Glossary

Adjudication – The legal process by which an arbiter or judge reviews evidence and argumentation, including legal reasoning, set forth by opposing parties or litigants to come to a decision which determines water rights and obligations between the parties involved.

Administrative use – Use by the Forest Service.

Age class – Trees or plants that originated within a relatively distinct range of years. Typically the range of years is considered to fall within 20 percent of the average natural maturity of a particular species (e.g., if 100 years is required to reach maturity, then there would be five 20-year age classes).

Allelopathy – The suppression of neighboring plants or the release into the environment by one plant of a substance that inhibits the germination or growth of other potential competitor plants of the same or another species

Allowable sale quantity (ASQ) – The quantity of timber that may be sold from the area of suitable land covered by the land management plan for a time period specified by the plan. This allowable sale quantity (ASQ) is usually expressed on an annual basis as the "average annual allowable sale quantity." For timber resource planning purposes, the allowable sale quantity applies to each decade over the planning horizon and includes only chargeable volume. Consistent with the definition of timber production, do not include firewood or other nonindustrial wood in the allowable sale quantity.

Aquatic management zones – An area of vegetation or forest litter located adjacent to stream courses and/or riparian areas for the purpose of filtering sediment, providing bank stability, and providing shade for fisheries habitat in tree/shrub ecosystems.

Aspen clone – A genetically identical set of aspen trees all connected by the same root system, such that they can be vegetatively propagated. A clone may be a distinct aspen stand, or it may be a smaller inclusion within a conifer stand, or it may cover an entire mountainside as a large stand or patch.

Available forage – That amount of growth of a vigorous and healthy plant that can be utilized as feed (regardless of what animal is using it) without impairing the plant's long-term health and productivity or other uses such as riparian filtering. The amount of available forage may be less where there is a need to restore health and vigor of forage plants. That amount may also depend on time of year and plant physiological stage or other conditions such as drought.

Basal area – The cross-sectional area of the stem or the stems of the plant or all plants in a stand. Herbaceous and small woody plants are measured at diameter at root collar (DRC) or near ground level; larger woody plants are measured at diameter at breast height (DBH) or other appropriate height. Basal area is a way to measure how much of a site is occupied by plants; it is expressed in square feet per acre for woody species.

Beneficial use – Beneficial use of water from rivers and streams is allocated by prior appropriation, meaning the first user to divert water and put it to a "beneficial use" obtains a priority right, and that right is to be satisfied before any other user has access to the water. The definition of what constitutes a "beneficial use" has evolved. Although the Arizona Legislature added habitat for wildlife and fish as one of the beneficial uses in 1941, it wasn't until 1976 that the court ruled this included a right for instream flow, and the first instream flow permit was not

issued until 1990. Obtaining a permit for instream flow allows users to leave their allocation of water in the river rather than diverting, consuming, or losing it for nonuse.

Best management practices (BMPs) – Methods, measures, or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters (40 CFR § 130.2(m)).

Biological diversity – The variety of the Apache-Sitgreaves NFs' organisms, the ecological complexes in which they occur, and the processes and life support services they facilitate.

Biomass – see woody biomass.

Bolt – Short piece of pulpwood, pole, or log.

Candidate species - Plant and animal taxa considered for possible addition to the list of endangered and threatened species. These are taxa for which the U.S. Fish and Wildlife Service has sufficient information on biological vulnerability and threat(s) on file to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

CCF – hundred cubic feet.

Chargeable volume – All volume included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity, based on regional utilization standards. Consistent with the definition of timber production, planned production of firewood is not included in the allowable sale quantity and therefore is non-chargeable.

Class I airshed – An airshed classification where areas require the highest level of protection under the Clean Air Act.

Class II airshed – An airshed classification representing National Forest System land that is not classified as a Class I airshed. These areas may receive a greater amount of human-caused pollution than Class I areas.

Clearcutting regeneration method – The cutting of essentially all trees, producing a fully exposed microclimate for the development of a new age class. This includes coppice cutting.

Climate change – Refers to long-term (decades or longer) trends in climate averages such as the global warming that has been observed over the past century and long-term changes in variability (e.g., frequency, severity, and duration of extreme events).

Climate variability – Refers to shorter term (daily, seasonal, annual, interannual, several years) variations in climate, including the fluctuations associated with El Niño (wet) or La Niña (dry) events.

Clump – A tight cluster of two to five trees of similar age and size originating from a common rooting zone that typically lean away from each other when mature. A clump is relatively isolated from other clumps or trees within a group of trees, but a stand-alone clump of trees can function as a tree group.

Critical habitat – When a species is listed as endangered or threatened under the Endangered Species Act (ESA), it is protected which includes protection of the habitat it occupies. In addition, specific areas may be designated as particularly necessary for the species' recovery whether the species is present or not; these areas are called "critical habitat." Besides requiring Federal agencies to ensure that their actions will not jeopardize the survival of an endangered or threatened species itself, the ESA also requires that their actions not destroy or adversely modify designated critical habitat. ESA requirements have no implications on non-Federal lands unless activities thereon are undertaken with Federal funding or require a Federal permit.

Coarse woody debris – Woody material, including logs, on the ground greater than 3 inches in diameter—a component of litter. Large coarse woody debris is often considered to be downed logs at least 12 inches in diameter and 8 feet in length.

Common variety minerals – Salable mineral materials/common variety minerals are synonymous terms for the same class of minerals that can be sold under a mineral material contract, and are common. These minerals are relatively low value per volume, for example, sand, gravel, cinders, common building stone, and flagstone. Many of the materials are used for road surfacing, boulders, and engineering construction or may be specialty resources such as soil amendments or decorative stone, including flagstone. These minerals are typically sold unless used internally, by another government agency, or for ceremonial uses. In these cases they may be provided free of charge

Communications site – An area of National Forest System land used for telecommunications services. A communications site may be limited to a single communications facility, but most often encompasses more than one facility. Existing Apache-Sitgreaves NFs communications sites are listed in appendix C of the proposed plan.

Communities-at-risk – As identified in the Federal Register, high risk urban communities within the wildland-urban interface.

Community wildfire protection plans (CWPP) – Plans for at-risk communities that identify and prioritize areas for hazardous fuels treatments. The CWPPs that cover the Apache-Sitgreaves NFs include CWPP for the At-Risk-Communities in Apache County, CWPP for At-Risk-Communities in Greenlee County, and the Sitgreaves CWPP (includes Apache, Coconino, and Navajo Counties).

Connectivity – The arrangement of habitats that allows organisms and ecological processes to move across the landscape; patches of similar habitats are either close together or linked by corridors of appropriate vegetation; the opposite of fragmentation.

Cultural affiliation – A relationship of shared group identity which can be reasonably traced historically or prehistorically between a present day Indian tribe or Native Hawaiian organization and an identifiable earlier group. (25 USC3001 (2))

Deciview – A measurement of visibility. A low deciview number reflects clearer visibility; while a high deciview number reflects increased haziness.

Departure (departed) – The relative difference between existing and desired conditions or reference conditions.

Desired condition – A description of social, economic, and/or ecological characteristics of the plan area, or portion of the plan area, toward which management of the land and resources should be directed.

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

Diameter – The diameter of a tree species, usually measured by two primary methods:

- **Diameter at breast height (DBH)** – The diameter of a forest tree species at the bole (or trunk) typically measured at 4.5 feet above ground level.
- **Diameter at root collar (DRC)** – The diameter of a woodland tree species typically measured at the root collar (the part of a tree where the main roots join the trunk, usually at or near ground level) or at the natural ground line, whichever is higher.

Dispersed recreation – Outdoor recreation in which visitors are spread over relatively large areas. Where facilities or developments are provided, they are more for access and protection of the environment than for the comfort or convenience of the visitors.

Ecological disturbance – An event or force that brings about mortality to organisms and changes in their spatial patterning in the ecosystems they inhabit. Disturbance plays a significant role in shaping the structure of individual populations and the character of whole ecosystems.

Ecological restoration – The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. Ecological restoration focuses on establishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystem sustainability, resilience, and health under current and future conditions. In the Southwestern Region, achievement of desired conditions means that the ecosystem has been restored. Restoration treatments are those that move ecosystem components toward desired conditions.

Ecoregion – Ecoregion sections and subsections are units in the National Hierarchy of Ecological Units ranging in size from 13 million acres (section) down to 10,000 acres (subsection) that describe areas of similar environmental and biological features. The Apache-Sitgreaves NFs fall completely within the White Mountains-San Francisco Peaks-Mogollon Rim ecoregion section.

Ecosystem – A spatially explicit, relatively homogeneous unit of the earth that includes all interacting organisms and components of the abiotic (nonliving) environment within its boundaries. An ecosystem is commonly described in terms of its (1) composition: major vegetation types, rare communities, aquatic systems, and riparian systems; (2) structure: successional stages, water quality, wetlands, and floodplains; and (3) function: ecological processes such as streamflows and natural disturbance regimes.

Ecosystem diversity – The variety of ecosystems present on the Apache-Sitgreaves NFs, as represented by the 14 potential natural vegetation types and the variety of species (both plant and animal), their habitats, and ecological processes that occur in their different physical settings.

Ecosystem services – Benefits obtained from ecosystems, including (1) provisioning services such as food, fresh water, fuel, and fiber; (2) regulating services such as climate, water, pollination, and disease regulation; (3) supporting services such as soil formation and nutrient

cycling; and (4) cultural services such as educational, aesthetic, and cultural values as well as recreation and tourism opportunities.

Endemic – A population of native insects, diseases, plants, or animals which perform a functional role in the ecosystem when they are present at low levels, or constantly attack just a few hosts throughout an area, but can become potentially injurious when they increase or spread to reach outbreak (epidemic) levels.

Energy corridor – A linear strip of land identified for the present or future location of utility right-of-way (e.g., above or belowground electric transmission line, gas pipeline).

Energy development – Infrastructure associated with the provision or transport of energy (e.g., biomass power generation, wind turbines, solar panels).

Environmental justice – To the greatest extent practicable and permitted by law, all populations are provided the opportunity to comment before decisions are rendered on, are allowed to share in the benefits of, are not excluded from, and are not affected in a disproportionately high and adverse manner by government programs and activities affecting human health or the environment.

Escaped prescribed fire – A prescribed fire that has exceeded or is expected to exceed prescription parameters or otherwise meets the criteria for conversion to wildfire. Criteria are specified in the Interagency Prescribed Fire Planning and Implementation Procedures Guide (NWCG, 2008).

Even-aged stands – Stands that are composed of one or two distinct age classes of trees.

Even-aged management – The application of a combination of actions that result in the creation of stands in which trees are essentially the same age. Managed even-aged forests are characterized by a distribution of stands of varying ages (and therefore, tree size) throughout the forest area. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

Federal reserved water rights (reserved rights) – When Congress designates Federal lands for a specific purpose it also reserves sufficient water to serve the purposes of that designation. These water rights are known as “Federal reserved water rights” or simply, reserved rights. Reserved rights are implied rights, meaning that Congress need not expressly state in a bill that it intends to reserve Federal water right. The right exists whether or not Congress explicitly mentions it.

Federally listed species (listed species) – Any species of fish, wildlife, or plant which has been determined to be endangered or threatened under section 4 of the Endangered Species Act.

Feral horse – A free-roaming domesticated horse. Feral horses are domestic horses, or their descendants (branded or unbranded), that strayed, escaped, or were deliberately released onto National Forest System lands and continue to survive and reproduce on the forests in the wild. Feral horses are animals that do not meet the definition of a wild free-roaming horse (see wild horse) and are considered unauthorized livestock (see unauthorized livestock)**.**

Fire intensity – The product of the available heat of combustion per unit of ground and the rate of spread of the fire; interpreted as the heat released per unit of time for each unit length of fire edge. The primary unit is British thermal unit per second per foot (Btu/sec/ft.) of fire front. See also fire severity.

Fire management plan – A plan that identifies and integrates all wildland fire management and related activities within the context of approved land management plans. It defines a program to manage wildland fires (wildfire and prescribed fire). The plan is supplemented by operational plans, including but not limited to, preparedness plans, preplanned dispatch plans, prescribed fire burn plans, and prevention plans. Fire management plans assure that wildland fire management goals and components are coordinated.

Fire regime – The patterns, frequency, and severity of fire that occur over a long period of time across a landscape and its immediate effects on the ecosystem in which it occurs. There are five fire regimes which are classified based on frequency (average number of years between fires) and severity (amount of replacement of the dominant overstory vegetation) of the fire:

- **Fire regime I** – 0- to 35-year frequency and low (surface fires most common, isolated torching can occur) to mixed severity (less than 75 percent of dominant overstory vegetation replaced)
- **Fire regime II** – 0- to 35-year frequency and high severity (greater than 75 percent of dominant overstory vegetation replaced)
- **Fire regime III** – 35- to 100+-year frequency and mixed severity
- **Fire regime IV** – 35- to 100+-year frequency and high severity
- **Fire regime V** – 200+-year frequency and high severity.

Fire regime condition class (FRCC) – FRCC is a metric that quantifies how departed a system is from historical conditions in relation to fire, the role fire historically played in that system, and the vegetative structure (Hann and Bunnell, 2001; Hardy et al., 2001; Hann et al., 2004).

Fire severity – Degree to which a site has been altered or disrupted by fire; also used to describe the product of fire intensity and residence time; usually defined by the degree of soil heating or mortality of vegetation.

Foliar – Pertaining to foliage (green tree leaves or needles).

Forest highway – A forest road under the jurisdiction of, and maintained by, a public authority and open to public travel. (23 USC101). The Forest Highway Program falls under 23 USC202, 203, and 204.

Forest road or trail – A road or trail wholly or partly within or adjacent to and serving the NFS that the Forest Service determines is necessary for the protection, administration, and utilization of the NFS and the use and development of its resources (23 USC 101, 36 CFR § 212.1, 36 CFR § 251.51, 36 CFR § 261.2, Forest Service Manual 7705).

Free-flowing – Existing or flowing in natural conditions without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.

Firewood – Wood that is round, split, or sawn and/or otherwise generally refuse material cut into short lengths or chipped for burning.

Fugitive dust – Fine particulate matter from windblown soil and dust which becomes airborne.

Geomorphic – Refers to the process of erosion and sediment transport and deposition.

Goshawk post-fledging family areas (PFAs) – Areas that surround nest areas. They represent an area of concentrated use by the northern goshawk family until the time the young are no longer dependent on adults for food. PFAs are approximately 420 acres in size (not including the nest area acres).

Gross growth – Ingrowth plus accretion. A measurable increase in wood volume due to the addition of new trees per acre added or grown into size classes which count toward total stand volume (ingrowth), plus added increases in tree diameter increment and height of trees already existing in those same size classes (accretion).

Group – A cluster of two or more trees with interlocking or nearly interlocking crowns at maturity surrounded by an opening. Size of tree groups is typically variable depending on forested PNVT and site conditions and can range from fractions of an acre (a two-tree group) (i.e., ponderosa pine, dry mixed conifer) too many acres (i.e., wet mixed conifer, spruce-fir). Trees within groups are typically non-uniformly spaced, some of which may be tightly clumped.

Group selection – An uneven-aged management method in which trees are removed and new age classes are established in groups, adjacent to other groups of different age classes. Group cut size is determined by the reproduction requirements of the species desired, and by the number or total acreage of different age classes desired across the stand.

Herbaceous – Grass, grass-like, and/or forb vegetation.

Herbivory – Loss of vegetation due to consumption by another organism.

Highly interactive species – A species that has a disproportionate effect on its ecosystem. The virtual or effective absence of a highly interactive species leads to significant changes in some feature of its ecosystem. Such changes include structural or compositional modifications, alterations in the import or export of nutrients, loss of resilience to disturbance, and decreases in native species diversity. The type of interactions these species have with their surrounding environment is critical to the persistence of certain ecosystem features through time. Examples of strong interactions include mutualisms (e.g., pollinators such as butterflies, spore and seed dispersers such as birds), consumers (e.g., large predators such as mountain lions), and ecosystem engineers (e.g., prairie dogs, beavers).

Historic range of variability (HRV) – Description of the change over time and space in the ecological condition of vegetation types and the ecological processes that shape those types (Schussman and Smith, 2006).

Human health and/or environmental effects – As used in USDA Departmental Regulation 5600-002 includes interrelated social and economic effects.

Hydrologic – Refers to the movement, distribution, and quality of water.

Hydrologic function – The behavioral characteristics of a watershed described in terms of ability to sustain favorable conditions of water flow. Favorable conditions of water flow are defined in terms of water quality, quantity, and timing.

Hydrologic Unit Code (HUC) – The United States is divided and subdivided into successively smaller hydrologic units which are identified by unique hydrologic unit codes (HUCs). The

Apache-Sitgreaves NFs is contained within three 3rd level (basin) HUC watersheds: Little Colorado, Gila, and Salt Rivers. The Apache-Sitgreaves NFs intersect thirteen 4th level (subbasin) HUC watersheds, thirty-two 5th level (watershed) HUC watersheds, and two hundred and fifteen 6th level (subwatershed) HUC watersheds. The average size of a 4th level HUC watershed is 1 million acres, 5th level HUC watersheds are around 165,000 acres, and 6th level HUC watersheds are about 21,000 acres.

Hydrophytic vegetation – The sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present.

Individual tree selection – An uneven-aged management method where individual trees of all size classes are removed more or less uniformly throughout the stand, to promote growth of remaining trees and to provide space for regeneration.

Industrial wood – All commercial roundwood products, except firewood.

Instream flow – Seasonal streamflows needed for maintaining aquatic and riparian ecosystems, wildlife, fisheries, and recreation opportunities at an acceptable level.

Invasive species – Species that are not native to the ecosystem being described and that cause, or have the potential to cause, ecological or economic harm.

Irruption – Sudden or drastic increase of an insect population which rises to epidemic levels for a period of time, after which the population returns to endemic levels. Cyclical population explosions and crashes are normal for some insect species, while for others this behavior only occurs in response to conditions tipped abnormally in their favor.

Leasable minerals – Leasable minerals include coal, oil, gas, oil shale, sodium, phosphate, potassium, and geothermal. Leasable minerals also include the hardrock minerals, if they are found on lands that have “acquired” status. Leases are obtained through the Bureau of Land Management to extract these mineral resources.

Litter – Litter consists of dead, unattached organic material on the soil surface that is effective in protecting the soil surface from raindrop splash, sheet, and rill erosion and is at least ½ inch thick. Litter is composed of leaves, needles, cones, and woody vegetative debris including twigs, branches, and trunks.

Livestock grazing – Foraging by permitted livestock (domestic foraging animals of any kind).

Locatable minerals – In general, the hardrock minerals mined and processed for metals (e.g., gold, silver, copper, uranium, some types of nonmetallic minerals such as sandstone). They are called “locatable,” meaning subject to mining claim location under the United States mining laws. Locatable minerals are limited to lands with “reserved public domain” status.

Long-term sustained-yield capacity (LTSYC) – The highest uniform wood yield from lands being managed for timber production that may be sustained, under specified management intensity, consistent with multiple-use objectives.

Low-income population – Any readily identifiable group of low-income persons who live in geographic proximity to, and, if circumstances warrant, migrant farm workers and other

geographically dispersed/transient persons who would be similarly affected by USDA programs or activities. Low-income populations may be identified using data collected, maintained and analyzed by an agency or from analytical tools such as the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty.

Mechanical treatment – For the purposes of this analysis, mechanical treatments include most vegetation treatments except fire. They may include mechanized cutting, hand cutting, and other silvicultural treatments.

Mechanized travel – Movement using any contrivance over land, water, or air, having moving parts, that provides a mechanical advantage to the user and that is powered by a living or nonliving power source. This includes, but is not limited to, sailboats, hang gliders, parachutes, bicycles, game carriers, carts, and wagons. It does not include wheelchairs when used as necessary medical appliances. It does not include skis, snowshoes, rafts, canoes, sleds, travois, or similar primitive devices without moving parts.

Mexican spotted owl protected activity center (PAC) – An area established around an occupied Mexican spotted owl site to help ensure successful reproduction and species viability. A PAC is no less than 600 acres in size and includes the best owl nesting and roosting habitat. Management in PACs is focused on forest health and includes retention of key habitat elements such as higher levels of basal area and canopy cover to provide the cool understory conditions owls need, and the down woody debris and forage (cover, fungi, seeds) needed by their prey. Management may involve thinning and/or burning to reduce the risk of high intensity wildfire, often with timing restrictions to prevent disturbance to owls during the breeding season (March 1 through August 31).

Minority – A person who is a member of one or more the following population groups: American Indian or Alaskan Native, Asian or Pacific Islander, Black, or Hispanic.

Minority population – Any readily identifiable group of minority persons who live in geographic proximity to, and, if circumstances warrant, migrant farm workers and other geographically dispersed/transient persons who would be similarly affected by USDA programs or activities.

Motorized travel – Movement using machines that use a motor, engine, or other nonliving power sources other than a vehicle operated on rails or a wheelchair or mobility device, including one that is battery powered, designed solely for the use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

National Forest System (NFS) – As defined in the Forest and Rangeland Renewable Resources Planning Act of 1974 (Public Law 93-378), the "National Forest System" includes all national forest lands reserved or withdrawn from the public domain of the United States, all national forest lands acquired through purchase, exchange, donation, or other means; the national grasslands and land use projects administered under Title III of the Bankhead-Jones Farm Tenant Act (50 Stat. 525, 7 USC 1010-1012); and other lands, waters, or interests therein administered by the Forest Service or are designated for administration through the Forest Service as part of the system.

National Forest System road – A road wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its

resources. A forest road other than a road which has been authorized by a legally documented right-of-way held by a state, county, or other local public road authority. (36 CFR § 212.1)

National Forest System trail – A trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources A forest trail other than a trail which has been authorized by a legally documented right-of-way held by a state, county, or other local public road authority. (36 CFR § 212.1)

National Wild and Scenic Rivers System – Created by Congress in 1968 (Public Law 90-542; 16 USC 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

Native species – A species which is a part of the original fauna or flora in the area in question.

Natural disturbance regime – The historic patterns (frequency and extent) of fire, insects, wind, landslides, floods, and other natural processes in an area.

Natural fire regime – The fire regime that existed prior to human-facilitated interruption of frequency, extent, or severity.

Net growth – Gross growth in forest wood volume minus natural (non-cut) mortality volume.

Nonindustrial wood – Includes aspen, junipers, piñons, Chihuahuan pine, oaks, cottonwoods and all riparian obligate broadleaved trees, and any industrial species cut from non-suitable timberlands. Also includes nonindustrial sizes of industrial species. Wood cut as nonindustrial may be used as firewood and/or biomass. Sometimes referred to as non-ASQ species.

Nonmotorized travel – Movement not relying on machines that use a motor, engine, or other nonliving power source (e.g., walking, canoeing, horseback riding).

Nonpoint source pollution (NPS) – NPS refers to water pollution affecting water quality from diffuse sources, such as polluted runoff from agricultural areas draining into lakes, wetlands, rivers, and streams. NPS can be contrasted with point source pollution, where discharges occur to a body of water at a single location, such as discharges from a chemical factory, or urban runoff from a roadway or storm drain. NPS may derive from many different sources with no specific solution to rectify the problem, making it difficult to regulate.

Noxious weed – Any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the United States, the public health, or the environment. The term typically describes species of plants that have been determined to be undesirable or injurious in some capacity. Federal noxious weeds are regulated by USDA-Animal and Plant Health Inspection Service under the Plant Protection Act of 2000, which superseded the Federal Noxious Weed Act of 1974. When the species are native, they are not considered invasive species by the Federal Government.

Offsite vegetation type – Vegetation type where certain tree or plant species would not survive or successfully reproduce when natural control processes function normally to control their encroachment. Example: exclusion of regular fire intervals permits white fir to encroach where it

does not naturally belong in the ponderosa pine forest. Thus, ponderosa pine forest is an offsite vegetation type for white-fir.

Old growth – In southwestern forested ecosystems, old growth is different than the traditional definition based on northwestern infrequent fire forests. Due to large differences among Southwest forested PNVTs and natural disturbances, old growth forests vary extensively in tree size, age classes, presence, and abundance of structural elements, stability, and presence of understory. Old growth refers to specific habitat components that occur in forests and woodlands – old trees, dead trees (snags), downed wood (coarse woody debris), and structure diversity. These important habitat features may occur in small areas, with only a few components, or over larger areas as stands or forests where old growth is concentrated. In the Southwest, old growth is considered "transitional," given that that the location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). Some species, notably certain plants, require "old forest" communities that may or may not have old growth components but have escaped significant disturbance for lengths of time necessary to provide the suitable stability and environment. See appendix B in the plan for a more detailed description.

Outstanding Arizona Waters – Surface water designated by Arizona Department of Environmental Quality as an outstanding State water resource. These are waters with exceptional quality where water quality should not be degraded.

Outstandingly remarkable value – A value that a river or river segment possesses that reflects its unique, rare, or exemplary qualities. In the Wild and Scenic River Act, river values identified include scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Examples of other similar values include botanical, hydrological, paleontological, scientific, or heritage. A river must have at least one outstandingly remarkable value to be eligible for wild and scenic river designation.

Patches – Areas larger than tree groups in which the vegetation composition and structure are relatively homogeneous. Patches compose the mid-scale, thus they range in size from 100 to 1,000 acres.

Plan Set of Documents – The complete set of documentation supporting the land management plan; it may include but is not limited to evaluation reports, documentation of public involvement, the plan including applicable maps, applicable plan improvement documents, applicable NEPA documents, and the monitoring program for the plan area.

Planning horizon – The overall time period considered in the planning process that spans all activities covered in the analysis or plan and all future conditions and effects of proposed actions which would influence the planning decisions.

Planned ignition – The intentional initiation of a wildland fire by hand-held, mechanical, or aerial device where the distance and timing between ignition lines or points and the sequence of igniting them is determined by environmental conditions (e.g., weather, fuel, topography), firing technique, and other factors which influence fire behavior and fire effects. See prescribed fire.

Planning period – The life of the plan, generally 10 to 15 years from plan approval. As a general rule, this analysis uses 15 years to define the planning period.

Potential natural vegetation type (PNVT) – Coarse-scale groupings of noncontiguous land that share similar aspect, elevation, vegetation, soil parent material, and natural disturbances such as fire or drought cycles. Identification of PNVTs is based on the terrestrial ecosystem survey (TES).

Prescribed fire – A wildland fire originating from a planned ignition to meet specific objectives identified in a written and approved prescribed fire plan for which NEPA requirements (where applicable) have been met prior to ignition. See also planned ignition.

Primitive recreation – Reliance on personal skills and nonmotorized and non-mechanized means to travel and camp in an area, rather than reliance on facilities or outside help.

Priority 6th level HUC watershed – The designated watersheds where restoration activities concentrate on the explicit goal of improving watershed condition.

Proper functioning condition (PFC) – Proper functioning condition (PFC) is a qualitative method for assessing the condition of riparian-wetland areas. The term PFC is used to describe both (1) the assessment process or tool, and (2) a defined, on the-ground condition of a riparian-wetland area.

- (1) The PFC tool is designed to assess if the physical elements (abiotic and biotic) are in working order relative to an area's capability and potential. When these physical elements are in working order, then channel characteristics develop that provide habitat for wildlife and other uses. Functionality comes first; then desired conditions are achieved.

- (2) A riparian-wetland area is considered to be in proper functioning condition when adequate vegetation, landform, or large woody debris is present to
    - dissipate stream energy associated with high water flow, thereby reducing erosion and improving water quality;
    - filter sediment, capture bedload, and aid floodplain development;
    - improve floodwater retention and groundwater recharge;
    - develop root masses that stabilize stream banks against cutting action;
    - develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and
    - support greater biological diversity (BLM, 1998).

Proposed species – Any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under section 4 of the Endangered Species Act.

Recreation opportunity spectrum (ROS) – A framework for defining the types of outdoor recreation opportunities the public might desire, and identifies that portion of the spectrum a given national forest area might be able to provide. The ROS map can be found in the "Plan Set of Documents." The broad classes are

- **Primitive (P)** – Characterized by essentially unmodified natural environment. Interaction between users is very low and evidence of other users is minimal. Essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is

generally not permitted. Very high probability of experiencing solitude, closeness to nature, tranquility, self-reliance, and risk.

- **Semi-primitive Nonmotorized (SPNM)** – Characterized by a predominantly natural or natural-appearing environment. 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 generally not permitted. High probability of experiencing solitude, closeness to nature, tranquility, self-reliance, and risk.
- **Semi-primitive Motorized (SPM)** – Characterized by a predominantly natural or natural-appearing environment. Concentration of 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 generally permitted. Moderate probability of experiencing solitude, closeness to nature, tranquility, self-reliance, and risk.
- **Roaded Natural (RN)** – Characterized by a predominantly natural-appearing environment with moderate evidence of the sights and sounds of other humans. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate but with evidence of other users prevalent. Resource modification and utilization practices are evident but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities. Opportunity to affiliate with other users in developed sites but with some chance for privacy.
- **Roaded Modified (RM)** – Characterized by substantially modified natural environment except for campsites. Roads and management activities may be strongly dominant. There is moderate evidence of other users on roads. Conventional motorized use is provided for in construction standards and design of facilities. Opportunity to get away from others, but with easy access.
- **Rural (R)** – Characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available. Opportunity to observe and affiliate with other users is important, as is convenience of facilities.
- **Urban (U)** – Characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Resource modification and utilization practices are to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans onsite are predominant. Large numbers of users can be expected, both onsite and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site. Opportunity to observe and affiliate with other users is very important, as is convenience of facilities.

Reference conditions – Environmental conditions that infer ecological sustainability. Reference conditions are often represented by the historic range of variation (i.e., the characteristic range of variation, not the total range of variation) for a particular attribute, prior to Euro-American settlement and under the current climatic period. For some ecosystems, the historic range of

variation reflects American Indian burning. Reference conditions may not necessarily represent desired conditions.

Reference landscape – For inventoried roadless areas, reference landscapes of relatively undisturbed areas can serve as a barometer to measure the effects of development on other parts of the landscape.

Reforestation – The natural or artificial reestablishment (restocking) of an area with forest tree cover.

Regulated – The technical (rather than legal or administrative) aspect of controlling forest stocking, periodic harvests, growth, and yields to meet management objectives including sustained yield. This control can be done either by area, or volume of growing stock, or basal area, or stand density index measures. An uneven-aged, regulated forest is one which has a balanced progression of three or more age/size classes, such that each younger/smaller class is advancing to replace the class above it on approximately the same acreage, until it is mature for harvest or other resource objectives. A regulated forest reaches sustained yield when the volume cut periodically equals the amount of net volume growth for that same period.

Research natural area – A physical or biological unit in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural physical and biological processes to prevail without human intervention. Research natural areas are principally for non-manipulative research, observation, and study. They are designated to maintain a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, and natural situations that have scientific interest and importance that, in combination, form a national network of ecological areas for research, education, and maintenance of biological diversity.

Resiliency – The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change.

Restoration – see ecological restoration.

Riparian area – Terrestrial ecosystems characterized by wet soils and plant species that are water loving and dependent on the water table or its capillary fringe zone (a zone in the soil just above the water table that remains saturated or almost saturated). Riparian areas make up the most biologically productive component of forest ecosystems providing unique wildlife habitat in the Southwest. Riparian areas also function to transport and filter water, soil and organic material from upslope to stream.). Examples of riparian areas on the forests include areas along streams, around wetlands, lakes, ponds, springs and seeps, and include wet meadows, fens, bogs and floodplains.

Road decommissioning – Activities that result in the stabilization and restoration of unneeded roads to a more natural state (36 CFR § 212.1). It includes a range of activities from ripping and seeding to full reclamation by restoring the original topography. Road decommissioning results in the removal of a National Forest System road from the forest transportation atlas.

Road maintenance – The upkeep of the entire transportation facility including surface and shoulders, parking and side areas, structures, and such traffic control devices as are necessary for

its safe and efficient utilization (36 CFR § 212.1). This work includes brushing of roadside vegetation, falling danger trees, road blading, cleaning ditches, cleaning culvert inlets and outlets, etc.

Road maintenance level – Defines the level of service provided by, and maintenance required for, a specific road, consistent with road management objectives and maintenance criteria. (Forest Service Handbook 7709.59, 62.32)

- **Maintenance level 1** – These are roads that have been placed in storage between intermittent uses. The period or storage must exceed 1 year. Basic custodial maintenance is performed to prevent damage to adjacent resources to an acceptable level and to perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate" all traffic. Roads receiving level 1 maintenance may be of any type, class, or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. However, while being maintained at level 1, they are closed to vehicular/ motorized traffic but may be available and suitable for nonmotorized uses.
- **Maintenance level 2** – Assigned to roads open for use by high-clearance vehicles. Passenger car traffic, user comfort, and user convenience are not considerations. Warning signs and traffic control devices are not provided with the exception that some signing, such as "Warning No Traffic" signs may be posted at intersections. Motorists should have no expectations of being alerted to potential hazards while driving these roads. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses. Log haul may occur at this level. Appropriate traffic management strategies are either to (a) discourage or prohibit passenger cars or (b) accept or discourage high-clearance vehicles.
- **Maintenance level 3** – Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. The Manual on Uniform Traffic Control Devices (MUTCD) is applicable. Warming signs and traffic control devices are provided to alert motorists of situations that may violate expectations. Roads in this maintenance level are typically low speed, with single lanes and turnouts. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.
- **Maintenance level 4** – Assigned to roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane. Some roads may be paved and/or dust abated. Manual on Uniform Traffic Control Devices (MUTCD) is applicable. The most appropriate traffic management strategy is "encourage." However, the "prohibit" strategy may apply to specific classes of vehicles or users at certain times.
- **Maintenance level 5** – Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. Manual on Uniform Traffic Control Devices (MUTCD) is applicable. The appropriate traffic management strategy is "encourage."

Road removal – The elimination of unauthorized routes. It includes a range of activities from ripping and seeding to full reclamation by restoring the original topography.

Roundwood products – Logs, bolts, or other round sections cut from trees, excluding firewood.

Sacred sites – Defined in Executive Order 13007 as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

Scenic integrity – The state of naturalness or 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 that have little or no deviation from the landscape character valued by constituents for its aesthetic quality. Scenic integrity is the state of naturalness or, conversely, the state of disturbance created by human activities or alteration. Scenic integrity is measured in five levels:

- **Very high (unaltered)** – A scenic integrity level that generally provides for ecological change only.
- **High (appears unaltered)** – Human activities are not visually evident. In high scenic integrity areas, activities may only repeat attributes of form, line, color, and texture found in the existing landscape character.
- **Moderate (slightly altered)** – Landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.
- **Low (moderately altered)** – Human activities must remain visually subordinate to the attributes of the existing landscape character. Activities may repeat form, line, color, or texture common to these landscape characters, but changes in quality of size, number, intensity, direction, pattern, and so on, must remain visually subordinate to these landscape characters.
- **Very Low (heavily altered)** – Human activities of vegetative and landform alterations may dominate the original, natural landscape character but should appear as natural occurrences when viewed at background distances.

Seed cut – One step of an even-aged regeneration cutting method in which the healthiest, most desirable trees are left, and stand conditions are created for them to become good cone producers. The intention is to promote natural tree regeneration where needed.

Seral state – A particular plant and animal community developmental stage which is transitional between other stages along the continuum of succession or change. Changes in seral states can take place over time or very quickly and movement between states can be in either direction. Aspen is an example of a seral state that, without disturbance over time, will eventually be replaced by a subsequent seral state dominated by conifers.

Silviculture – The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands using species silvics to meet the diverse needs and values of landowners and society on a sustainable basis. Under this definition, silvicultural treatments include all management activities that control the establishment, growth, composition, health, and quality of forested lands to achieve stated land management objectives. The use of prescribed fire on forested lands qualifies as a silvicultural treatment in the context of this definition.

Slash – The residue (e.g., branches, bark) left on the ground after a management activity, such as logging, or natural ecological disturbance such as a storm or fire.

Snags – Standing dead or partially dead trees (snag topped), often missing many or all limbs and/or bark. Snags (generally 12 inches or larger) provide essential wildlife habitat for many species and are important for forest ecosystem function.

Soil burn severity – Burn severity indicators are classified and defined as follows (Parsons et al., 2010):

- **Low soil burn severity** – Surface organic layers are not completely consumed and are still recognizable. Structural aggregate stability is not changed from its unburned condition, and roots are generally unchanged because the heat pulse below the soil surface was not great enough to consume or char any underlying organics. The ground surface, including any exposed mineral soil, may appear brown or black (lightly charred), and the canopy and understory vegetation will likely appear "green."
- **Moderate soil burn severity** – Up to 80 percent of the pre-fire ground cover (litter and ground fuels) may be consumed but generally not all of it. Fine roots (~3/32 inch diameter) may be scorched but are rarely completely consumed over much of the area. The color of the ash on the surface is generally blackened with possible gray patches. There may be potential for recruitment of effective ground cover from scorched needles or leaves remaining in the canopy that will soon fall to the ground. The prevailing color of the site is often "brown" due to canopy needle and other vegetation scorch. Soil structure is generally unchanged.
- **High soil burn severity** – All or nearly all of the pre-fire ground cover and surface organic matter (litter, duff, and fine roots) is generally consumed and charring may be visible on larger roots. The prevailing color of the site is often "black" due to extensive charring. Bare soil or ash is exposed and susceptible to erosion, and aggregate structure may be less stable. White or gray ash (up to several centimeters in depth) indicates that considerable ground cover or fuels were consumed. Sometimes very large tree roots (> 3 inches in diameter) are entirely burned extending from a charred stump hole. Soil is often gray, orange, or reddish at the ground surface where large fuels were concentrated and consumed.

Soil productivity – The inherent capacity of the soil to support appropriate site-specific biological resource management objectives, which includes the growth of specified plants, plant communities, or a sequence of plant communities to support multiple land uses.

Special use authorization – A permit, term permit, temporary permit, lease, easement, or other written instrument that grants rights or privileges of occupancy and use subject to specified terms and conditions on National Forest System land.

Species diversity – The number of different species, both plant and animal, within a region (i.e., the Apache-Sitgreaves NFs). NFMA requires that land management plans provide for diversity of plant and animal communities.

Springs and seeps - Springs and seeps are groundwater-dependent ecosystems where groundwater discharges at the ground surface, often through complex subsurface flow paths (Stevens and Meretsky, 2008).

Stand – A contiguous group of trees generally uniform in age class distribution, composition, condition, and structure, and growing on a site of generally uniform quality, to be a distinguishable unit, such as mixed, pure, even-aged, and uneven-aged stands. A stand is the fundamental unit of silviculture reporting and record-keeping.

Structure – Structure includes both the vertical and horizontal dimensions of a vegetation type or plant community. The horizontal structure refers to spatial patterns of individual and groups of plants and openings, as well as plant size and species composition. The vertical component refers to the layers of vegetation between the forest floor and the top of the canopy. Each vegetation type has its own structure. For example, forests have greater vertical structure than a grassland or woodland based on the height of the dominant species.

Suitable timberlands – Land to be managed for timber production on a regulated basis. Such lands are those which have been determined to meet the following criteria: (a) are available for timber production (i.e., not withdrawn for wilderness or other official designation by Congress, the Secretary of Agriculture, or Chief of the Forest Service); (b) are physically capable of producing crops of industrial wood without irreversible resource damage to soils productivity or watershed conditions; (c) adequate tree restocking within 5 years of final harvest is reasonably assured; (d) adequate information exists about responses to timber management activities; (e) timber management is cost efficient over the planning horizon in meeting forest objectives that include timber production; (f) timber production is consistent with meeting the management requirements and multiple-use objectives specified in the forest plan or plan alternative; and (g) other management objectives do not limit timber production activities to the point where it is impossible to meet management requirements set forth in 36 CFR § 129.27 (per Forest Service Handbook 2409.13, WO Amendment 2409.13-92-1, O Code and Chapter 20).

Sustainability – Meeting the needs of the present generation without compromising the ability of future generations to meet their needs. Sustainability is composed of desirable social, economic, and ecological conditions or trends interacting at varying spatial and temporal scales embodying the principles of multiple use and sustained yield.

Temporary road or trail – A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road, or trail and that is not included in the transportation atlas. (36 CFR § 212.1).

Terrestrial ecosystem survey (TES) – Also called the terrestrial ecological unit inventory, the TES identifies ecological units for the Apache-Sitgreaves NFs that are distinct from each other in terms of their soil, vegetation, and climate components.

Thinning – An intermediate treatment made to reduce the stand density of trees primarily to improve growth, enhance forest health, recover potential mortality, emphasize desired tree species, and/or emphasize desired forest structure. It includes crown thinning (thinning from above, high thinning), free thinning, low thinning (thinning from below), selection thinning (dominant thinning), mechanical thinning (leaves trees in equally spaced rows), and mechanized thinning (any spacing arrangement). Mechanized thinning should not be confused with mechanical thinning. Mechanized thinning, as used in the plan, includes prescribed cuts made by both hand and/or mechanized equipment, as a distinction from prescribed thinning by use of wildland fire only. Traditional (cutting) prescribed thinning can be used with both even- and uneven-aged management systems. Thinning with prescribed fire can qualify as an intermediate

treatment but may not provide enough controlled tree selection to clearly fit in either management system.

Timber production – Purposefully growing, tending, harvesting, and regenerating regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use. In addition, managing land to provide commercial timber products on a regulated basis with planned, scheduled entries. It does not include firewood or harvest from unsuitable lands. (Forest Service Manual 1900)

Total maximum daily load (TMDL) – A TMDL is a written analysis that determines the maximum amount of a pollutant that a surface water can assimilate (the "load"), and still attain water quality standards during all conditions. The TMDL allocates the loading capacity of the surface water to point sources and nonpoint sources identified in the watershed, accounting for natural background levels and seasonal variation, with an allocation set aside as a margin of safety.

Traditional cultural properties (TCP) – Defined in National Register Bulletin 38 as properties associated "with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community." TCPs can range from structures, mountains, and other landforms to plant gathering locations to communities. These areas are considered historic properties that may be eligible to the National Register of Historic Places

Travel Management Rule (November 29, 2005, 36 CFR § 212.51) – Requires that each national forest designate a system of roads, trails, and areas for motor vehicle use by vehicle class and, if appropriate, by time of year. Once the system is designated, the rule will prohibit motor vehicle use off the designated system.

Tree cutting – The cutting or removal of trees for wood fiber use and other multiple-use purposes. Sometimes referred to as "timber harvest" or "thinning."

Unauthorized livestock – Any cattle, sheep, goat, hog, or equine not defined as a wild free-roaming horse or burro by 36 CFR § 222.20(b)(13), which is not authorized by permit (or Bill for Collection) to be upon the land on which the livestock is located and which is not related to use authorized by a grazing permit (livestock owned by other than a national forest grazing permit holder). Noncommercial pack and saddle stock used by recreationists, travelers, other forest visitors for occasional trips, as well as livestock to be trailed over an established driveway when there is no overnight stop on Forest Service administered land, do not fall under this definition.

Unauthorized road or trail – A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas (36 CFR § 212.1). Sometimes referred to as a "user-created" road or trail.

Uncharacteristic wildfire – An increase in wildfire size, severity, and resistance to control compared to reference conditions which occurred historically. These fires result as a consequence of more continuous canopy cover, ladder fuels, and accumulated live and dead woody material. Uncharacteristic wildfires burn with more intensity; cause higher tree mortality; degrade watersheds; sterilize soils; and threaten adjacent communities, forest infrastructure, and wildlife habitat. See reference conditions.

Uneven-aged forests – Forests that comprise three or more distinct age classes of trees, either intermixed or in small groups.

Uneven-aged management – The application of combined actions needed to simultaneously maintain continuous forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

Unplanned ignition – A wildfire, not including planned ignitions.

Use of wildland fire – Management of either wildfire or prescribed fire to meet resource objectives specified in land management plans.

Vigor – Relates to the relative robustness of a plant in comparison to other individuals of the same species. It is reflected primarily by the size of a plant (i.e., height, weight) and its parts in relation to its age and the environment in which it is growing.

Wild and scenic rivers – These rivers are free flowing and have at least one outstandingly remarkable value. Eligible and suitable rivers are given a tentative classification of wild, scenic, or recreational. These rivers may be included in the National Wild and Scenic Rivers System.

- **Wild** – Those rivers or segments of rivers free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- **Scenic** – Those rivers or segments of rivers free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- **Recreational** – Those rivers or segments of rivers readily accessible by road or railroad that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Wildfire – Unplanned ignition of a wildland fire (e.g., fires caused by lightning, unauthorized and accidental human-caused fires) and escaped prescribed fires. See also unplanned ignition.

Wild horse (wild free-roaming horse) – All unbranded and unclaimed horses and their progeny using National Forest System lands on or after December 15, 1971. This definition does not include any horse introduced onto National Forest System lands on or after December 15, 1971, by accident, negligence, or willful disregard of private ownership. Animals that stray from other lands onto National Forest System lands are not considered wild free-roaming horses and are not under Forest Service protection. No known records or documentation exists that the Apache NF had any unbranded and unclaimed horses prior to December 15, 1971. See 36 CFR § 220 and Forest Service Manual 2260 for more information.

Wildland – An area in which development is essentially nonexistent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

Wildland fire – A general term describing any nonstructural fire that occurs in the vegetation and/or natural fuels. The two types of wildland fire are wildfires and prescribed fires. Other terms such as “fire-use fires,” “resource benefit fires,” or “suppression fires” are not used in this document.

Wildland-urban interface (WUI) – The WUI includes those areas of resident populations at imminent risk from wildfire, and human developments having special significance. These areas may include critical communications sites, municipal watersheds, high voltage transmission lines, church camps, scout camps, research facilities, and other structures that if destroyed by fire, would result in hardship to communities. These areas encompass not only the sites themselves, but also the continuous slopes and fuels that lead directly to the sites, regardless of the distance involved. (Forest Service Manual 5140.5, Southwestern Region supplement).

Windthrow – Trees susceptible to wind damage (e.g., bole breakage, uprooting, toppling).

Woody biomass – The trees and woody plants, including limbs, tops, needles, leaves, and other woody parts, grown in a forest, woodland, or grassland environment, that are the byproducts of forest management used to produce bioenergy and the full range of bio-based products.

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