

APPENDIX F: GLOSSARY

ACRONYMS

AA - analysis area
ADA - Americans with Disabilities Act
A.E. – acre equivalent
AMS - Analysis of the Management Situation
APHIS - Animal and Plant Health Inspection Service
ARPA - Archaeological Resources Protection Act
ASQ - allowable sale quantity
AT - Appalachian Trail
ATV - all-terrain vehicle
AUM - animal unit month
BA - basal area; Biological Assessment
BE - Biological Evaluation
BEA - Bureau of Economic Analysis
BF - board foot
BLM – Bureau of Land Management
BMP - best management practice
BO - Biological Opinion
BSS - base sale schedule
CAA - Clean Air Act
CCF - hundred cubic feet
CE - categorical exclusion
CEQ - Council on Environmental Quality
CF - cubic foot
CFR - Code of Federal Regulations
CFS - cubic feet per second
CMAI - culmination of mean annual increment
CVH - cove hardwood
CWA - Clean Water Act
DBH - diameter at breast height
DEIS - Draft Environmental Impact Statement
DFC - desired future condition
EA - Environmental Assessment
EAM - even-aged management
ECS - Ecological Classification System
EIS - Environmental Impact Statement
EMU - ecological management unit
EPA - Environmental Protection Agency
ESA - Endangered Species Act
EWPP- Emergency Watershed Protection Plan
FEIS - Final Environmental Impact Statement
FH - Forest Highway
FIA - Forest Inventory and Analysis
FMAP - Fire Management Action Plan
FONSI - Finding of No Significant Impact
FR - Forest Road
FRCC - Fire Regime Condition Classes
FSH - Forest Service Handbook
FSM - Forest Service Manual
FSVEG – Field Sampled Vegetation system, replaces previous stand inventory database called CISC
FTE - full-time employee
FY - fiscal year

GAO - Government Accounting Office
GIS - Geographic Information System
GDP - gross domestic product
GWNF - George Washington National Forest
GWJNF - George Washington & Jefferson National Forests
HRP - Human Resource Program
HUC - Hydrologic Unit Code
HWA – Hemlock woolly adelgid
IDT - Interdisciplinary Team
IMPLAN - Impact Analysis for Planning
INFRA - Infrastructure
IPM - integrated pest management
IS - Interpretive Services
JNF - Jefferson National Forest
LAC - Limits of acceptable change
LANDFIRE - Landscape Fire and Resource Management Planning Tools Project
LAR - Land Area Report
LE - law enforcement
LOAP - Landownership Adjustment Plan
LRMP - Land and Resource Management Plan
LTSYC - long-term sustained-yield capacity
L&WCF - Land and Water Conservation Fund
LWD - large woody debris
M - thousand
M\$ - thousands of dollars
M&E - monitoring and evaluation
MA - management area
MAI - mean annual increment
MAR - Management Attainment Report
MAUM - thousand animal unit month
MBF - thousand board feet
MCF - thousand cubic feet
MIL - management intensity level
MIS - management indicator species
MM - million
MM\$ - millions of dollars
MMBF - million board feet
MMCF - million cubic feet
MMR - minimum management requirement
MMRVD - million recreation visitor-days
MOU - memorandum of understanding
MRVD - thousand recreation visitor-day
MVUM – motorized vehicle use map
MWFUD - thousand wildlife and fish user-day
NAAQS - National Ambient Air Quality Standards
NAPAP - National Acid Precipitation Assessment Program
NEPA - National Environmental Policy Act
NF - National Forest
NFMA - National Forest Management Act
NFRS - National Forest Recreation Survey
NFS - National Forest System
NHPA - National Historic Preservation Act
NLFCA - National Listing of Fish Consumption Advisories
NNIP – non-native invasive plants
NNIS – non-native invasive species
NOI - Notice of Intent

NPS - National Parks Service
NRCS - Natural Resources Conservation Service
NRIS - Natural Resource Information System
NTMB - neotropical migratory birds
NVUM - National Visitor Use Monitoring
NWPS - National Wilderness Preservation System
OHV - off-highway vehicle
OMP - operation maintenance and protection
PAOT - persons-at-one-time
PILT - Payment in Lieu of Taxes
PL - public law
PM - particulate matter
PNV - present net value
PNW - present net worth
PSD - prevention of significant deterioration
PSI - pounds per square inch
RAP - Roads Analysis Process or Procedure
RARE - Roadless Area Review and Evaluation
RARE II - the second Roadless Area Review and Evaluation
RBP - Rapid Bioassessment Protocol
(RFD) - reasonable foreseeable development scenario
RLRMP - Revised Land and Resource Management Plan
RMO - Road Management Objectives
RNA - research natural area
RN - roaded natural
ROD - record of decision
ROS - Recreation Opportunity Spectrum
ROW - right-of-way
RPA - Resources Planning Act
RVD - recreation visitor-day
SAA - Southern Appalachian Assessment
SBA – special biological area
SCORP - State Comprehensive Outdoor Recreation Plan
S&G - standard and guideline
SH - state highway
SHPO - State Historic Preservation Officer
SIC - Standard Industrial Code
SIO - Scenic Integrity Objective
SIP - State Implementation Plan
SMS - Scenery Management System
SPB - southern pine beetle
SPM - semi-primitive motorized
SPNM - semi-primitive non-motorized
SMZ - Streamside Management Zone
SYP - southern yellow pine
T&E - threatened and endangered species
T/E/S - threatened, endangered, and sensitive species
TESLR - threatened, endangered, sensitive, and locally rare species
TNC - The Nature Conservancy
TSI - timber stand improvement
TSP – total sale program
TVA - Tennessee Valley Authority
UPH - upland hardwood/mixed
USC - United States Code
USDA - U.S. Department of Agriculture
USDI - U.S. Department of Interior

USFWS - U.S. Fish and Wildlife Service
USGS - U.S. Geological Survey
VMS - Visual Management System
VMEIS - Vegetation Management Environmental Impact Statement
VQO - visual quality objective
W&SR - Wild and Scenic River
WFUD - wildlife and fish user-day
WIN - Watershed Improvement Inventory
WO - Washington Office
WPN - white pine
WRP - Wetlands Reserve Program
WSA - wilderness study area
YPN - yellow pine

DEFINITIONS

A

abiotic: Not related to, or caused by, living organisms. For example, the climate is an abiotic component of ecosystems.

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.

accessible facility: A single or contiguous group of improvements, that exists to shelter or support Forest Service programs that is in compliance with the highest standard of current Federal or Forest Service accessibility guidelines, at the time of construction.

acid deposition: Rain, snow, or particulate matter containing high concentrations of acid anions (e.g. nitrate and sulfate), usually produced by atmospheric transformation of the byproducts of fossil fuel combustion. Precipitation with a pH lower than 5.0 is generally considered to be acidic.

acid neutralizing capacity: The total capacity of a water sample to neutralize acids, as determined by titration with a strong acid. Acid neutralizing capacity includes alkalinity (e.g. carbonate) plus base cations.

acidification: To convert into an acid or become acid.

acquisition: Obtaining land through purchase, exchange or donation.

acre-foot: A measurement of water volume, equal to the amount of water that would cover an area of 1 acre to a depth of 1 foot (specifically 43,560 cubic feet or 325,851 gallons).

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.

activity area: The area on the Forest where soil disturbing management activity can occur. Used to provide a basis to compare the extent of effects to.

adaptive management: A dynamic approach to forest management in which the effects of treatments and decisions are continually monitored and used, along with research results, to modify management on a continuing basis to ensure objectives are being met.

administrative unit: All the National Forest System lands where one forest supervisor has responsibility. The basic geographic management area within a Forest Service Region, station, or area.

advance regeneration (reproduction): Seedlings or saplings that develop, or are present, in the understory.

aerial logging: A yarding system employing aerial means, (e.g., helicopters, balloons), to lift logs.

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.

agricultural land: Areas used primarily for production of food and/or fiber (excludes wood fiber). Examples include cropland, pasture, orchards, vineyards, nurseries, confined feeding areas, farmsteads, and ranch headquarters.

air pollution: Any substance or energy form (heat, light, noise, etc.) that alters the state of the air from what would naturally occur.

air quality class: Three broad classifications used to prevent significant deterioration of air quality for all areas of the country.

Class I: All areas where essentially any degradation of air quality would be considered significant deterioration.

Class II: All areas where moderate degradation over baseline concentrations are allowed.

Class III: All others.

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 NAAQS.

Class I: Select wilderness areas and national parks where identified air quality related values might become (or currently are) adversely affected by even a small increment of additional air pollution. To date, there are 156 such areas, nation-wide.

Class II: Areas the states may designate to receive such additional amount of air pollution (even up to 30 times the Class I area increment) that air quality may deteriorate from baseline to (but not below) NAAQS. To date, there are no such areas, nation-wide.

Class III: All other areas, by default, where a moderate level of additional air pollution is deemed acceptable. The bulk of the U.S.

air quality related values: Terminology used in the PSD portion of the Clean Air Act describing values associated with certain resources that may become impaired by air pollution. Typically, these include aquatic habitats, terrestrial habitats and visibility. Visibility refers to the ability of an air mass to convey the landscape image.

all aged stand: See uneven-aged.

allocated fund: Funds transferred from one agency or bureau to another for carrying out the purpose of the parent appropriation and agency.

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.

allopatric: Condition where one species lives in a section of stream without other closely related species. The species have disjunct distributions. Opposite of sympatric.

allotment management plan: The basic land unit used to facilitate management of the range resource on National Forest System and associated lands administered by the Forest Service.

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." The quantity is a ceiling rather than a future sales level projection or target. (36 CFR 219.3, 1982).

all-terrain vehicle (ATV): Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels straddled by the operator and has steering controlled by handlebars.

alternative: In forest planning, a mix of resource outputs designed to achieve a desired management emphasis as expressed in goals and objectives, and in response to public issues or management concerns.

amenity values: Features or qualities which are pleasurable or aesthetic, as contrasted with the utilitarian features of a plan, project, location, or resource.

analysis area: A collection of lands, not necessary contiguous, sufficiently similar in character, that they may be treated as if they were identical.

analysis area identifier: A resource characteristic used to stratify the land into capability areas and analysis areas.

Analysis of the Management Situation (AMS): A determination of the ability of the planning area to supply goods and services in response to society's demand. The Forest Plan includes a summary of the AMS. Information from it is contained throughout the EIS/Plan.

animal unit month: The quantity of forage required by one mature cow and her calf (or the equivalent, in sheep or horses), for one month; 682 pounds of air-dry forage.

annual forest program: The summary or aggregation of all projects that make up an integrated (multifunctional) course of action for a given level of funding of a forest planning area that is consistent with the Forest Plan.

annual work planning process: Preparation of technical plans that serve to implement land and resource management, and program decisions contained in the integrated land, resource plans, and budget allocations.

appropriated fund: Funds available for obligation or outlay by Congress to a given agency.

appropriate management response: The response to a wildland fire based on an evaluation of risks to firefighter and public safety. Evaluation includes the consideration of: circumstances under which the fire occurs, including weather and fuel conditions; natural and cultural resource management objectives; protection priorities; and values to be protected. The evaluation must also include an analysis of the context of the specific fire within the overall logic, geographic area, or national wildland fire situation.

aquatic ecosystem: Components that include: the stream channel, lake and estuary beds, water, biotic community, and associated habitat features. Also included are streams and lakes with intermittently, semipermanently, and seasonally flooded channels or streambeds. In the absence of flowing water, intermittent streams may have pools or surface water.

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.

aquifer recharge: Adding water to a wet underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, silt, or clay) from which groundwater can be usefully extracted using a water well.

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.

aspect: A ground surface that faces in a given direction.

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: The area of the cross-section of a tree inclusive of bark at breast height (4.5 feet or 1.37 meters above the ground) most commonly expressed as square feet per acre or square meters per hectare. Used to measure the density of a stand of trees. For shrubs and herbs it is used to determine phytomass. Grasses, forbs, and shrubs usually measured at or less than 1 inch above soil level. Trees: the cross-section area of a tree stem in square feet commonly measured at breast height (4.5' above ground) and inclusive of bark, usually computed by using diameter at breast height (DBH), or tallied through the use of basal area factor angle gauge.

basal spray: The application of a pesticide, usually an herbicide for controlling brush or weed trees, directed at the base of the stem.

base sale schedule: A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to, or greater than, the planned sale and harvest for the preceding decade. The planned sale and harvest for any decade must not be greater than the long-term sustained yield capacity. (36 CFR 219.3, 1982 rule)

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 in an area, 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 assessment (BA): Information prepared by a federal agency to determine whether a proposed action is likely to: 1) adversely affect listed (threatened, endangered, or proposed) species, 2) jeopardize the continued existence of species, or 3) adversely modify critical habitat. BAs must be prepared for "major construction activities". The outcome of the BA determines whether formal consultation or a conference with the US Fish and Wildlife Service is necessary.

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 can sometimes be alternatives to mechanical or chemical means.

biological evaluation (BE): A documented Forest Service review of its programs or activities in sufficient detail to determine how an action or proposed action may affect any endangered, threatened, or sensitive species.

biological growth potential: The average net growth attainable on a fully-stocked natural forest land.

biological opinion (BO): An official report by the US Fish and Wildlife Service issued in response to a formal Forest Service request for consultation or conference. It states whether an action is likely to result in jeopardy to a species or adverse modification of its critical habitat.

biological oxygen demand: Dissolved oxygen required by organisms for the aerobic biochemical decomposition of organic matter present in water.

biomass: The amount of living matter in a given habitat, expressed either as the weight of organisms per unit area or as the volume of organisms per unit volume of habitat.

biotic: Refers to live components of an ecosystem. For example, green plants and soil microorganisms are biotic components of ecosystems.

board foot: A unit of timber measurement equaling the amount of wood contained in an unfinished board 1 inch thick, 12 inches long, and 12 inches wide. Commonly, 1,000 board feet is written as 1 MBF, and 1,000,000 board feet is written as 1MMBF. The conversion factor used in the preparation of this document is 5.5 board feet = 1 cubic foot.

borrow: In highway construction, materials used in the roadbed that are excavated from native materials in ground generally close to the road bed; the term "borrow" implies the excavation, hauling and spreading of the material from designated pits.

borrow pit: An excavation made for the purpose of obtaining earth, rock, or other fill material for use in construction.

browse: Young twigs, leaves and tender shoots of plants, shrubs or trees that animals eat.

C

cable logging: A term for any system involving transport of logs along, or by means of steel cables with the load being lifted partly or wholly off the ground.

canopy closure: The percent cover of the tree canopy in a stand.

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.

carbon sequestration: the prevention of greenhouse gas build-up in the earth's atmosphere by methods such as planting trees to absorb carbon dioxide or pumping carbon dioxide into underground reservoirs.

carrying capacity: The number of organisms of a given species and quality that can survive in, without causing deterioration of, a given ecosystem through the least favorable environmental conditions that occur within a stated interval of time.

category 1 (or 2) species: The Regional Forester of the Southern Region established a Regional Invasive Exotic Plant Species List. Category 1 species are defined as exotic species that are known to be invasive and persistent throughout all or most of their range within the Southern Region. They can spread into and persist in native plant communities and displace native plant species and therefore pose a demonstrable threat to the integrity of the natural plant communities in the Region. Category 2 species are defined as exotic plant species that are suspected to be invasive or are known to be invasive in limited areas of the Southern Region. Category 2 species will typically persist in the environment for long periods once established and may become invasive under favorable conditions.

channeled ephemeral streams: Ephemeral streams that have a defined channel of flow where surface water converges with enough energy to remove soil, organic matter, and leaf litter. Ones that exhibit an ordinary high watermark and show signs of annual scour or sediment transport are considered navigable waters of the United States (USACE, Part 330: Nationwide Permit program, 2000).

chemical control: The use of pesticides to control pests or undesirable species. Contrast with biological control and mechanical control.

chemical site preparation: The killing or retardation of competing vegetation to prepare an area for reforestation, using herbicide.

class I areas: See air quality class.

cleaning: A release treatment made in an age class, not past the sapling stage, in order to free the favored trees from less desirable individuals of the same age class which can overtop them.

clearcutting: The harvesting in one cut of all trees on an area for the purpose of creating a new, even-aged stand. The area harvested may be a patch, stand, or strip large enough to be mapped or recorded as a separate age class in planning for sustained yield under area regulation. A method of regenerating an even-aged stand. Regeneration is from natural seeding, direct seeding, planted seedlings, and/or advance reproduction. Harvesting may be done in groups or patches (group or patch clearcutting), or in strips (strip clearcutting). In the clearcutting system, the management unit or stand in which regeneration, growth, and yield are regulated consists of the individual clearcut stand.

clearcutting with reserves: A two-aged regeneration method in which varying numbers of reserve trees are not harvested to attain goals other than regeneration.

climax: The culminating stage in plant succession for a given environment with the vegetation having reached a highly stable condition.

coarse woody debris: See large woody debris.

co-dominant trees: Trees or shrubs with crowns receiving full light from above, but comparatively little from the sides. Crowns usually form the general level of the canopy.

cold water fishery: Aquatic habitats that predominately support fish species that have temperature tolerances up to about 70°F, and exhibit their greatest reproductive success at temperatures below 65°F (18.3°C).

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.

colluvial: Loose earth material that has accumulated at the base of a hill, through the action of gravity, as piles of talus, avalanche debris, and sheets of detritus moved by soil creep or frost action.

commercial forest land: Forest land that can produce crops of industrial wood, and has not been withdrawn by Congress, the Secretary of Agriculture, or the Chief of the Forest Service. Existing technology and knowledge must be available to ensure timber production without irreversible damage to soils productivity, or watershed conditions. Adequate restocking can be attained within five years after final harvesting.

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

commercial timber harvest: Any type of timber sale that produces merchantable wood products where the value of the product(s) usually is equal to or exceeds the direct cost of harvesting.

commercial tree species: (1) Tree species suitable for industrial wood produces. (2) Conifer and hardwood species used to calculate the commercial forest land allowable sale quality.

commodity outputs: A resource output with commercial value. All resource products that are articles of commerce.

compaction: Increased soil density (weight per unit volume) and strength that hampers root growth, reduces soil aeration, and inhibits soil water movement. Measurements pertain to the critical surface layers that

typically contain a high proportion of the soil's organic matter and nutrients and or strongly affect water retention and movement in the soil.

compartment: A portion of a forest under one ownership, usually contiguous and composed of a variety of forest stand types, defined for purposes of locational reference.

composition (stand): The proportion of each tree species in a stand expressed as a percentage of the total number, basal area, or volume of all tree species in the stand.

concentrated use area (CUA): An undeveloped site or area located within a general forest area, generally not in the Infrastructure system, but receiving investments of management time and/or dollars because recreation use leaves evident impacts such as litter, vandalism or soil compaction. Any amenities in a CUA are placed and managed for resource protection rather than user convenience.

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).

concession: The granting of an operation and maintenance of a recreation facility to a private business through a special use authorization.

condition class (fire regimes): Fire Regime Condition Classes (FRCC) are a measure describing the degree of departure from historical fire regimes, possibly resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. One or more of the following activities may have caused this departure: fire suppression, timber harvesting, livestock grazing, introduction and establishment of exotic plant species, introduced insects or disease, or other management activities. Condition Class 1 lands have fire regimes that are within the historical range of variation (HRV) and whose vegetation attributes (species composition, structure, and function) are intact. Fire behavior, effects and other associated disturbances are similar to those that occurred prior to fire exclusion (suppression). Condition Class 2 lands have a moderate departure from the historic range of variation and Condition Class 3 lands have a high departure.

connectivity: Condition in which the spatial arrangement of land cover types allows organisms and ecological processes (such as disturbance) to move across the landscape. Used in this sense, connectivity is the opposite of fragmentation.

constraint: A restriction or limit that must be met.

controlled surface use stipulation: Use and occupancy is allowed for fluid mineral development (unless restricted by another stipulation), but the identified resource values require special operational constraints that may modify the lease rights.

conventional logging: A term used to identify methods commonly used in an area to move logs from stump to mill.

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.

coppice with reserve: A two-aged regeneration method in which reserve trees are retained to goals other than regeneration. This method normally creates a two-aged stand.

cord: A unit of gross volume measurement for stacked, round wood based on external dimensions, generally implies a stack of 4 x 4 feet vertical cross section and 8 feet long. Contains 128 stacked cubic feet.

corridor: A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries. It can also be identified for wildlife habitat connecting, or protecting forest resources.

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

cove: The head of a small valley or drainage, typically in a moist shaded and protected site.

creel survey: A survey of anglers.

critical habitat: Habitat, determined by the Secretary of Interior, essential to the conservation of the endangered or threatened species.

crown class: A class of tree based on crown position relative to the crowns of adjacent trees.

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.

co-dominant: Trees with crowns forming the general level of the main canopy in even-aged groups of trees. They receive full light from above, and comparatively little from the sides.

intermediate: Trees with crowns extending into the lower portion of the main canopy of even-aged groups of trees, but shorter in height than the co-dominants. They receive little direct light from above, and none from the sides.

overtopped (suppressed): Trees of varying levels of vigor that have their crowns completely covered by the crowns of one or more neighboring trees.

cubic foot: A unit of measure reflecting a piece of wood 12 inches long, 12 inches wide, and 12 inches thick.

culmination of mean annual increment: Age at which average rate of annual tree growth stops increasing and begins to decline. Mean annual increment is expressed in cubic feet measure and is based on expected growth, according to the management intensities and utilization standards assumed in accordance with 36 CFR 219.16(a)(2)(i) and (ii). Culmination of mean annual increment includes regeneration harvest yields, and any additional yields from planned intermediate harvests.

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.

cunit: Equivalent to 100 cubic feet of solid wood. Commonly, 100 cubic feet is expressed as 1 CCF.

cutting cycle: The planned interval between partial harvests in a stand being managed with an uneven-aged regeneration method.

D

daylighting: The practices of cutting back edges of roads or trails by removing shrub and tree growth.

decision criteria: Rules or standards used to evaluate and rank alternatives.

decommission: Activities that result in the stabilization and restoration of unneeded roads to a more natural state (36 CFR 212.1, Forest Service Manual 7734 - Travel Management [USDA FS 2009]). The Forest Service Manual identifies five levels of treatments for road decommissioning which can achieve the intent of the definition. These five treatments give a range of options for stabilizing and restoring unneeded roads. In some situations, blocking the entrance may meet restoration objectives. In other situations, restoring hillslope hydrology may require full obliteration or re-contouring. Local factors such as climate, geology, topography, soil,

and road design and construction also factor into the stabilization and restoration objectives. These five treatment options include:

1. Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation;
2. Blocking the entrance to a road or installing water bars;
3. Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed;
4. Completely eliminating the roadbed by restoring natural contours and slopes; and
5. Other methods designed to meet the specific conditions associated with the unneeded road.

decomposition: The physical and chemical breakdown of organic matter by bacterial and fungal action into simpler chemical compounds.

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

demand species: Animal species commonly associated with recreation (e.g. hunting, fishing, viewing).

dendropyrochronology: The science that uses tree rings to date and study past and present changes in wildfires.

den trees: Trees having rainproof, weather: tight cavities used by wildlife.

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

desired landscape character: Appearance of the landscape character to be retained or created over time, recognizing that a landscape is a dynamic and constantly changing community of plants and animals. It includes the combination of landscape design attributes and opportunities, and biological opportunities and constraints.

developed recreation: Recreation use or opportunities occurring at developed sites.

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

development level: An indication of site modification based on classes in the Recreation Opportunity Spectrum. Development Level 1 equates to Primitive, with minimum site modification; 2 equates to Semi-Primitive Motorized/Non-motorized, with little site modification; 3 equates to Roaded, with moderate modification; 4 equates to Rural, with heavy site construction; and 5 relates to Urban, with a high degree of site modification. See Facilities level, below, and FSM 2330.3, Exhibit 1.

diameter at breast height (dbh): A tree's diameter measured at about 4.5 feet (1.37m) above the forest floor on the uphill side of the tree. For the purposes of determining breast height, the forest floor includes the duff layer that may be present, but does not include unincorporated woody debris that may rise above the ground line.

diameter class: Any of the intervals into which a range of diameters of tree stems may be divided for classification and use, (e.g., 10-inch class includes diameters from 9.5 inches to 10.49 inches.

dispersed recreation: Recreation opportunities or use occurring in the general forest area. Does not take place in developed sites. Examples are trail use, rock climbing, boating, hunting and fishing.

disturbance (ecology): A discrete event, either natural or human-induced, that causes a change in the existing condition of an ecosystem.

disturbance-recovery regime: A natural pattern of periodic disturbance followed by a period of recovery. Examples include fire or flooding.

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

drainage area/basin: The total area above a given point on a stream that contributes to the flow at that point. Term is often used interchangeably with watershed.

drumming log: Drumming logs are large, decaying logs generally used by male ruffed grouse for display purposes. They usually have large overhanging shrub cover. Many of the same drumming locations are used year after year, often by the same male. Drumming centers have a zone of influence of about 20 acres that are usually defended.

E

early successional forest: Defined as regenerating forest of 0 to 35 years of age for depending upon the ecological system. It is characterized by dominance of woody growth of regenerating trees and shrubs, often with a significant grass/forb component, and relatively low density or absent overstory. This condition is distinguished from most permanent opening habitats by dominance of relatively dense woody vegetation, as opposed to dominance of grasses and forbs. Such conditions may be created by even-aged and two-aged regeneration cutting, and by natural disturbance events, such as windstorms, severe wildland fire, and some insect or disease outbreaks. Ages defining the remaining successional stages vary by ecological system.

ecological classification system: A hierarchical system used to help organize and coordinate the classification of ecological types, units, and to make comparisons. Classification is ecologically based and integrates existing resource data including climate, topography, geology, soil, hydrology, and vegetation. The system includes many levels (from the top-down approach): domain, division, province, section, subsection, land type, land type association, land type phase, and site.

ecological management unit: A grouping of one or more soil series that have similar characteristics including texture, structure, or water retention capacity. EMUs are used in soil mapping.

ecological process: The actions or events that link organisms (including humans) and their environment such as disturbance, successional development, nutrient cycling, carbon sequestration, productivity, and decay.

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

ecosystem/cover type: The native vegetation ecological community considered together with non-living factors of the environment as a unit. The general cover type occupying the greatest percent of the stand location. Based on tree or plant species forming a plurality of the stocking within the stand. May be observed in the field, or computed from plot measurements.

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

ecotone: An ecological community of mixed vegetation formed by the overlapping of adjoining communities.

edaphic: pertaining to soil or geologic conditions

edge effects: Ecological characteristics associated with the junction between two dissimilar habitat types or successional stages that positively or negatively affect species living there.

endangered species: Any species that is in danger of extinction throughout all or a significant portion of its

range, other than members of the class Insecta determined by the Secretary of Interior to constitute a pest whose protection under the provisions of this (Endangered Species Act of 1973) act would present an overwhelming and overriding risk to humans. It must be designated in the *Federal Register* by the appropriate secretary.

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

ending inventory: The standing volume at the end of the planning horizon. It must be adequate for the maintenance of long-term sustained yield.

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

environmental consequence: The result or effect of an action upon the environment.

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.

ephemeral streams: Streams having flows that occur for short periods of time in direct response to storm precipitation or snowmelt runoff. Their bottoms are always above the water table and do not contain fish or aquatic insects that have larvae with multiple-year life cycles. Ephemeral streams may have a defined channel, but may be manifested as a natural swale or depression with vegetation and organic material covering the bottom. They also may serve as a conduit for much of the sediment that enters the stream system. Large woody debris associated with ephemeral streams may also contribute significantly to the stability of a stream system. Ephemeral streams that exhibit an ordinary high watermark, show signs of annual scour or sediment transport, are considered navigable waters of the United States.

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.

eutrophication: Condition of a lake where deleterious effects are caused by increased nutrients (nitrogen and phosphorous), and a decrease in oxygen.

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

even-aged silvicultural system: A planned sequence of treatments designed to maintain and regenerate a stand with one age class.

even-aged stand: A stand of trees containing a single age class in which the range of tree ages is usually less than 20 percent of rotation.

existing old growth: forest stands or patches that have been determined to meet the age, disturbance, basal area and tree size criteria described in the operational definitions for the 16 forest community types of the Southern Region (see *Guidance for Conserving and Restoring Old Growth Forest Communities on National Forests in the Southern Region, Forestry Report R8-FR 62, 1997*). A stand or patch must meet all four criteria in order to be classified as existing old growth.

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

extirpation: Extinction of a species from a part of its range.

F

facilities level: A term that refers to campgrounds, expressed as Development Level 1-5. Customers in levels 1 and 2 campgrounds generally seek a relatively primitive experience with a minimum of facilities for comfort or convenience. Tent camping dominates and spurs are too short to accommodate most RVs. Utilities are not provided and access is difficult. Level 3 developments focus on tent campers and small RVs. Low amperage electrical service may be provided. Water hydrants and flush toilets are typically provided. A moderate degree of accessibility is provided. Level 4 and 5 developments serve users with RVs of all types. Showers, flush toilets and other amenities are available; individual water, sewer and electrical hookups are commonly provided.

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".

feathering: A treatment used along the edges of openings in the forest canopy to reduce shadow contrasts by manipulating the density and size of vegetation.

Federal Register: The designated document that notifies the public of federal actions and includes Notice of Intent, calls for public involvement, etc. It also publishes the regulations needed to implement those federal actions.

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

Federally Listed Threatened and Endangered Mussel and Fish Conservation Plan: The George Washington and Jefferson National Forests worked closely with the U.S. Fish and Wildlife Service in 2004 to develop the Federally Listed Threatened and Endangered Mussel and Fish Conservation Plan for both forests. The conservation plan included the life history, threats, conservation needs and specific conservation measures for federally listed mussel and fish species that have potential to be affected by forest activities.

felling: The cutting down of trees.

final crop: That portion of the growing stock (to be) kept until final commercial harvest, (i.e., final product objective).

fire dependent species: refers to species that depend on fire occurrence to maintain habitat characteristics or life cycle requirements (opening cones to disperse seeds).

fire adapted species: refers to species that have adapted to fire occurrence and whose populations are enhanced through a particular fire regime.

fire regime condition class (FRCC): Based on coarse scale national data, classes measure general wildfire risk:

Condition Class I: 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.

Condition Class II: 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.

Condition Class III: 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 management effectiveness index: A measure of the effectiveness of annual fire management operational programs. Measured in dollars per thousand acres protected, the objective is to minimize the index value.

fire management plan: Strategic plans that define a program to manage wildland fires based on an area's approved land management plan. They must address a full range of fire management activities that support ecosystem sustainability, values to be protected, protection of firefighter and public safety, public health and environmental issues, and must be consistent with resource management objectives and activities of the area.

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.

fisheries classification: Water bodies and streams classed as having a cold- or warm-water fishery. This designation is dependent upon the dominant species of fish occupying the water.

fisheries habitat: Streams, lakes, and reservoirs that support fish.

floodplains: Lowland or relatively flat areas joining inland and coastal water including, at a minimum, that area subject to a 1-percent (100-year return period) or greater chance of flooding in any given year. Although floodplains and wetlands fall within the riparian area, they are defined here separately as described in the Forest Service Manual.

formal consultation: A process between US Fish and Wildlife Service and a federal agency that: 1) determines whether a proposed federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; 2) begins with a federal agency's written request and submittal of a complete initiation package; and 3) concludes with the issuance of a biological opinion and, if needed, incidental take statement.

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

forage production: The weight of forage that is produced within a designated period of time on a given area. The weight may be expressed as green, air dry, or oven dry. The term may also be modified as to time of production including annual, current years, or seasonal forage production.

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

forest road: A road wholly or partly within, or adjacent to, and serving a part of the National Forest System. It also has been included in the Forest Development Road System Plan.

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 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 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 trail system: Trails that are part of the forest transportation system. A designated path commonly used and maintained for hikers, horse riders, bicycles, or two-wheeled motorized vehicles.

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

forestwide 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.

four-wheel drive vehicle (4WD): A full-sized vehicle with four-wheel drive, which is registered with the state, and legal to operate on public highways. Any Sport Utility Vehicle would fall in this class, although a 4WD may be a modified vehicle intended primarily for off-highway use.

free-to-grow: A seedling or small tree free from direct competition from other trees, shrubs, grasses, or herbaceous plants.

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.

fuel treatment: The rearrangement or disposal of fuels to reduce fire hazard. Fuels are defined as living and dead vegetative materials consumable by fire.

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

fuelwood: Wood used for conversion to some form of energy.

future old growth: stands or patches that may, or may not, currently meet the operational definition for existing old growth, but are allocated to management prescription areas that will not allow timber harvest and thus allow the stands to mature to become old growth.

G

game species: Any species of wildlife or fish for which seasons and bag limits have been prescribed, and which are normally harvested by hunters, trappers, and fishermen under state or federal laws, codes, and regulations.

general forest area: (New term for dispersed recreation) – Describes areas where recreation occurs outside of developed areas. Dispersed recreation is typically associated with low-density use distributed over large expanses of land.

geologic features: Landforms or other features of significant geologic interest that may require special management to protect the special qualities, or provide interpretation to the public.

geologic formation: A mappable body of rock identified by distinctive characteristics, some degree of internal homogeneity, and stratigraphic position. The name normally consists of two parts. The first is the name of the geographic locality where the formation was first identified and described. This is followed by a descriptive geologic term, usually the dominant rock type.

Geographic Information System (GIS): An information processing technology to input, store, manipulate, analyze, and display spatial resource data to support the decision-making processes of an organization. Generally, an electronic medium for processing map information, typically used with manual processes to affect specific decisions about land base and its resources.

goal: In planning, a concise statement that describes a desired future condition to be achieved with no specific date by which it is to be attained. It is normally expressed in broad, general terms. Goal statements form the principal basis from which objectives are derived.

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, cordgrass marshes, sphagnum moss areas, pasturelands, and areas cut for hay.

grazing: Consumption of range or pasture forage by animals.

grazing capacity: The maximum stocking rate possible without inducing damage to vegetation or related resources.

grazing permit: Official, written permission to graze a specified number, kind, and class of livestock for a specific period on a defined range allotment.

gross receipts: A total of all funds received by the U.S. Treasury as a result of Forest Service activities.

groundwater: Water in a saturated zone in a geologic stratum. Water stored below the water table where the soil (or other geologic material) is saturated.

groundwater-dependent ecosystems (GDEs): communities of plants, animals, and other organisms whose extent and life processes are dependent on access to or discharge of ground water. Includes areas such as springs, seeps and wetlands; groundwater-fed streams/lakes and associated riparian areas; shallow water table areas; cave and karst systems.

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 stock trees: Live trees, meeting specified standards of quality or vigor, included in growth and yield projections to arrive at the allowable sale quantity.

growing stock volume: Volume (cubic feet) of solid wood in growing stock trees 5 inches DBH and larger, from a 1-foot stump to a minimum 4-inch top diameter, outside bark, on the central stem. Volume of solid wood in primary forks from the point of occurrence to a minimum 4-inch top diameter outside bark is included.

guideline: A preferred or advisable course of action generally expected to be carried out. Guidelines can also describe limitations on management actions, but they are generally not as restrictive as standards. Guidelines often indicate measures that should be taken to help maintain or restore resource conditions, or prevent resource degradation. Deviation from compliance does not require a Forest Plan amendment, but rationale for deviation is required in the project record or NEPA documentation for a signed decision.

H

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

harvest cutting: An intermediate or final cutting that extracts salable trees.

harvesting 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 undesirable plants.

heritage sites and assets: Remnants of past cultures that remind us of the centuries-old relationship between people and the land (from *National Heritage Strategy*); property, plant or equipment that are unique for one or more of the following reasons: (1) historical or natural significance; (2) cultural, educational or artistic/aesthetic significance; or (3) significant architectural characteristics.

hibernaculum (plural is hibernacula): A wintering area (usually underground) for bats (caves, rockshelters, mines). Typically, hibernacula provide a cold but not freezing temperature and relative high humidity. Different bat species have different environment requirements for their hibernacula.

high risk soils: Soils very susceptible to nutrient depletion and acidification caused by acid precipitation and/or vegetation management. This is caused by low buffering capability in the soil to the effects of these impacts. Factors contributing to low buffering capability are low organic matter, siliceous and acidic geology, low clay content, shallow depth to bedrock (rooting depth) and low natural fertility.

historic landscapes: Industrial, agricultural, pastoral or domestic landscapes that have evolved over many years from human alteration. Commonly functional and often vernacular, the landscapes may not always be visually pleasing, often responding to specific functions or topography, not formally planned or designed. They may be informal to the degree that they appear to be natural occurrences, or the spatial organization of built and natural elements may be quite traditional or formal. They are identifiable and can be mapped, either as point-specific features or enclaves within a larger landscape, as entire landscapes themselves, or as a combination of both.

historic range of variability: The range of the spatial, structural, compositional, and temporal characteristics of ecosystem elements during a period specified to represent "natural" conditions.

horizontal drilling: a method of drilling a well for the production of natural gas or oil that is intended to maximize the length of wellbore that is exposed to the formation and in which the wellbore is initially vertical but is eventually curved to become horizontal, or nearly horizontal, to parallel a particular geologic formation. (Modified from West Virginia Legislature 2011 Natural Gas Horizontal Well Control Act "Horizontal Well Control Act" in Enrolled house Bill 401, passed December 14, 2011.) (http://www.legis.state.wv.us/Bill_Status/bills_text.cfm?billdoc=hb401enr.htm&yr=2011&sesstype=4X&i=401; accessed June 12, 2012).

hydraulic fracturing: a well stimulation process of injecting pressurized fluids into the subsurface to initiate or propagate fractures in rock (target geologic formations) to enhance production of natural gas and/or oil. The type, composition and volume of fluids used depend largely on regional geologic structure, formation pressure and the specific geologic formation and target for a well.

hydraulic fracturing fluid: the primary carrier fluid and all applicable additives. Sand pumped in with the fluids helps to keep the fractures open.

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

Hydrologic Unit Code (HUC): A cataloging system developed by the US Geological Survey and the Natural Resource Conservation Service to identify watersheds, and to standardize hydrological unit delineations for geographic description and data storage purposes.

I

igneous: Rocks derived by solidification of magma or molten lava emplaced on or below the earth's surface.

immediate foreground: The area in the landscape from the viewer out to 300 feet distance.

impaired stream: Waters are defined by the Virginia Department of Environmental Quality as impaired when they do not support, or only partially support, one or more of five designated uses, (i.e. aquatic life, fish consumption, shellfish consumption, swimming, and drinking water). Support of the designated uses is based on compliance with Virginia's Water Quality Standards which include numeric and narrative criteria. Compliance is determined by the assessment of all available monitoring data and water quality information.

improved pasture: Fenced, fertilized pastures intensively managed for livestock grazing.

improvement cutting: The removal of less desirable trees in a stand of poles or larger trees, primarily to improve composition and quality.

incidental take: Take of ESA-listed fish or wildlife species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a federal agency or applicant.

incidental take statement: The document that recognizes the circumstances of and level of incidental take, the reasonable and prudent measures required to further minimize the level of incidental take, and the terms and conditions the Forest must comply with to implement the reasonable and prudent measures.

indicator: a measurement of an ecological condition to evaluate progress made toward goals and objectives.

informal consultation: An optional process that includes all discussions and correspondence between the US Fish and Wildlife Service and a federal agency prior to formal consultation, to determine whether a proposed federal action may affect listed species or critical habitat. This process allows the federal agency to utilize the US Fish and Wildlife Service's expertise to evaluate the agency's assessment of potential effects or to suggest possible modifications to the proposed action that could avoid potentially adverse effects.

industrial wood: All commercial round wood products, except fuelwood.

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.

INFRA: An integrated database for collection/storage/use of information about features, land units, facilities and utilities, accessibility and real property. For recreation management, INFRA holds information on O&M costs, recreation funding shortfalls, recreation use data, information on accessibility, and inventories of facilities. INFRA brings together Oracle, Arc Info and Arc View GIS technology, and supplements recreation management systems including SMS, ROS and Benefits Based Management.

initial attack: The aggressive response to a wildland fire based on values to be protected, benefits of response, and reasonable cost of response.

instream flow: The presence of adequate stream flow in channels necessary to maintain the integrity of the stream channel, and protection of downstream beneficial uses including fish and wildlife needs, outdoor recreation uses of water, and livestock watering needs.

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.

interdisciplinary team: A group of individuals with skills for management of different resources (e.g.: wildlife biologist, hydrologist, forester, etc.). An interdisciplinary team is assembled because no single scientific discipline is sufficient to adequately identify and resolve issues and problems. Team members ensure integrated use of natural and social sciences as required by the NEPA and NFMA.

interior forest habitat: High canopy forest conditions suitable to meet the requirements of area-sensitive species that are adversely impacted by forest edge, including microclimate change (warmer, windier), increased predation, increased brood parasitism, and increased competition.

intermediate 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 streams: Streams that flow in response to a seasonally-fluctuating water table in a well-defined channel. The channel will exhibit signs of annual scour, sediment transport, and other stream channel characteristics, absent perennial flows. Intermittent streams typically flow during times of elevated water table levels, and may be dry during significant periods of the year, depending on precipitation cycles.

interpretive association: A nonprofit, tax-exempt corporation or organization whose purpose is extending and enhancing the ability of the Forest Service to provide customer service to National Forest visitors. They work cooperatively with the Forest Service in educating the public about natural and cultural issues on public lands.

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.

intolerant: A plant requiring sunlight and exposure for establishment and growth.

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.

inventoried roadless area: Areas identified in a set of inventoried roadless area maps, contained in Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000, or any subsequent update or revision of those maps in accordance with the Roadless Area Conservation Final Rule (the '2001 Roadless Rule'). Reference 36 Code of Federal Regulations, Part 294 and 66 Federal Register 3244-3272 (Jan. 12, 2001). The definition of a roadless area for the 2001 Roadless Rule included: undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration under the Wilderness Act and that were inventoried during the Forest Service's Roadless Area Review and Evaluation (RARE II) process, subsequent assessments, or forest planning.

irretrievable impact: Refers to commitments that are lost for a period of time. For example, while an area is used as a developed recreation site, some or all of the timber production there is irretrievably lost. If the recreation area closes, timber production could resume. However, the loss of timber production during that time of irretrievability is not irreversible, because it is possible for timber production to resume if the area is no longer used as a recreation site. Contrast with irreversible impact.

irreversible impact: Refers to commitments that cannot be reverse, except perhaps in the extreme long term. For example, once coal has been removed, it will not be replaced within any measurable time period. Contrast with irretrievable impact.

K

karstland: Land underlain by limestone and characterized by sinks, abrupt ridges, irregular rock outcrops, caverns and underground streams.

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.

landline location: Legal identification and accurate location of national forest property boundaries.

land management planning: A formal process of management planning involving four interactive steps: monitoring, assessment, decision making, and implementations as described in the Federal Code of Regulations.

LANDFIRE: LANDFIRE (also known as Landscape Fire and Resource Management Planning Tools) is an interagency vegetation, fire, and fuel characteristics mapping program, sponsored by the United States Department of the Interior (DOI) and the United States Department of Agriculture, Forest Service. LANDFIRE produces a comprehensive, consistent, scientifically credible suite of spatial data layers for the entire United States. LANDFIRE data products consist of over 50 spatial data layers in the form of maps and other data that support a range of land management analysis and modeling. Specific data layer products include: Existing Vegetation Type, Canopy, and Height; Biophysical Settings; Environmental Site Potential; Fire Behavior Fuel Models; Fire Regime Classes; and Fire Effects layers. The original LANDFIRE Project was designed to use peer-reviewed, consistent, and repeatable scientific methods. Data products are developed through integrating a collection of advanced scientific procedures, including relational databases, georeferenced land-based plots and polygons representing field conditions, satellite-enabled remote sensing, systems ecology, gradient analysis, predictive landscape modeling, and vegetation and disturbance dynamics. (www.landfire.gov)

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.

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 theme: The general focus or subject of variations on landscape character settings. Detailed description of desired landscape character. Themes range from a natural landscape to an urban landscape.

landtype: An intermediate level in the ecological classification system hierarchy that addresses land areas ranging in size from hundreds of acres up to ten thousands of acres. These units typically have similarities in landform, natural vegetative communities, and soils.

landtype association: A group of landtypes. The landtypes in the association are sufficiently homogeneous to be considered as a whole for modeling the future outputs and effects of planned management activities.

Landtype associations may not follow watershed boundaries, and are defined on the basis of general similarities in climate, geology, landform, and vegetation.

landtype phase: The most detailed level in the ecological classification system hierarchy that addresses local geology, soils, streams, and vegetation types. Land areas are generally less than 100 acres in size.

landslide: A general term for a mass movement landform. Types of landslides include creep, rock slides and falls, earthflows, debris flows, and avalanches.

large woody debris (LWD): Any piece(s) of dead woody material, e.g., dead boles, limbs, and large root masses, on the ground in forest stands, or in streams. Sometimes called coarse woody debris (CWD).

late successional forest: forests from 50 to 100 years in age and older, include old growth conditions. This stage contains the largest trees and often has well-developed canopy layers and scattered openings caused by tree mortality.

late successional closed canopy: Stands reaching older ages of mature trees (50-100 years or greater) and more lasting structural conditions with a largely closed canopy (all layers) greater than 60%. Includes natural canopy gaps.

late successional open canopy: Stands reaching older ages of mature trees (50-100 years or greater) and more lasting structural conditions with overall open canopy (canopy closure of 25-60%; typical of thinned forests).

leaching: The gravity influenced loss of water-soluble plant nutrients from the soil.

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.

limits of acceptable change (LAC): A system in which the amount of change to be allowed is defined explicitly by means of quantitative standards and the appropriate management actions needed to prevent further change are identified, and procedures for monitoring and evaluating performances are established.

locally rare species: A term used by USDA Forest Service to describe species for which representation on a particular forest is a concern.

logging: The felling, skidding, on-site processing, and loading of trees or logs onto trucks.

long-term sustained-yield capacity: The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified management intensity, consistent with multiple-use objectives. (36 CFR 219.3, 1982 rule)

low PSI skidder: A term used to identify any one of several types of vehicles used to move logs from stump to log loading area. Low PSI (pounds per square inch) identifies those vehicles that, because of design of tracks, wheels, or suspension system, exert much lower pressure on ground surface than other types of ground-based skidding vehicles.

M

Major Land Resource Area: Major land resource area (MLRA) boundaries are based on soil and landscape characteristics, vegetation, and climate. MLRAs often include a wide range of soil, plant, and landscape conditions.

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

management area: A Forest Planning term denoting a contiguous geographic area of land with similar physical, biological, or social factors which influence management decisions. Each management area is allocated to one or more management prescriptions.

Management Attainment Report (MAR): A process used in determining whether work is progressing as planned. It provides the manager with information for measuring progress against objectives, information for measuring self and subordinates' performance, and an indication of a reporting unit's performance.

management direction: A statement of multiple-use goals, objectives, and standards for attaining them. Management direction is expressed forestwide, 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 intensity: A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.

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

management prescription area: A Forest Planning term denoting areas of land with similar desired conditions, objectives, and standards for achieving them. Management practices and intensity are selected and scheduled for implementation to attain multiple-use goals and objectives.

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.

manual site preparation: The killing or retardation of competing vegetation to prepare for an area for reforestation, using hand or power tools such as chainsaws.

mast tree: Generally hardwood trees of the heavy seeded variety including oaks, hickories, walnut, beech: 25 years and older capable of producing frequent seed crops to feed a variety of wildlife species.

maternity colony (for Indiana bats): A group of female Indiana bats that day-roost together during the spring and summer maternity season, generally in one or more snags or living trees. Young are born and reared while the female bats are gathered in a maternity colony.

maximum modification: A visual quality objective in which human activities may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

mean annual increment of growth: The total increase in girth, diameter, basal area, height, or volume of individual trees or a stand up to a given age divided by that age.

mean annual soil temperature: The average yearly temperature of the soil at 20 inches for a given area.

meaningful measures: A moniker for the Forest Service's National Recreation Business Management System, MM is a six-step management system for professional, accountable and visitor-responsive site and project-level management. Accomplishment is measured by established standards of quality for recreation services; the system determines costs to attain those standards, sets priorities for work to be accomplished and budget allocations, and measures the actual success at attaining these quality standards.

mechanized transport: Any contrivance for moving people or material in or 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 also does not include skis, snowshoes, rafts, canoes, sleds, travois, or similar primitive devices without moving parts.

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

metamorphic: Rocks altered considerably from their original structure and mineralogy by pressure and heat.

middle ground: The space between the foreground and the background in a picture or landscape; generally 1/2 mile to 4 miles distance from the viewer.

mid-successional forest: often begins to develop with the sapling/pole forest characterized by canopy closure of dense tree regeneration, with tree diameters typically smaller than 10 inches. It then proceeds through stratification of over-, mid-, and understory layers.

mid-successional closed canopy: Stands beyond regeneration where the canopy closure is greater than 60%.

mid-successional open canopy: Stands beyond regeneration that stay in a relatively open canopy (canopy closure of 25-60%).

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 soil: Weathered rock materials without any vegetative cover.

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 from the concentration is currently or potentially feasible.

minerals (leasable): Coal, oil, gas, phosphate, sodium, potassium, oil shale, sulphur, and geothermal steam. All hard-rock minerals that occur on acquired lands, as opposed to public domain lands, are leasable.

minimum management requirement: Any constraint imposed to comply with 36 CFR 219.27 and other legal restrictions that must be met by benchmark solutions as noted in 36 CFR 219.11(e)(1). These include requirements including conserving soil productivity, maintaining minimum viable populations of wildlife, preserving the habitat of endangered species' habitat, dispersing openings, and limiting cut size. It also includes any other standards and guidelines, including best management practices that serve to define management prescriptions and resource response.

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

mixed mesophytic forest: A forest containing tree (mostly hardwood) and plant species, which normally grow in moderately moist soils, typically in coves, or in riparian areas.

modification: A visual quality objective in which human activity may dominate the characteristic landscape but must, at the same time, use naturally established form, line, color, and texture appearing as a natural occurrence when viewed in foreground or middle ground.

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.

montane: Relating to the zone of relatively moist, cool upland slopes characterized by the presence of large evergreen trees as a dominant life form.

mortality: Dead or dying trees resulting from forest fire, insect, diseases, or climatic factors.

motor vehicle use map: A map reflecting designated roads, trails, and areas on an administrative unit or a Ranger District of the National Forest System.

motorized equipment: Machines that use a motor, engine, or other nonliving power sources. This includes, but is not limited to, such machines as chain saws, aircraft, snowmobiles, 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. There is a variation of this issue which involves personal use of cell phones, satellite phones, walkie-talkies, portable music players, and a variety of other electronic devices which can distract from the wilderness experience of others. These items, considered 'personal use' items, are not prohibited by law or agency policy, even if they contain small motors.

multiple use: The management of all the various renewable surface resources of the National Forest System so that they are used in a manner that will best meet the needs of the American people. Making the most judicious use of the land for these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in the use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output (36 CFR 219.3, 1982)

N

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 System (NFS): All national forest lands reserved or withdrawn from public domain of the United States and acquired through purchase, exchange, donation, and/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 Historic Landmark: Cultural properties designated by the Secretary of the Interior as being nationally significant. These cultural properties may be buildings, historic districts, structures, sites and objects

that possess exceptional value in commemorating or illustrating the history of the United States.

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 Visitor Use Monitoring: A systematic process to estimate all recreation and other uses of National Forest lands through user surveys.

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.

National Visitor Use Monitoring (NVUM): A systematic process to estimate annual recreation and other uses of National Forest lands through user surveys.

natural appearing landscape character: Landscape character that has resulted from human activities, yet appears natural.

natural range of variability: In planning, the full range of ecosystem processes and disturbance regimes that occur within the current climatic period.

net annual growth: The net change in merchantable volume expressed as an annual average between surveys in the absence of cutting (gross growth minus mortality).

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-action alternative: The most likely condition expected to exist in the future if current management direction would continue unchanged.

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-attainment area: For National Ambient Air Quality Standards (NAAQS), where the pattern of "violations of standard" is sufficient to require remedial action; a boundary is determined around the location of the violations. The area within that boundary is designated to be in non-attainment of the particular NAAQS standard and an enforceable plan is developed to prevent additional violations.

non-chargeable volume: All volume not included in the growth and yield projections for the selected management prescriptions used to arrive at the allowable sale quantity.

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

non-commodity output: A resource output that cannot be bought and sold.

non-declining yield: A level of timber production planned so that the planned sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade.

non-forest land: Land that has never supported forests and lands formerly forested where use for timber utilization is precluded by development for other use. Lands that never have had, or that are incapable of having 10 percent or more of the area occupied by forest trees; or lands previously having such cover and currently developed for non-forest use.

non-game species: Any species of wildlife or fish which is ordinarily not managed or otherwise controlled by hunting, fishing, or trapping regulations. The designation may vary by state.

non-native invasive species: A species that did not originate in the location it is living and has no natural predators or disease to keep it in check. As a result, it can out-compete other species for space, food, and water, negatively affecting native populations of species.

non-point source pollution: A diffuse source of pollution not regulated as a point source. May include atmospheric, deposition, agricultural runoff, and sediment from land-distributing activities.

non-stocked stands: Stands less than 16.7 percent stocked with growing stock trees.

non-timber forest products: All forest products except timber, including resins, oils, leaves, bark, plants other than trees, fungi, and animals or animal products.

nutrient cycling: A pathway by which a chemical element or molecule moves through both biotic (biosphere) and abiotic (lithosphere, atmosphere, and hydrosphere) compartments of Earth. In effect, the element is recycled, although in some cycles there may be places (called *reservoirs*) where the element is accumulated or held for a long period of time (such as an ocean or lake for water).

O

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

off-highway vehicle (OHV): Any motor vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, wetland, or other natural terrain. OHVs include all-terrain vehicles (ATV), motorcycles, amphibious machines, snowmobiles, hovercraft, and any other vehicles that use mechanical power, including 2 and 4-wheel drive (4WD) vehicles that are highway registered, when operated off highways.

offstream use: Water withdrawn or diverted from a ground or surface-water source for public water supply, industry, irrigation, livestock, thermoelectric power generation, and other uses.

old field: Idle or abandoned farmland or pasture that is reverting to shrubland or forest.

old growth: Defined by age (can vary by forest type) and related structure attributes as defined in the *Guidance for Conserving and Restoring Old-Growth Forest Communities on National Forests in the Southern Region, Forestry Report R8-FR 62, 1997*. Criteria include: 1) a minimum age at which a stand will begin to develop old growth conditions; 2) presence of past disturbance; 3) basal area; and 4) tree size for the largest trees.

on-site: A term referring to species normally found on a site under natural conditions. The same or contiguous property that may be divided by a public or private right-of-way, provided that the entrance and exit between the properties is at a crossroads intersection, and that access is by crossing, as opposed to going along the right-of-way.

open structural condition: Land with less than 10% canopy cover in permanent or long-term open condition (grasslands, barrens, etc.; not newly cut forest regeneration).

open woodlands: Created and maintained largely by periodic fire disturbance regimes, open woodlands are characterized by an overstory of trees that are spaced far enough apart to allow sunlight to reach the forest floor. This structural condition allows the development of a grassy/shrubby/herbaceous/woody understory more typical of early successional forest and grassland/shrublands.

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.

operational maintenance level: Maintenance levels define the level of service provided by, and maintenance required for, a specific road. There are five maintenance levels that are described as follows:

Level 1 - Assigned to intermittent service roads during the time they are closed to vehicular traffic. Closures must be for 1 or more years. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities.

Level 2 - Assigned to roads open for use by high clearance vehicles. Road in this maintenance level are low speed, single lane and native surface.

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. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material.

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.

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.

ordinary high water mark: The line on the shore established by the fluctuation of water, and is indicated by physical characteristics including a clear, natural line impressed on the bank; shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter, debris, or other appropriate means that consider the characteristics of the surrounding area.

output: The goods, end products, or services that are purchased, consumed, or used directly by people. Goods, services, products, and concerns produced by activities that are measurable and capable of being used to determine the effectiveness of programs and activities in meeting objectives. A broad term for describing any result, product, or service that a process or activity actually produces.

output, minimum level: The amount of an output that will occur regardless of management activity.

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.

outstandingly remarkable values (ORV): Those scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values that exist to an outstandingly remarkable degree such that a segment of river qualifies under the Wild and Scenic River Act.

overnight use developed sites (OUDS): National Forest sites with facilities for overnight use, including campgrounds, cabins/fire lookouts, lodges, horse camps, etc. Recreation residences are not included in this definition.

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

overstory removal: The cutting of trees comprising an upper canopy layer in order to release trees or other vegetation in an understory.

P

parent materials: The underlying geological material (generally bedrock or a superficial or deposit) in which soil horizons form.

partial retention: A visual quality objective which in human activities may be evident, but must remain subordinate to the characteristic landscape.

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.

payments in lieu of taxes: Payments to local or state governments based on ownership of federal land, and not directly dependent on production of outputs or receipt sharing.

perennial stream: Any watercourse that generally flows most of the year in a well-defined channel and is below the water table. Droughts and other precipitation patterns may influence the actual duration of flow. It contains fish or aquatic insects that have larvae with multi-year life cycles. Water-dependent vegetation is typically associated with perennial streams.

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 measure of carrying capacity, especially for developed sites. National conventions include 5 persons per family picnic/camp unit, 3.5 persons per parking lot stall at a trailhead or visitor center, 1.5 persons per motorcycle parking stall and 40 persons per tour bus parking stall.

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.

petrographic: The description and systematic classification of rocks.

physiographic region: A region of similar geologic structure and climate that has had a unified geomorphic history.

planning area: The area of the National Forest System covered by a regional guide or forest plan.

planning criteria: Standards, tests, rules, and guidelines by which the planning process is conducted, and upon which judgments and decisions are based.

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

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

possible old growth: areas with the highest probability of being existing or future old growth based on the preliminary inventory criteria. For the GWNF, these are forest stands that meet the stand age, which varies by forest type) based on current FSVEG data.

potential natural vegetation: the biotic community that would become established if all successional sequences were completed without additional human interference under the present environmental conditions. Classifications of Potential Natural Vegetation are based on existing vegetation, successional relationships, and environmental factors (e.g., climate, geology, soil, natural disturbances, etc.) considered together.

potential wilderness area: An area of national forest system land that meets the criteria for being evaluated for wilderness suitability and possible recommendation to Congress for wilderness study. Reference 72 Federal Register 4478-4481 (Jan. 31, 2007) and Forest Service Handbook 1909.12-2007-1, Chapter 70 Wilderness Evaluation. The intent is to identify and evaluate all NFS lands that meet the definition of wilderness in section 2(c) of the 1964 Wilderness Act.

pre-commercial thinning: The selective felling, deadening, or removal of tree in a young stand not for immediate financial return, but primarily to accelerate diameter increment on the remaining stems. To maintain a specific stocking or stand density range, or to improve the vigor and quality of the remaining trees.

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. Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements (where applicable) must be met, prior to ignition.

prescribed fire plan: A written statement defining the objectives to be attained as well as the conditions of temperature, humidity, wind direction and speed, fuel moisture and soil moisture under which a prescribed fire will be allowed to burn.

present net value (PNV): The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area. Future estimated revenues and costs are 'discounted' to the present by an interest rate that reflects the changing value of a dollar over time. Also called present net worth and net present value.

preservation: A visual quality objective that provides for ecological change only.

presuppression: Activities required in advance of fire occurrence to ensure effective suppression action, including: (1) recruiting and training fire forces, (2) planning and organizing attack methods, (3) procuring and maintaining fire equipment, and (4) maintaining structural improvements necessary for the fire program.

primary trout stream: Streams that contain naturally-reproducing populations of brook, rainbow, and/or brown trout.

primitive road: Roads constructed with no regard for grade control or designed drainage, sometimes by merely repeated driving over an area. These roads are single lane, usually with native surfacing and sometimes passable with four-wheel drive vehicles only, especially in wet weather.

priority watershed: Watershed with sensitive aquatic species, impaired streams and/or public water supplies (listed in Appendix D).

process records: A system that records decisions and activities that result from the process of developing a forest plan, revision, or significant amendment.

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

productivity class: A classification of the capacity of a given piece of land for timber growth is expressed in cubic feet per acre a year.

Class I: Lands capable of producing 120 cubic feet or more per acre a year.

Class II: Lands capable of producing 85 to 119 cubic feet per acre a year.

Class III: Lands capable of producing 50 to 84 cubic feet per acre a year.

Class IV: Lands capable of producing 20 to 49 cubic feet per acre a year.

program budget: The schedule of projects and activities to be carried out on the forest for a year for which funds have been appropriated.

program development and budgeting: The process by which activities for the forest are proposed and funded.

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.

proposed wilderness study area: Areas recommended for wilderness study by the Forest Service but which have yet to be acted on by Congress.

public water supplies: Public water supplies as identified by the Commonwealth of Virginia (State Water Control Board 9 VAC 25-260-380 Virginia Water Quality Standards. Statutory Authority: 62.1-44.15 3a of the Code of Virginia, effective January 6, 2011). Those within the GWNF include North River, Dry River, Pedlar River, Smith Creek, North Fork of Shenandoah, Cedar Creek, Jackson River, and Coles Run. Known inactive public water supplies are not listed in the Forest Plan.

pulpwood: Wood cut and prepared primarily for manufacture into wood pulp.

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.

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 subdivisions of the forest supervised by a District Ranger who reports to the Forest Supervisor.

real dollar value: A monetary value, which compensates for the effects of inflation.

reasonable foreseeable development (RFD) scenario: The prediction of the type and amount of oil and gas activity that would occur in a given area. The prediction is based on geologic factors, past history of drilling, projected demand for oil and gas, and industry interest.

receipt shares: The portion of receipts derived from Forest Service resource management that is distributed to state and county governments, including the Forest Service, 25 percent fund payments.

recommended wilderness study areas: An area of national forest system land that has been evaluated for wilderness suitability, analysis and public review has been completed in accordance with the National Environmental Policy Act, and recommended by the Regional Forester to the Chief, Secretary of Agriculture and the President for further review for Wilderness designation. This recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture and the President of the United States. The Congress has reserved the authority to make final decisions on Wilderness designation.

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.

recovery plan: A plan that outlines actions needed to recover and/or protect a federally listed species.

recreation: Leisure time activity including swimming, picnicking, camping, boating, hiking, hunting, and fishing.

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 and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted. 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.

Semi-Primitive (SP): Not a true recreation opportunity class, Semi-Primitive is an abbreviated consolidation of both the Semi-Primitive Non-Motorized and Semi-Primitive Motorized classes.

recreation visit: The entry of one person upon a National Forest to participate in recreation activities for an unspecified period of time. A NF visit can be composed of multiple site visits.

recreation visitor day (RVD): A unit of measure of recreation use equivalent to 12 hours of accumulated recreational activity by one or more persons during one or more visits to the National Forest. For example, 1 person for 12 hours, 2 persons for 6 hours, 3 persons for 4 hours are each one RVD.

reference conditions: Conditions characterizing ecosystem composition, structure and function, and their variability.

reference watersheds: Relatively undisturbed watersheds (listed in Chapter 2) that have existing water quality conditions considered to be representative of the ecological sub-section under natural conditions.

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.

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

regeneration method: Cutting procedure by which a new age class is created. Major methods are clearcutting, seed-tree, shelterwood, selection, and coppice.

regeneration period: The time between the initial regeneration cutting and the successful re-establishment of a new age class by natural means, planting, or direct seeding.

Region 8: The states that make up the Southern Region of the USDA Forest Service.

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

regulated harvest: Includes any volume scheduled in calculations of the allowable sale quantity which is harvested from suitable forest land.

release and weeding: A silvicultural treatment designed to free desirable trees from competition with overstory trees, less desirable trees, or grasses and other forms of vegetative growth. It includes release of natural and artificial regeneration.

removal cut: The cut which removes the last seed bearers of a seed tree or shelterwood regeneration method after the new seedling stand is considered to be established.

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.

reserve trees: Trees, pole-sized or larger, retained after the regeneration period under the clearcutting, seed-tree, shelterwood, or coppice methods.

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.

residual trees: The live trees remaining after a natural or artificial disturbance (e.g. a wind event or timber harvest).

resiliency: The capacity of forests and grassland/shrublands to return to prior conditions after disturbance. Resilient forests are those that not only accommodate gradual changes related to climate but tend to return

toward a prior condition after disturbance either naturally or with management assistance. Within the GWNF, maintaining a diversity of tree species or dominance types, age or size class diversity within dominance types, and forest density similar to what historic disturbance regimes produced, are considered underpinnings of a resilient forest.

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

resource allocation model: A mathematical model using linear programming that will allocate land to prescriptions and schedule implementation of those prescriptions simultaneously. The end purpose of the model is to find a schedule and allocation that meets the goals of the forest and optimizes some objective function including minimizing costs. The model used for this planning is called Spectrum.

resource use and development opportunities: A possible action, measure, or treatment and corresponding goods and services identified and introduced during the scoping process. It may subsequently be incorporated into and addressed by the land and resource management plan in terms of a management prescription.

responsible line officer: The Forest Service employee who has the authority to select and/or carry out a specific planning action.

restoration: The process of assisting the recovery of resilience and adaptive capacity of ecosystems that have been degraded, damaged, or destroyed. Restoration focuses on establishing the composition, structure, pattern, and ecological processes necessary to make terrestrial and aquatic ecosystems sustainable, resilient, and healthy under current and future conditions (FSM 2020.5).

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

revegetation: The re-establishment and development of a plant cover. This may take place naturally through the reproductive processes of the existing flora or artificially through the direct action of humans (e.g.: afforestation and range reseeding).

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. Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project or facility passing over, upon, under, or through such land.

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.

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-associated species: Species that may use a variety of habitats but that disproportionately make use of aquatic or riparian areas during at least one stage of their life cycle.

riparian corridor: An administrative zone applied to both sides of a stream or alongside a pond, lake, or wetland. It is a fixed width that may fall within or beyond the true riparian area.

riparian-dependent species: Species that are dependent on riparian areas during at least one stage of their life cycle.

riparian functions: Activities that occur in a riparian area without the influence of management activities. Functions include erosion and deposition by the streams, nutrient cycling, movement and storage of water, vegetative succession, etc.

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

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.

road closure: A technique used by management to regulate and control the use of facilities to achieve transportation economy, user safety, protection of the public investment, and accomplishment of forest resource objectives. It may be intermittent or long term.

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

road density: See open road density.

road maintenance levels: A formally established set of objectives that describes the conditions necessary to achieve the planned operation of a road. The levels vary from Level I, basic custodial care, to Level V, which is assigned high use roads in which user safety and comfort are important considerations.

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.

roadless area: National Forest lands evaluated for potential wilderness that meet the criteria in FSH 1909.12, Chapter 7.

Roadless Area Review and Evaluation (RARE) II: The assessment of "primitive" areas within the national forests as potential wilderness areas as required by the Wilderness Act. This refers to the second such assessment that was documented in the final environmental impact statement of the Roadless Area Review and Evaluation, January 1979.

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.

rotation: The number of years required to establish, including the regeneration period and grow timber crops, to a specified condition or maturity for harvest. Even: and two-aged management prescriptions in the Forest Plan use a rotation.

roundwood: Timber and fuelwood prepared in the round state: from felled trees to material trimmed, barked, and crosscut (e.g.: logs and transmission poles).

RPA Program: The recommended direction for long-range management of renewable resources of National Forest System lands. This direction serves as the basis for the regional targets assigned to the forest. The development of this direction is required by the Forest and Rangeland Renewable Resources Planning Act.

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.

rural water use: Term used in previous water-use circulars to describe water used in suburban or farm areas for domestic and livestock needs. The water is generally self-supplied.

S

sacred sites: 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 had informed the agency of the existence of such a site.

sale schedule: The quantity of timber planned for sale by time period from an area of suitable land covered by a forest plan. The first period (usually a decade) of the selected sale schedule provides the allowable sale quantity. Future periods are shown to establish that long-term sustained yield will be achieved and maintained.

salmonids: Fish of the family salmon idea, the chars, trouts, salmons, and white fishes.

salvage cutting: The removal of dead trees or trees being damaged or killed by injurious agents other than competition. To recover value that would otherwise be lost.

sanitation cutting: The removal of trees to improve stand health and to reduce actual or anticipated spread of insects and disease.

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

savanna: an open area with trees covering less than 25 percent and with herbaceous species dominating.

sawtimber: Trees suitable in size and quality for producing logs that can be processed into dimension lumber.

scalloping: The undulating vegetative edge treatment given to a travelway or opening for aesthetic purposes.

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 class: A system of classification describing the importance or value of a particular landscape or portions of that landscape. Values range from 1 (highest value) to 7 (lowest value).

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 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 future condition.

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 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.

scoured channel: A definable channel of flow where surface water converges with enough energy to remove soil, organic matter, and leaf litter.

secondary processor: A mill that processes partially manufactured wood (a wood product such as chips or lumber), into a finished product. Examples include paper and furniture.

secondary trout streams: Streams that do not contain naturally-reproducing trout populations, but will sustain trout throughout the year. Populations must be maintained by stocking.

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.

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.

seed-tree with reserves method: A two-aged regeneration method in which some or all of the seed trees are retained after regeneration has become established to attain goals other than regeneration.

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.

selection cutting: The removal of selected trees, particularly mature trees at planned intervals (cutting cycle), individually or in small groups, from an uneven-aged forest to realize the yield, and establish a new crop of desired tree species. Additionally, the tending of immature stand components are accomplished at each cutting cycle.

semi-primitive: See Recreation Opportunity Spectrum

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

sensitivity analysis: A determination of the consequences of varying the level of one or several factors while holding other factors constant.

sensitivity level: A particular degree or measure of viewer interest in the scenic qualities of the landscape.

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.

shelterwood with reserves: A two-aged regeneration method in which some or all of the shelter trees are retained, well beyond the normal period of retention, to attain goals other than regeneration.

short-term effects: In planning, those effects that usually occur within ten years.

short-term facilities: Facilities developed and operated for limited resource activity or other project needs. It will cease to exist as a transportation facility after the purpose for which it was constructed is completed, and the occupied land is reclaimed and managed for natural resource purposes.

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.

significant cave: A cave identified as a significant cave under the authority of The Federal Cave Resources Protection Act of 1988

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 class: A classification of site quality, usually expressed in terms of ranges of dominant tree height at a given age or potential mean annual increment at culmination.

site preparation: The preparation of the ground surface prior to reforestation. Various treatments are applied as needed to control vegetation that will interfere with the establishment of the new crop of trees or to expose the mineral soil sufficiently for the establishment of the species to be reproduced.

site index: A series-specific measure of actual or potential forest productivity (site quality, usually for even-aged stands), expressed in terms of the average height of trees included in a specified stand component (defined as a certain number of dominants, codominants, or the largest and tallest trees per unit area) at a specified index or base age.

site productivity class: A species-specific classification of forest land in terms of inherent capacity to grow crops of industrial, commercial wood. Usually derived from the site index.

site quality (productivity): The productive capacity of a site, usually expressed as volume production of a given species.

skid road: A temporary blade-constructed pathway having a road-like function and appearance, used to drag felled trees or logs to a landing. Several skid trails normally branch off of a skid road.

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 felling, silvicultural operations, or as a result of storm, fire, girdling, or poisoning. All vegetative debris resulting from the purchaser's operations. Slash associated with construction of roads is subject to treatment according to construction specifications, all other is subject to the terms of contract provision B/BT6.7.

slope stabilization: Improving the integrity of soil and rock material on a slope by using various techniques to lessen the chance of the material moving downslope.

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.

social analysis: An analysis of the social (as distinct from the economic and environmental) effects of a given plan or proposal for action. It includes identification and evaluation of all pertinent desirable and undesirable consequences to all segments of society, stated in some comparable quantitative terms, including persons or percent of population in each affected social segment. In addition, social analysis also includes a subjective analysis of social factors not expressible in quantitative terms.

soil enhancement: Application of methods or materials to the soil to increase its productivity and stimulate growth of biomass.

soil quality The ability of a specific kind of soil to function within its surroundings, support plant and animal productivity, maintain or enhance water and air quality and support human health and habitation. (FSH 2509.18)

soil productivity: The capacity of a soil to produce a specific vegetative community and is dependent on several inherent and climatic characteristics.

soil survey: A term for the systematic examination of soils in the field and in laboratories; their description and classification; the mapping of kinds of soil; the interpretation of soils according to their suitability for various crops, grasses, and trees; their behavior under use of treatment for plant production or for other purposes; and their productivity under different management systems.

soil and water resource improvement: The application of preplanned treatment measures designed to favorably change conditions of water flow, water quality, rates of soil erosion, and enhancement of soil productivity.

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.

special places: Those specific locations and expanses in outdoor settings that have attractions and features that are identified as unique, different, distinctive, and extraordinary to people. Special places can range in size from small areas to very large areas.

special use permit: A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest System lands for some special purpose.

SPECTRUM: A computer modeling tool to model alternative resource management scenarios applied to landscapes through time in support of strategic and tactical planning. This includes scheduling vegetation manipulation activities to achieve ecosystem management objectives; modeling resource effects and interactions within management scenarios; and exploring tradeoffs between alternative management scenarios in support of decision-making.

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: 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.

stand density: A quantitative measure of stocking expressed either absolutely per unit of land in terms of number of trees, basal area, volume per unit area, or relative to some standard condition.

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.

standard: A particular action, level of performance, or threshold specified by the Forest Plan for resource protection or accomplishment of management objectives. Unlike "guidelines" which are optional, standards specified in the Forest Plan are mandatory.

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.

stratigraphic: Pertaining to strata or layers, as in a description of layers of rock types.

stratum (canopy layer): A distinct layer of vegetation within a forest community.

stressors: Pressure or change brought upon an ecosystem by pollution sources including sediment, contaminants, and toxins.

structure: The horizontal and vertical distribution of components in a vegetation community including the height, diameter, crown layers, and stems of the plants, and the amount and arrangement of snags and down woody material.

successional stage: A period, marked by distinctiveness of structure, in the development of a forest community from establishment of tree regeneration to advanced age. Forest age is used as a surrogate measure of the distinct structure at each stage as follows: early 0-10 years; seedling/sapling 11-40 years; mid 41-80 years; and late over 80 years old.

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.

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.

supply: The amount of a good or service that producers are willing to provide at a specified price, time period, and conditions of sale.

surface use plan of operation: In minerals management, a plan for surface use, disturbance and reclamation on a leasehold.

surficial water: Water on or at the ground surface. Does not include ditches, canals, spillways, or other human-created flow channels.

sustainability: Obtaining yields and services from ecosystems without irreversibly affecting their resilience, natural resistance to change, or ability to meet the needs of future generations.

sustained yield of the products and services: The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest System without impairment of the productivity of the land.

sympatric: Condition where two or more closely related species live together in the same section of stream. The species have overlapping distributions. Opposite of allopatric.

T

taking: Defined by the Endangered Species Act and US Fish and Wildlife Service as any act which adversely affects a listed species including killing, harassing, harming, pursuing, hunting, capturing or collected a listed animal.

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.

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

thinning interval: The period of time between successive thinning entries, usually used in connection with even-aged stands.

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 demand: A relationship between stumpage or delivered log price and the quantity of timber produced.

timber product market area: The geographic area enclosed within a polygon drawn by connecting those mills buying forest timber that are the farthest away from the forest.

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 removals (drain): The merchantable volume of trees removed from the inventory by harvesting, cultural operations including stand improvement, land clearing, or changes in land use expressed as an annual average between surveys. Within national forests, removals are almost all timber harvest except that the inventory on lands withdrawn by legislative action is also normally accounted for as "removals."

timber sale program quantity (TSP): The volume of timber planned for sale during the first decade of the planning horizon. It includes the allowable sale quantity (chargeable volume), and any additional material (non-chargeable volume), planned for sale. The timber sale program quantity is usually expressed as an annual average for the first decade.

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

timber supply: The amount of wood raw material available to be harvested within specified parameters of time and geographic area.

timberland: Forest land that is producing or capable of producing in excess of 20 cubic feet per acre per year of industrial wood crops under natural conditions. Not withdrawn from timber utilization, and not associated with urban or rural development. Currently, inaccessible and inoperable areas are included.

tolerance: The ability of a tree to grow satisfactorily in the shade of, and in competition with, other trees.

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

toxicity index profile: Estimate of cumulative potential for toxic impacts in water.

traditional cultural property: A historic property that is eligible for inclusion in the National Register because of its association 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.

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

traffic service levels: Describe a road's significant traffic characteristics and operating conditions.

two-aged silvicultural system: A planned sequence of treatments designed to maintain and regenerate a stand with two age classes.

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

U

unacceptable alteration: A scenic integrity level (never an objective) where human activities of vegetative and landform alterations are excessive and totally dominate the natural, natural-appearing or valued cultural landscape character.

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.

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 regeneration methods: Methods of regenerating a forest stand, and maintaining an uneven-aged structure by removing some trees in all size classes either singly, in small groups, or strips. The methods are single-tree or group selection.

uneven-aged silvicultural system: A planned sequence of treatments designed to maintain and regenerate a stand with three or more age classes.

universal soil loss equation: An equation used to estimate soil erosion rates and for the design of water erosion control systems. $A = RKLSPC$ wherein A = average annual soil loss in tons per acre per year; R = rainfall factor; K = soil erodibility factor, L = length of slope; S = percent of slope; P = conservation practice factor; and C = cropping and management factor.

unregulated forest: Commercial forest land that will not be organized for timber production under sustained-yield principles.

utility-scale wind energy: Large scale wind turbines (also known as utility wind turbines) that are normally tied directly into the utility grid and are used to provide electrical power for entire communities and

municipalities. Each of these large, "utility-scale," wind turbines can have blade lengths up to 150ft and sit on a 200ft tower, and produce enough electricity for 500-600 average homes per year. Small scale wind turbines (also known as home or residential wind turbines) can either be connected to the utility grid or stand-alone as an "off-grid" application, normally providing electrical power for home, farm, school, or business applications. Small scale wind machines can have blade length between 3ft-30ft, with a 100ft tower, and can power between 1/4 to 6 average American homes.

utilization standards: Measurements for standing trees that describe the minimum size tree that will be designated for sale for various products including sawtimber or small roundwood.

V

values, market: Prices of market goods and services measured in real dollars in terms of what people are willing to pay as evidenced by market transactions.

values, non-market: Prices of non-market goods and services imputed from other economic values.

vertical diversity: The diversity in a stand that results from the different layers or tiers of vegetation.

very low scenic integrity (VL): An existing scenic inventory classification in which landscapes appear heavily altered. Human created deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes of size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles within or outside the landscape being viewed. However, deviations must be shaped and blended with the natural terrain so that elements such as edges, roads, landings, and structures do not dominate the composition.

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. To insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.

viewing platform: Viewing platforms are areas where people routinely view landscapes. They include but may not be limited to roads, roadside pullouts, parking areas, trails, rivers, lakes, developed recreation sites, known dispersed campsites, visitor centers, and residential areas. Due to intervening landforms, rock outcrops, and vegetation, not all of the landscape within the foreground, middleground and background distance zones is visible.

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

visual quality objective (VQO): A term under the Visual Management System (VMS) as defined in Agricultural Handbook #462 which was replaced by "scenic integrity objective" under the Scenery Management System (SMS). A desired level of excellence based on physical and sociological characteristics of an area under the Visual Management System. Refers to the degree of acceptable alterations of the characteristic landscape. Objectives include Preservation, Retention, Partial Retention, Modification, and Maximum Modification. Except for "preservation," each goal describes a different degree of acceptable alteration of the natural landscape based on the importance of aesthetics.

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

warm water fishery: Aquatic habitats that support fish species which have their best reproductive success and summer water temperature tolerance between 75 and 85 degrees Fahrenheit (23-29 C), or about 80 degrees Fahrenheit. Examples include sunfish species, and largemouth bass.

water-holding capacity: The ability of the soil to absorb and hold water, expressed in inches of water per vertical foot of soil.

water supply area: Areas that serve present and future municipal water supply and trout hatching or rearing operations.

watertable: The 'surface' of the subsurface materials that are saturated with groundwater in a given vicinity.

water yield: The measured output of the forest's streams expressed in acre-feet. The amount or volume of water that flows in a given period of time from a watershed.

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 total area above a given point on a stream that contributes water to the flow at that point.

weathering: The breaking down of Earth's rocks, soils and minerals through direct contact with the planet's atmosphere.

wetlands: Pursuant to the Federal Clean Water Act: areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances, support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas, and are found primarily within palustrine systems; but may also be within riverine, lacustrine, estuarine, and marine systems.

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.

wildfire: Unplanned human (unauthorized or accidental) or natural (usually lightning) fires in wildlands.

wilderness: An area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected through congressional designation and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value." (Source – The Wilderness Act of 1964)

wilderness study area: One of the areas selected by the Chief of the Forest Service from an inventory of undeveloped National Forest System lands as having apparent high qualities for wilderness. Lands possessing the basic characteristics of wilderness and designated by Congress for further wilderness study. A study can determine whether they should be recommended for addition to the National Wilderness Preservation System.

wildland fire: a general term describing both prescribed fire and wildfire (unplanned human or naturally caused fire) that occurs in the wildland.

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

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.

wildlife and fish user-day (WFUD): A 12-hour participation in the use of wildlife and fish primarily for consumptive or non-consumptive use including hunting, fishing, or wildlife viewing. Such use is the result of habitat management, and the populations supported by that habitat. A WFUD is counted as one day or any part of a day that the user participated in these activities. Does not include sport or commercial uses of anadromous fish.

wildlife habitat diversity: The distribution and abundance of different plant and animal communities and species within a specific area.

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 tree: A den tree, snag, or mast or food tree.

with-without comparison: An evaluation that compares outputs, benefits, costs, and other effects with a base alternative.

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

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

woody biomass: Vegetation removed from the forest, usually logging slash, small diameter trees, tops, limbs, or trees not considered merchantable in traditional markets. (http://www.forestguild.org/publications/research/2012/FG_Biomass_Guidelines_SE.pdf)

wood biomass energy: Wood (solid wood, tree trimmings, wood chips, sawdust, bark, and shavings) used to produce heating, electricity, or other forms of energy. (<http://mwcc.edu/renewable/biomass.html>)

woody biomass utilization: The harvest, sale, offer, trade, or utilization of woody biomass to produce the full range of bio-based products and bio-energy, including timber, engineered lumber, paper and pulp, furniture and value-added commodities, and bio-energy and/or bio-based products such as plastics, ethanol, and diesel.

X

xeric: Pertaining to sites or habitats characterized by decidedly dry conditions.

Y

yarding: A term used to describe operations used to move logs from stump to point where logs are loaded for transport to mill. Most commonly used in cable logging operations.

yield table: A tabular statement of outputs expected to be produced under a specific set of conditions.