of areas affected by oil and gas activities.

### **Federal Leasable Minerals – Coal**

- Operations will follow federal and state rules and regulations promulgated to establish performance standards for protecting soil, water, riparian, and aquatic resources and values; and for restoration and reclamation of areas affected by mining activities. Such rules and regulations include requirements for protection of surface and groundwater quantity and quality; prevention and control of acid mine

drainage, erosion, and sediment deposition; and protection of streams and hydrologic balance.

#### **Federal Leasable Minerals – Other**

- Unless statutorily withdrawn, other Federal hardrock leasable minerals are available for lease.

#### **Mineral Materials**

- Mineral materials are available for commercial, personal, free, and administrative uses, except as specified by the individual management prescription. For all approved mineral material sites, a pit development plan must be developed and approved by the authorized Forest Service Official.

#### **Reserved and Outstanding Mineral Rights**

- On National Forest System tracts where mineral rights are outstanding or where reserved, the exercise of private mineral rights to explore and develop mineral resources will be respected.
- Operations proposed under outstanding and reserved mineral rights are processed within 60 days and 90 days, respectively.
- Any mineral operation undertaken on National Forest land where minerals have been reserved, will comply with applicable state and federal laws, and the Secretary's rules and regulations.
- Any mineral operation undertaken on National Forest land where minerals are outstanding, will be administered in strict accordance with the terms of the deed of separation, and comply with applicable state and federal laws.
- Management Prescriptions, Management Area direction, and Forest-wide direction are subject to outstanding and reserved mineral rights. The government should pursue acquiring private mineral rights through purchase, exchange, or donation in the following areas (if appropriate): designated Wilderness; designated Wild Rivers; designated Rare Communities and Special Biological Areas. Unless, and until such, private rights are acquired, the exercise of reserved and outstanding mineral rights to explore and develop mineral resources will be respected.
- All projects (mineral or non-mineral) or consideration of special designations shall include a review of the status of private mineral rights. Where private mineral rights could be negatively affected, the public involvement process will inform and seek comments from the current owners of private mineral rights. The potential effects on private mineral rights will be assessed.
- Where reserved or outstanding mineral rights are involved, the mineral owner is encouraged to implement all surface-disturbing activities outside riparian areas.

#### **Geologic Resources**

- Manage geologic resources to provide multiple public benefits.
- Manage geologic hazards to protect public safety and facilities while integrating the keystone role of these natural disturbances in riparian and watershed management.
- Integrate geologic components (processes, structures, and materials) in management of riparian areas, watersheds, and ecosystems.
- Locate and design facilities and management activities to avoid, minimize, or mitigate negative effects on geologic resources with identified values (scientific, scenic, paleontological, ecological, recreational, drinking water, etc.).

### **Geologic Hazards**

- Complete appropriate order of geologic inventory and as appropriate geotechnical investigation in areas where proposed activities or uses could be endangered by geologically related hazards such as land instability, earthquakes, subsidence, etc., or increase risks of subsidence, land instability, ground water pollution, or diversion.

### **Locatable Minerals**

- Areas not withdrawn from locatable minerals location would be open and available for prospecting, location, and development of the locatable mineral resource.
- Surface disturbing mining claim exploration and development activities would be evaluated and approved subject to site-specific environmental analyses.
- Administer active mineral operations in accordance with approved plans of operation, current NEPA analysis, and adequate reclamation bonds.
- Require reclamation bonds for all proposed mineral activities that will potentially cause significant surface disturbance and require rehabilitation. Bonds should be of sufficient amount to ensure the full costs of reclamation. Existing bonds should be reviewed for adequacy annually.
- Inspection and monitoring results should be evaluated and applied to modify plans and permits as needed to minimize negative effects to other resources.

### **Withdrawal Review – Ouachita NF Minerals Withdrawals**

The review of existing withdrawals and potential future minerals withdrawals is required per Section 204 of the Federal Land Policy and Management Act of 1976. Determination to recommend maintaining or revoking an existing mineral withdrawal, or initiate action to approve a new mineral withdrawal is based on the need to protect the resource or administrative values of the lands in question. Where it is determined that full protection from the provisions of the 1872 mining law is necessary and that existing regulatory controls applied to a mining related activity would not be sufficient to secure this protection, then it is appropriate to recommend removing the lands from mineral entry. Where it is determined that existing regulatory controls would be sufficient then the lands should be made available for entry under the mining laws.

#### **1. LAKE OUACHITA**

Public Land Order 628 (PLO 628) dated 2/13/50 withdrew 26,146.32 acres of public domain lands for use by the Department of the Army for flood control purposes. In 1987, lands around Lake Ouachita were formally interchanged between the Corps of Engineers and the Forest Service. The lands around Lake Ouachita are chiefly valuable to maintain high water quality standard and recreation for the lake. The 16,795.74 acres of land around Lake Ouachita currently withdrawn from mineral entry are recommended to remain so withdrawn. An additional 2,000 acres of public domain lands within the Lake Ouachita Management Area chiefly valuable for similar purposes are recommended to be withdrawn from mineral entry, are identified as such:

- T1N R22: Sec. 35 - 80 acres
- T2S R21: Sec. 19 - 160 acres
- T2S R22: Sec. 23 - 520 acres; Sec. 24 - 160 acres; Sec. 30 - 120 acres; Sec. 31 - 80 acres; Sec. 32 - 240 acres; Sec. 33 - 120 acres
- T2S R23: Sec. 04 - 40 acres; Sec. 23 - 280 acres; Sec. 25 - 40 acres; Sec. 26 - 160 acres.

## 2. POTEAU MOUNTAIN

Because of its proximity to the Poteau Mountain Wilderness and Congress' stated intent to confer a special protective status to these lands, it is recommended that the following public domain lands within the Poteau Management Area be withdrawn from mineral entry (3,400 acres):

- T4N R30: Sections 19, 20, 21(SWSW), 28 (SWNW, S2SW), 29, 30, partials 31&32
- T4N R31: partial Sections 25, 36

## 3. LAKE WINONA

Lake Winona furnishes approximately 46 percent of the water needs for the 300,000 people in the city of Little Rock, the State capital of Arkansas. The Forest Service and the city of Little Rock have a cooperative agreement to establish a public use area and various management practices that will be followed to protect this valuable water source. Certain types of mining practices may be incompatible with the need to maintain high-quality standards for the Lake Winona watershed. A withdrawal is necessary to prevent mining related activities that could adversely impact the watershed and affect the water quality of Lake Winona, and to prevent the potential loss of government control of surface resources that could result from a transfer of lands to the private sector as a result of key provisions of the general mining law. The following public domain lands around Lake Winona are recommended to be withdrawn from mineral entry (1,120 acres):

- T2N R17W: partial Sections 19 (SW, E2E2), 20 (W2W2), 30 (NW)
- T2N R18W: partial Sections 15 (SW), 22(NW and S2), 23 (S, NE), 24 (S2), 25 (N2N2)

## 4. LOOKOUTS AND OTHER SITES

Twenty-four sites have been withdrawn from mineral entry as lookouts, guard stations, warden stations and warehouses, under authority of public land orders (PLO) 13358/27/56. The following 11 sites are no longer in use for specific administrative purposes. It is recommended that the withdrawals on these sites be lifted (230 acres):

- Paul Mountain Lookout, Vanderslice Lookout, Allen Peak Lookout, Shady Warehouse, Muddy Mountain Lookout, Bear Knob Lookout, Eagle Gap Guard Station, Slatington Lookout, Cold Springs Guard Station, Pigeon Creek Warden Station, and North Fork Pinnacle Lookout

The following 13 sites are still in use for specific administrative purposes. It is recommended that the withdrawals remain in effect on these sites (220 acres):

- These nine sites originally were used as lookouts but are now needed for electronic sites: White Oak, Eagle Mountain, High Peak, Dutch Creek, Poteau Mountain, Tall Peak, Bee Mountain, Ouachita Pinnacle, and Wolf Pinnacle
- These four sites remain in use for their original purpose: Jessierville Guard Station, Oden Ranger Station, Fiddlers Creek Game Warden Station, Hickory Nut Lookout

In addition, the following site is now in use as an electronic site. It is recommended that the site be withdrawn from mineral entry (10 acres):

- Kingdoodle Knob Electronic Site (Union Hill Site) T4N, R27W Section 36

#### 5. RECREATION AREAS

The following recreation areas have been withdrawn by the PLO as noted, and are currently being used for the purpose of the withdrawal. It is recommended that the withdrawals for these lands remain in effect (566.60 acres):

- South Fourche (PLO 725, 6/4/51); Crystal Campground (PLO 725, 6/4/51); Shady Lake (PLO 725, 6/4/51); Jack Creek (PLO 1335, 8/27/56 and PLO 1447, 7/18/57); Knoppers Ford (PLO 1335, 8/27/56 and PLO 2439, 7/18/61); Iron Springs (PLO 1335, 8/27/56); Charlton (PLO 1335, 8/27/56); Bard Springs (PLO 1335, 8/27/56 and PLO 1447, 7/18/57); Collier Springs (PLO 1335, 8/27/56); Queen Wilhelmina State Park (PLO 2597, 1/29/62)
- The Mine Creek site was withdrawn from mineral entry under authority of PLO 1560 on 12/6/57 and is no longer needed. It is recommended that the withdrawal for Mine Creek be removed (504.22 acres).

#### 6. SCENIC AREAS

The following scenic areas have been withdrawn by the PLO as noted, and are currently being used for the purpose of the withdrawal. It is recommended that the withdrawals for these lands remain in effect (1,926 acres)

- Ouachita Lake Visitor Center (PLO 5053; 5/07/71) 920.0 acres, Womble RD, T2S R23W Sec 23-26
- Dutch Creek Mtn Scenic Area (PLO 2436; 7/18/61) 320.5 acres, Fourche RD, T3N R26W Sec 1&2
- Choctaw Trail (Skyline Drive) (PLO 4103; 9/29/66) 685.4 acres, Mena RD, T1S R30 thru 32W

The following scenic areas are to be managed in a manner to protect the scenic characteristics of the areas. This may be incompatible with minerals related activities. Further review of these areas is necessary to consider a recommendation of withdrawing them from mineral entry (2,700 acres):

- Blowout Mountain: Oden RD; T1 S R26W Sec. 4, 5 (526 acres)
- Dutch Creek: Cold Springs & Fourche RD's; T3N R25 & 26W (624 acres)
- Crystal Mountain: Caddo & Womble RD's; T3S R24W Sec. 8 (100 acres)
- Irons Fork: Jessieville RD; T1 N R23W Sec. 5-9 (1,450 acres)

The following area was managed as a scenic area under the 1990 Amended Forest Plan and is recommended to be expanded and managed as a botanical area under the 2005 Revised Forest Plan. This may be incompatible with minerals related activities. Further review of this area is necessary to consider a recommendation of withdrawing it from mineral entry (2,580 acres):

- South Fourche: Winona RD; T3N R19W Sec. 19, 20, 30 (2,850 acres)

## 7. RESEARCH NATURAL AREAS

Five research natural areas are identified on the Forest and four are withdrawn (one recommended for withdrawal) from mineral entry. The Roaring Branch Research Natural Area was withdrawn from mineral entry by PLO 5114 on 9/10/71. The Lake Winona Research Natural Area was designated as an RNA by the Chief on 11/7/77; however, the lands were not withdrawn from mineral entry. Gap Creek RNA was established in 1990 and is withdrawn from mineral entry. R.R. Reynolds RNA is established within the Crossett Experimental Forest, which is already withdrawn from mineral entry. The need to protect the RNAs as unique research sites that will not be directly affected by human-caused impacts has led to the following recommendations:

- Retain withdrawal - Roaring Branch RNA: Caddo RD, T4S, R28W- 330 acres
- Withdraw Lake Winona RNA: Winona RD, T2N, R18W - 280 acres
- Withdraw Gap Creek RNA: Caddo RD T4S, R24W - 65 acres
- Retain withdrawal – R. R. Reynolds RNA

Roaring Branch and Lake Winona have dual status as Research Natural Areas (RNA) and National Natural Landmarks. Designated under 36 CFR 251.23, RNAs provide continued opportunity for studies of ecological succession and other research interests in a setting where disturbance by humans is very limited. Administration and protection are supplied by the National Forest, with scientific and educational uses coordinated through the Southern Research Station.

## 8. EXPERIMENTAL FORESTS

The Alum Creek Experimental Forest was established by PLO 3647 on 4/15/65, and is currently being used for the purposes for which it was withdrawn. It is recommended that the withdrawal for Alum Creek be retained (4,590 acres):

- Alum Creek Experimental Forest (Winona RD): T1 N, R19W: partial Sections 4 and 5; T2N, R19W: partial Sections 21-23, 26-30,32-35
- Crossett Experimental Forest – retain withdrawal
- Irons Fork Experimental Forest (Mena RD, T1S R28W - PLO 1055, 1/18/55) is no longer in use. It is recommended that the withdrawal be rescinded

### **Minerals Potential on the Ouachita National Forest**

The minerals potential for quartz, hard rock minerals, gas, and coal, on the Ouachita National Forest is displayed in Table B.1. Geologic formations by percent occurrence on each Ranger District are included as well. The areas of known mineral potential are based on current information and may change due to further exploration, technological advances, and geologic evaluations. The USDI Bureau of Land Management (BLM) in cooperation with the Forest Service developed the Reasonable Foreseeable Development Scenario for oil & gas on the Ouachita National Forest from which the potential for gas is based. The Reasonably Foreseeable Development Scenario was developed with best scientific and historical information available up to and through December 2004. These numbers can change dramatically if a new oil and gas discovery is made or if current projections of known discoveries are found, through production, to be over-estimated. Hardrock minerals potential is based on minerals and geology

reports primarily from the State of Arkansas Geological Commission, USDI Bureau of Mines, USDI Geological Survey, and USDA Forest Service.

**Table B.1 Minerals Potential for the Ouachita National Forest**

Ranger District	Formations <sup>1</sup> (% of Total Formations on each Ranger District)	Minerals Potential			
		Quartz	Other Hardrock <sup>2</sup>	Gas <sup>3</sup>	Coal (Coal Bed Methane)
Choctaw	Pa 90% PMs/Pj/Pjv/Phs 10%	Low	Low	Med to Med-High	Med to Med-High
Caddo	Ms 40%, Mda 15%, Ob 15%, Ow 15%, Oc 5% Pj/Smb/Ocm/Obp 10%	High	High	Low	Low
Cold Springs	North of Highway 80: Pau 35%, Pam 15%, Pma 15%, Phs 5%, Psv 30%	Low	Low	Med	Med-Low
	South of Highway 80: Pal 95%, Pam 5%	Low	Low	Low	Low
Fourche	North of Highway 28: Pal/Pam 75%, Pau 25%	Low	Low	Med	Med-Low
	South of Highway 28: Pal/Pam 95%, Pjv/Pj 5%	Low	Low	Med	Low
Jessieville	MS 25%, Pal 3%, Pj 30%, Pjv 15% (North 2/3 from Highway 298)	High	Med	Low	Low
	Ob 7% Ow 10%, Om 5%, Mda/Smb/Obf/Obp 5% (South 1/3 from Hwy 298)	High	Med	Low	Low
Kiamichi	Pj 60%, Pjv 5%, Pa 20%, Pms 15%	Med	Med	Med	Low
Mena	North of Mena, AR: Pj 50%, Pjv 10%, Ms 20%, Pal 20%:	Med	Med	Low	Low
	South of Mena, AR Ms 50%, Mda 25%, Smb 15%, Obp 10%	Med	Med	Low	Low
Oden	Pam/Pal 30%, Pj 30%, Obp/Smb 5%, Ms 30%, Pjv 5%	High	Med	Low	Low

Ranger District	Formations <sup>1</sup> (% of Total Formations on each Ranger District)	Minerals Potential			
		Quartz	Other Hardrock <sup>2</sup>	Gas <sup>3</sup>	Coal (Coal Bed Methane)
Poteau	North of Poteau River: Phs 10%, Pau 10% Pma/Psv 80%	Low	Low	Med	High
	South of Poteau River: Pal/Pam 90% Pjv/Pj 10%	Low	Low	Med	Low
Womble	Ow 15%, Mda 5%, Oc 15%, Ocm 20%, Ob 10%, Om 15%, Ms/Obp/Smb 20%	High	High	Low	Low
Winona	Pj 50%, Ms 15%, Pal/Pam 30%, Pjv/Mda/Ow/Obp 5%	High	Med	Low	Low
Tiak - Idabel	Qt/Qal 45%, Kto 40%, Kk 7%, Kw 7%, Ka/Kgw/Kbr 1%	Low	Low	Med	Low
Tiak -Broken Bow	Mst 55% Sb30%, MDSa 8%, Pjf/Ob/ Op/ Obf/Ow/ Oc/Sm/Kh/Qal 7%	Low	Low	Med	Low

<sup>1</sup>Geologic formations and approximate percent of the formation within the Ranger District

<sup>2</sup> Hardrock: metallic and valuable non-metallic minerals (excludes sand, gravel building stone)

<sup>3</sup>Gas: Potential from USDI Bureau of Land Management

### **Projected Minerals Activity**

Projected minerals activity in the planning period will be from coal bed methane exploration and possible development, possible natural gas exploration, existing hardrock minerals operations (quartz, novaculite, gravel and building stone), and with new proposed hardrock minerals operations. It is projected that there will be 7 to 16 gas wells drilled on the Forest, with 7 being commercially productive. The rest would be dry holes and the sites would be reclaimed. For each of the producing well sites, the area needed for production would be less than was needed for the drilling phase. The size of the drill pad would decrease from two acres of disturbance down to about one-fourth acre, with the unneeded portion being reclaimed.

In the next 10-year planning period, five new quartz operations are expected to occur. Most case sites are operated intermittently. The nature of hardrock mining operations on the Ouachita National Forest requires that they proceed at a slow and methodical pace. These are all surface operations. New common variety mineral material operations are expected to occur at the rate of at least 40 to 60 per year. These are small tonnage, short duration removals primarily from within the existing 22 pits and the primary building stone site on the Forest. Operations outside of existing pits are small tonnage (generally several pickup loads), hand removals of surface-exposed building stone. Site-specific environmental analysis is conducted on all new sites.

Gravel pits on the Forest are long-term impact sites that allow controlled centralized access to essential pit-run aggregate resources. Pits are designed to prevent water runoff and consequent siltation from leaving the pit site and impacting adjacent Forest resources. All pits on the Ouachita National Forest are worked intermittently by counties and Forest Service contractors removing material for public projects (roads, etc) as needed.

There are positive economic impacts resulting from oil and gas exploration and development activities. Lessees/operators usually contract locally for road and drill pad construction. They purchase food, fuel, lodging, and other supplies from local sources and may subcontract certain parts of the operation to local well servicing companies. Most of the salaries paid to workers are spent in the local area. The estimated dollars that an average drill rig generates per day is over \$200 per worker. A typical well drilling operation will have an average of 10 to 20 workers. This translates into about \$2,000 to \$4,000/day spent in the local area. Since the average gas well in this area takes 2 to 4 weeks to complete, \$28,000 to \$112,000 per well goes into the economy. There are 59 hardrock mining cases for quartz crystal, novaculite, wavellite, aggregate (gravel), and building stone, and 1 energy case for coal bed methane. The accumulated total existing surface impacts from these operations located across the Forest is approximately 120 acres. Average surface impact is less than 2 acres per case. This represents less than one-tenth of 1 percent of the total Forest land base.

# Appendix C – Proposed and Probable Activities

**Table C.1 Proposed and Probable Activities (Including Timber Sale Program)**

<b>Activity</b>	<b>Unit of Measure</b>	<b>Range of Proposed/ Probable Annual Activity</b>
Allowable Sale Quantity	Million cubic feet/year	27
Timber offered for sale	Million cubic feet/year	20-30
Regeneration harvest (by modified seedtree/shelterwood methods)	Acres	5,000-6,000
Management Area 14	Acres	4,000-4,700
Management Area 15	Acres	140
Management Area 17	Acres	250
Management Area 21	Acres	160
Management Area 22	Acres	1,000-1,200
Other MAs	Acres	250
Uneven-aged management	Acres	9,000-12,500
Management Area 14	Acres	7,200-7,850
Management Area 16	Acres	1,000-1,300
Management Area 19	Acres	800-850
Commercial Thinning	Acres	20,000-28,500
Management Area 14	Acres	10,000-13,700
Management Area 15	Acres	1,000
Management Area 17	Acres	400-500
Management Area 21	Acres	1,500-1,600
Management Area 22	Acres	7,000-8,200
Midstory reduction	Acres	4,325-5,000
Management Area 21	Acres	500-600
Management Area 22	Acres	3,500-3,725
Other MAs	Acres	325-500

<b>Activity</b>	<b>Unit of Measure</b>	<b>Range of Proposed/ Probable Annual Activity</b>
Watershed improvement and maintenance	Acres	30-60
Arterial/collector roads reconstructed	Miles	15-20
Local roads constructed	Miles	5-10
Roads decommissioned	Miles	10-20
Trail maintenance (non-motorized)	Miles	300-350
Heritage resource survey	Acres	9,000-10,000
Active range allotments	Number	≤17
Prescribed burning	Acres	80,000-250,000
Management Area 6	Acres	5,000-10,000
Management Area 14	Acres	25,000-110,000
Management Area 17	Acres	8,000-22,000
Management Area 21	Acres	8,000-25,000
Management Area 22	Acres	27,000-70,000
Other MAs	Acres	7,000-13,000

# Appendix D – Old Growth

**Table D.1. Preliminary Inventory of Possible Old Growth (Approximate Acres Meeting Minimum Age Criteria<sup>a</sup>) by Ecological System Type and Management Area**

Management Area	Dry-Mesic Hardwood System (Age 120+)	Pine-Oak System (Age 100+)	Dry Oak Woodland System (Age 120+)	Montane Oak System (Age 120+)	Mesic Hardwood System (Age 140+)
1. Wilderness	—	10,988	—	—	—
2. Special Interest Areas	—	1,168	—	—	—
4. Research Natural Areas	0 <sup>b</sup>	226			
5. Experimental Forests	—	1,110	—	—	—
6. Rare Upland Communities	—	NA	189 <sup>c</sup>	224 <sup>d</sup>	303 <sup>e</sup>
9. Water and Riparian Communities	—	455	—	—	—
14 Ouachita Mountains, Habitat Diversity Emphasis	3,489	33,335	188	195	—
15. West Gulf Coastal Plain Habitat Diversity Emphasis	—	—	—	—	—
16. Lands Surrounding Lake Ouachita and Broken Bow Lake	—	9,606	—	—	—
17. Semi-Primitive Areas	1,826	6,088	—	—	—
19. Winding Stair Mountain NRA	—	1,700	—	—	—
20. Wild and Scenic River Corridors	222	3,264	—	—	—
21. Old Growth Restoration	375	6,100	—	—	—
22. Renewal of the Shortleaf Pine-Bluestem Grass Ecosystem	296	54,129	—	—	—
<b>Total</b>	<b>6,208</b>	<b>128,169</b>	<b>377</b>	<b>419</b>	<b>303</b>

<sup>a</sup> Acreages are from an existing inventory based upon the CISC database of September 2003; areas less than 100 acres are not reported in this table but are preserved in the inventory data.

<sup>b</sup> At least 303 acres is 100+ years of age.

<sup>c</sup> At a minimum, an additional 367 acres is 100+ years of age.

<sup>d</sup> At a minimum, an additional 305 acres is 100+ years of age

<sup>e</sup> At a minimum, an additional 556 acres is 100+ years of age.

Each of the major terrestrial ecological systems in the Ouachita Mountains is well represented in management areas in which active or passive (“custodial”) development and perpetuation of patches or large areas of old growth are strongly featured (Table D.2).

**Table D.2. Minimum Area in which Restoration of Old Growth Characteristics in Primary Terrestrial Ecological Systems will be Featured**

Management Area		Land Base in which Restoration of Old Growth Conditions will be Featured <sup>a</sup>	Active Management to Restore Old Growth Conditions, Custodial Management or Both?	Primary Ecological Systems Represented			
				SP-Oak Forest	Pine-Oak Woodland	SP-Bluestem	Dry-Mesic Hardwood
		<i>Acres (approximate)</i>		<i>----- Acres (approximate) -----</i>			
1	Wilderness	70,000	Custodial	35,000	18,800	0	16,084
2	Special Interest Areas	18,000	Both	10,600	2,080	0	9,358
4	Research Natural Areas/ National Natural Landmarks	2,000	Custodial	714	257	0	501
20	Wild and Scenic River Corridors	26,000	Primarily custodial	19,200	3,330	0	4,037
21	Old Growth Restoration	79,000	Active	53,800	10,700	0	5,850
22	Renewal of the Shortleaf Pine-Bluestem Grass Ecosystem/RC W Habitat	36,600	Active	0	0	29,000	7,600
Total		224,000		119,314	35,167	29,000	43,430

<sup>a</sup> Old growth conditions eventually will be featured prominently in landscapes within the land base shown. “Featured prominently” does not necessarily mean that old growth will be the predominant condition of the landscape, because, even within the management areas where old growth conditions develop without active management, natural disturbances are likely to generate patches of younger growth and help maintain a mix of forest stands differing in age and composition.

In addition to old growth characteristics likely to develop in the primary terrestrial systems [Table D.2], much of the 270,000+ acres assigned to Management Area 9 (Riparian Communities and Water) already has and is also likely to develop patches of old growth naturally, because, although thinning and single tree selection are permitted under certain very limited circumstances (e.g., to restore native forests in off-site loblolly pine plantations or to control insect infestations), few native trees in this management are subject to cutting. Much of this future old growth would be representative of the Ouachita Riparian subsystem, and smaller areas would be representative of the Ouachita Mountain Seep System, but

large portions would be more characteristic of upland Shortleaf Pine-Oak and Dry-Mesic Hardwood systems. Although old growth conditions should be common within Management Area 9 in the future, natural disturbances are likely to generate patches of younger growth and help maintain a mix of forest ages and different mixes of species. As an example of the kind of forces likely to influence the development or perpetuation of old growth over time, the major ice storms of December 2000 that greatly affected an extensive area of the Ouachita National Forest had a noticeably greater impact on riparian areas than any others (due perhaps to the steepness of the slopes above many riparian areas and/or the shallowness of trees roots in and immediately above the riparian area); in many places near streams, great volumes of trees were felled by ice. In short, although the development of old growth in Management Area 9 will be strongly supported, long term persistence of such conditions cannot be guaranteed.

Several other types of old growth conditions should develop in Management Area 6, Rare Upland Communities, at least in Mesic Hardwood Forest and Dry Oak Woodland Systems, which cover at least 31,000 acres (Table D.3). Although “old growth” conditions could be described for the glade/barren and cliff/talus systems, the desired conditions of these rare communities are more appropriately described in terms of vegetation cover and fire regime (see Part 1 of the Revised Forest Plan). These communities will be managed under mixes of active and custodial management needed to achieve the desired conditions described in Part 1 of the Revised Forest Plan.

**Table D.3. Potential Old Growth and Other Rare Upland Communities in MA 6**

MA	Land Base in which Restoration of Old Growth Conditions will be Featured <sup>a</sup>	Ecological Systems Represented					
		Mesic Hardwood Forest	Dry Oak Woodland	Novaculite Glade and Woodland	Dry Acidic Glade and Barrens	Acidic Cliff and Talus	
		----- Acres (approximate)-----					
6	Rare Upland Communities	48,000	27,700	3,574	1,315	2,912	4,418

<sup>a</sup> Old growth conditions eventually will be featured prominently in the Mesic Hardwood Forest and Dry Oak Woodland Systems. “Featured prominently” does not mean that old growth will be the only condition of the landscape, however, because natural disturbances are likely to generate patches of younger growth and help maintain a mix of stands differing in age and composition.

Finally, patches having old growth characteristics and varying in size from 10 to 100 or more acres are also likely to develop in each of the additional management areas listed in Table D.4, particularly on steeper slopes. In these management areas, there are more than 100,000 acres of dry-mesic hardwood forest (mostly oak-hickory forest) or woodland that are unlikely to receive much active management in the form of tree cutting or forest regeneration (Table D.4). Periodic prescribed fire is likely to be the most common treatment most of these stands would receive. Under these circumstances, old growth characteristics could develop in many hardwood stands over time; trends toward old growth conditions are likely to be counterbalanced, though, by episodes of oak decline and other drought-, disease-, and/or insect outbreak-related phenomena that periodically thin hardwood stands and initiate phases of natural regeneration.

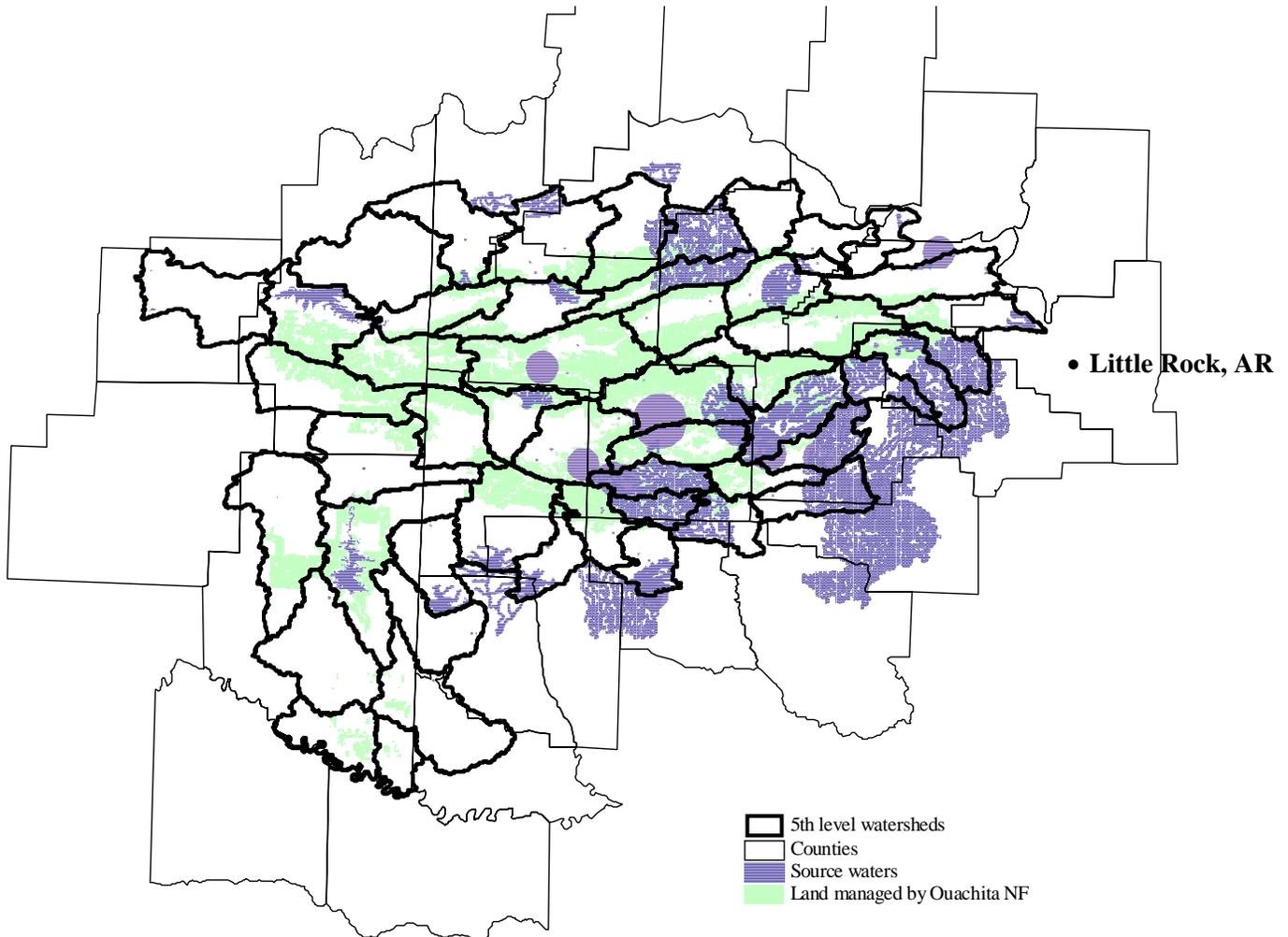
**Table D.4. Estimated Maximum Potential Future Old Growth Acres of Dry-Mesic Forest and Woodland by Selected Management Area**

<b>Management Area</b>		<b>Estimated Acres of Dry-Mesic Hardwood Forest or Woodland</b>
14	Ouachita Mountains, Habitat Diversity Emphasis	78,700
16	Lands Surrounding Lake Ouachita & Broken Bow Lake	6,200
17	Semi-Primitive Areas	40,800
19	Winding Stair Mountain National Recreation Area (and Associated Non-Wilderness Designations)	14,100
Total		139,800

## Appendix E – Designated Source Waters

As part of the 1998 Clean Water Action Plan, each state identified source waters that are the contributing areas above municipal or public water sources. These areas are generally separated into ground waters and surface waters. Forty-seven surface sources that intersect National Forest System lands are found in Arkansas, and one is found in Oklahoma. Sixty-two Arkansas wells and springs and six Oklahoma wells fall within the influence of lands managed by the Ouachita National Forest. Figure E.1 identifies the approximate locations of source waters on or near the Ouachita National Forest. A map is available in color at [www.aokforests.com](http://www.aokforests.com).

Public water supply surface sources that have lands on or near the Ouachita National Forest include Broken Bow and Wister Lakes in Oklahoma and the following source areas in Arkansas: South Fork Reservoir (Cedar Creek), Iron Forks, and James Fork Reservoirs; Hamilton, Nimrod, Ouachita, Waldron, Winona, and Square Rock Lakes; and the Caddo, Middle Fork Saline, Ouachita, Petit Jean, and Saline (eastern) Rivers.



**Figure E.1 Approximate Locations of Source Waters on or near the Ouachita National Forest**

# Appendix F – Additional Guidance

The following additional sources of design criteria include administrative, program and project guidance. Some are legal requirements, while others are policies, procedures, and manuals that are used as guidance in project-level analysis and decision-making. For ease of use, these other sources of design criteria are arranged under headings that represent the most common use of the reference, although the reference may provide guidance in several areas. This is not intended to be an all-inclusive list, because management direction to federal agencies changes periodically. Some of these references may be amended or deleted, while others may be added.

## **General**

- National Forest Management Act. 1976
- Organic Act, 1897

## **Air Quality**

- 40 CFR Part 51. Vol. 64. No. 126. Regional Haze Regulations – Final Rule. July 1, 1999.
- Clean Air Act of 1970, 1977 and 1990
- Forest Service Manual 2500 Watershed and Air Management
- Forest Service Manual 5140 Fire Use
- U.S. Environmental Protection Agency (U.S. EPA) 1998, Interim Air Quality On Wildland and Prescribed Fires
- Wilderness Act, 1997

## **Soil and Water Resources**

- Federal-State Cooperation for Soil Conservation Act of 1944  
Soil Management Handbook 2509.18
- Best Management Practices for the states of Arkansas and Oklahoma
- Federal Water Pollution Control Act and Amendments of 1972 (Clean Water Act)
- Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands)
- Joint Surveys of Watershed Areas Act of 1962
- Safe Drinking Water Act, as Amended, 1977
- Clean Water Act, as Amended
- Water Resources Planning Act of 1965
- Watershed Protection and Flood Prevention Act of 1954
- Discharge of Dredged or Fill Material into Waters of the US, 33 CFR 323
- Water Resource Inventory Handbook 2509.16
- Forest Service Manual 2500 Watershed and Air Management
- Water Programs 40 CFR 121-135

## **Wildlife, Fish, and Plant Habitat**

- Forest Service Manual 2600 Wildlife, Fish, and Sensitive Plant Habitat Management
- Fish and Wildlife Coordination Act of 1934
- Migratory Bird Treaty Act of 1918
- Fish and Wildlife Conservation Act of 1960
- Federal Noxious Weed Act of 1975
- USDA Forest Service, General Report SA-GA7, Endangered, Threatened, or Sensitive Species of the Southeastern United States
- Wildlife Game Refuges Act of 1916
- Fish and Wildlife 36 CFR 241
- Wildlife and Fisheries Program Management Handbook 2609.13

## **Threatened, Endangered, and Sensitive Species and their Habitats**

- Recovery Plans for Threatened or Endangered Species
- Endangered Species Act of 1973, as amended

## **Vegetation Management**

### **General**

- Timber Resource Planning Handbook 2409.13
- Forest Service Manual 2400 Timber Management
- Forest Service Manual 3400 Forest Pest Management

### **Prescribed Fire**

- Forest Service Manual 5100 Fire Management
- Fire Management Analysis and Planning Handbook 5100

### **Forest Regeneration**

- Knutson-Vandenberg Act of 1930
- Supplemental National Forest Reforestation Fund Act of 1972
- Timber Management Planning 36 CFR 221

### **Forest Resource Improvement**

- Anderson-Mansfield Reforestation and Revegetation Act of 1949

### **Timber Harvest Administration**

- Sale and Disposal of National Forest System Timber 36 CFR 223

### **Herbicide Use**

- Federal Insecticide, Rodenticide, and Fungicide Act of 1972
- FSM 2150 - Pesticide-Use Management and Coordination
- FSH 2109.14 – Pesticide-Use Management and Coordination Handbook
- FSH 6709.11– Health and Safety Code Handbook

## **Heritage Resources**

- Historic Sites Act of 1935
- National Historic Preservation Act of 1966
- National Historic Preservation Act of 1980, as amended
- Native American Graves Protection and Repatriation Act of 1990, 43 CFR 10
- Preservation of Historical and Archaeological Data Act of 1974
- National Register of Historic Places 36 CFR 60
- Antiquities Act of 1906
- American Indian Religious Freedom Act of 1978
- Archaeological Resources Protection Act of 1979, as amended
- Protection of Archaeological Resources 36 CFR 296
- Protection of Historic Properties 36 CFR 800
- Protection and Enhancement of Cultural Environment EO 11593
- Indian Sacred Sites, EO 13007

## **Public Use and Enjoyment/Infrastructure**

### **Recreation and Scenery Management**

- National Trails System Act of 1968
- Occupancy and Use of Developed Sites and Areas of Concentrated Public Use 36 CFR 291
- National Recreation Areas 36 CFR 292
- Special Areas 36 CFR 294
- Forest Service Manual 2300 Recreation, Wilderness, and Related Resource Management
- Forest Service Handbook No. 701, "Landscape Aesthetics, A Handbook for Scenery Management"

### **Transportation and Infrastructure**

- Forest Highways Act of 1958
- National Forest Road and Trails Act of 1964
- Forest Development Transportation System 36 CFR 212
- Forest Service Manual 7700 Transportation System
- Forest Service Handbook 7709.55 Transportation Planning

### **Lands**

- Land Acquisition Act of 1925
- Land Acquisition – Declaration of Taking Act of 1931
- Land Acquisition – Title Adjustment Act of 1943
- Leases Around Reservoirs Act of 1962
- Land and Water Conservation Fund Act of 1964
- Granger-Thye Act of 1950
- Public Land Surveys Act of 1899
- Right of Eminent Domain Act of 1888
- Small Tracts Act of 1983
- Landownership Adjustment 36 CFR 254
- Title Adjustment Act of 1930
- Forest Service Manual 5400 Landownership
- Federal Land Policy and Management Act of 1976

- Weeks Act of 1911

## **Commodity, Commercial, and Special Uses**

### **Livestock Grazing**

- Public Rangelands Improvement Act of 1978
- Range Management 36 CFR 222
- Forest Service Manual 2200 Range Management

### **Minerals and Geology**

- Mineral Leasing Act of 1920
- Mineral Leasing Act for Acquired Lands Act 1947
- Mineral Resources on Weeks Law Land Act of 1917
- Common Varieties of Mineral Materials Act of 1947
- Mining Claims Rights Restoration Act of 1955
- Mining and Minerals Policy Act of 1970
- Oil and Gas Leasing Reform Act of 1987
- Surface Mining Control and Reclamation Act of 1977
- U.S. Mining Laws (Public Domain Lands) Act of 1872
- Minerals 36 CFR 228
- Minerals 36 CFR 251.15
- Minerals 36 CFR 219.22
- Forest Service Manual 2800 Minerals and Geology
- Public Law 100-446, Section 323, enacted 1988
- The Federal Onshore Oil and Gas Leasing Reform Act of 1987
- The National Materials and Minerals Policy Research and Development Act of 1980
- The Energy Security Act of 1980, Section 262
- Surface Mining Control and Reclamation Act of 1977
- The Federal Land Policy and Management Act of 1976
- Mineral Leasing Act of 1960
- Multiple Use Mining Act of 1955

### **Special Use and Special Forest Products Permits**

- Occupancy Permits Act of 1915
- Interagency Agreement between participating agencies and the Department of Energy dated May 2002, for interstate natural gas pipelines projects certified by the Federal Energy Regulatory Commission (FERC)
- AR-OK Construction and Use Agreement for reciprocal granting of R-O-W easements or permits to serve the needs of the cooperating parties
- Multiple-Use Sustained-Yield Act of 1960, as amended (36 CFR 223.1 Subpart A for the law on plant collection permits)
- Pipelines Act of 1920
- Forest Service Manual 2700 Special Uses Management
- Master Agreement between the Department of Defense and Department of Agriculture

### **Management Area 1 (Wilderness)**

- Wilderness Act of 1964
- Eastern Wilderness Act of 1975
- Arkansas Wilderness Act of 1984
- Winding Stair Mountain National Recreation and Wilderness Area Act of 1988
- Wilderness-Primitive Areas 36 CFR 293
- Individual wilderness implementation plans

### **Management Area 2 (Special Interest Areas)**

- Establishment reports for RNAs

### **Management Area 16 (Lakes)**

- Lake Ouachita Joint Management Agreement signed between the Forest Service and Corps of Engineers

### **Management Area 20 (Wild and Scenic River Corridors and Recommended Wild and Scenic River Corridors)**

- Wild and Scenic Rivers Act of 1968, as amended
- Wild and Scenic Rivers 36 CFR 297

### **Management Area 22. Renewal of the Shortleaf Pine-Bluestem Grass Ecosystem and Red-cockaded Woodpecker Habitat**

- Red-cockaded Woodpecker Revised Recovery Plan.  
See [http://rcwrecovery.fws.gov/recovery\\_plan.htm](http://rcwrecovery.fws.gov/recovery_plan.htm).