
APPENDIX D

GLOSSARY

ACTIVITY. A measure, course of action, or treatment that is undertaken to directly or indirectly produce, enhance, or maintain forest and range land outputs or achieve administrative or environmental quality objectives.

ACTIVITY AREA. Area within the project area where activities are proposed.

ACTIVITY FUELS. (1) The portion of the total fuel that would actually burn under various environmental conditions. (2) Fuel available for use in a motor vehicle, aircraft, or other motorized equipment.

AERIAL FUELS - All live and dead vegetation located in the forest canopy or above the surface fuels, including tree branches and crowns, snags, moss and high brush.

AFFECTED ENVIRONMENT. The natural, physical, and human-related environment that is sensitive to changes due to proposed actions.

AGE CLASSES. A distinct group of trees, or portion of growing stock recognized on the basis of age (i.e., seedling, pole, mature).

AGGRADATION (DEPOSITION). When more sediment enters a reach than leaves it, there is a buildup of sediment. This is called aggradation or deposition.

AIR POLLUTANT. Any substance in air that could, if in high enough concentration, harm humans, animals, vegetation, or material. Air pollutants may include almost any natural or artificial matter capable of being airborne, in the form of solid particles, liquid droplets, gases, or a combination of these.

AIR QUALITY. Refers to standards for various classes of land as designated by the Clean Air Act, P.L. 88-206: Jan. 1978.

AIRBORNE PARTICULATE. Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Particulates include: windblown dust, emissions from industrial processes, smoke from the burning of wood and coal, and the exhaust of motor vehicles.

AIRSHED. Geographical areas identified by the Montana/Idaho Airshed Group with similar topography and weather patterns.

ALLOWABLE SALE QUANTITY. A quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. This quantity is usually expressed on an annual basis as the "average annual sale quantity".

ALTERNATIVE. A mix of management prescriptions proposed for specific land areas to achieve a set of goals and objectives. Each alternative represents a different way of achieving a set of similar management objectives.

ANALYSIS AREA. The geographic area defining the scope of analysis for a particular resource. This area may be larger than the project area when effects have the potential to extend beyond the boundaries of the proposed action.

ANALYTICAL SAMPLING. Data collection using sound statistical procedures.

ANCHOR POINT. An advantageous location, usually a barrier to fire spread, from which to start constructing fireline. The anchor point is used to minimize the chance of being flanked by the fire while the line is being constructed.

APPEAL. A request by any party dissatisfied with a decision of a Forest Officer to have that decision reviewed at a higher organizational level within the Forest Service and, where appropriate, by the Secretary of Agriculture.

APPROPRIATE MANAGEMENT RESPONSE (AMR) - Specific actions taken in response to a wildland fire to implement protection and fire use objectives. Formerly known as the appropriate suppression response, which consisted of the confine, contain, and control tactical strategies. (NWCG terminology adopted 06/12/97)

APPROPRIATED FUNDING. Monies allotted or budgeted for departments to fund the job activities taking place for the fiscal year.

AQUATIC SYSTEMS. Biological and physical attributes and their interaction related to water.

ASPECT. The direction a slope faces the sun. Expressed in cardinal direction. Same as exposure.

AVAILABLE FUEL. The portion of the total fuel that actually burns.

BACKFIRE. A fire set along the fire side of a control line or barrier to consume the fuel in the path of an advancing wildfire or to change the direction of force of the fire's convection column. Note: Doing this on a small scale and with closer control, in order to consume patches of unburned fuel and aid in control line construction is distinguished as burning out.

BACKING FIRE. A slowly advancing fire that is burning into or against the wind or downslope. See head fire.

BARK BEETLE HAZARD. The degree of vulnerability of a stand to a particular bark beetle, given that the insect is present.

BASAL AREA. The area of the cross-section of a tree trunk measured at 4.5 ft. above the ground. Basal area can be used to measure how much of a site is occupied by trees. The term is often used to describe the collective basal area of trees per acre.

BENEFICIAL USES. Attributes that are considered useful products of the resource. They may include (but are not limited to): recreation, production of salmonid fishes, drinking water, power generation, and irrigation.

BEST MANAGEMENT PRACTICES (BMP). A set of practices which, when applied during implementation of a project, ensures that water-related beneficial uses are protected and that State water quality standards are met.

BIG GAME. Those species of large mammals normally managed as a sport hunting resource.

BIODIVERSITY. Biodiversity is the variety of life in an area, including all the processes of life. Included in this definition is genetic diversity in species; species richness; variety, patterns, and abundance of species communities and ecosystems at large geographical scales; and the processes whereby species interact.

BIOLOGICAL ASSESSMENT. Information (document) prepared by or under the direction of the federal agency concerning listed and proposed threatened and endangered species and proposed critical habitat that may be present in the action area, and the evaluation of potential effects of the action on such species and habitats.

BIOLOGICAL EVALUATION. A documented Forest Service review of programs or activities in sufficient detail to determine how an action or proposed action may affect any sensitive species.

BIOMASS. The sum total of living plants and animals above and below ground.

BLOWDOWN. Trees that have been uprooted by the force of wind.

BLOWUP . Sudden increase in fire intensity or rate of spread sufficient to preclude direct suppression or to upset existing suppression strategies. Often accompanied by violent convection and may have other characteristics of a firestorm.

BOARD FOOT (BF). A unit of measurement equal to an unfinished board one square foot by one inch thick. Timber volumes are often expressed in terms of thousands of board feet (MBF) or millions of board feet (MMBF).

BOGS. Perennially saturated areas that usually have wetland and riparian plants surrounding them.

BOLE. The trunk or main stem of the above ground part of a tree.

BROADCAST BURN. Intentional burning within well defined boundaries for reduction of fuel hazard, as a resource management treatment, or both. Also see Prescribed Burning.

BROAD-SCALE ASSESSMENT. A synthesis of current scientific knowledge, including a description of uncertainties and assumptions, to provide a characterization and comprehensive description of ecological, social, and economic components within an assessment area critical for understanding past and present conditions and projecting future trends which provides a foundation for the identification of additional or necessary information for policy discussion or decisions.

BULK DENSITY. The mass of dry soil per unit volume, corrected for weight and volume of coarse fragments greater than 2mm in diameter.

BURN INTENSITY (FIRE INTENSITY). The rate of heat release for an entire fire at a specific point in time.

BURN SEVERITY (FIRE SEVERITY). Refers to soil impacts (BAER Handbook, FSH 2509.13):

High Severity – More than 40% of the polygon exhibits soil features likely to significantly increase runoff and erosion (e.g., absence of duff layer, hydrophobic soils, and soil discoloration). High severity fires are lethal to conifers with all needles burned off of the trees.

Moderate Severity – Less than 40% of the polygon exhibits high severity indicators. Duff layers may be absent or mostly absent. Moderate severity fires kill the majority of conifers and needles on trees are scorched (brown).

Low Severity – Duff layers are burned but intact. Unburned areas are intermingled with lightly burned areas. Low severity fires cause some tree mortality (torching) but stands have a notable live tree component.

BURNING PERIOD. That part of each 24-hour period when fires will spread most rapidly. Most commonly 10:00 am to 4:00 pm.

BURNING INDEX (BI) .A measure of fire intensity. BI combines the Spread Component and Energy Release Component to relate to the contribution of fire behavior to the effort of containing a fire. BI has no units, but in general it is 10 times the flame length of a fire.

CANDIDATE SPECIES. Species identified by the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS), which are considered to be candidates for listing under the Endangered Species Act.

CANOPY. The stratum containing the crowns of the tallest vegetation present, (living or dead) usually above 20 feet.

CANOPY CLOSURE. The progressive reduction of space between tree crowns as they spread laterally; a measure of the percent of potential open space occupied by the collective tree crowns in a stand.

CANOPY FUELS. The live and dead foliage, live and dead branches, and lichen of trees and tall shrubs that lie above the surface fuels.

CAVITY. Hollows, which are excavated in trees by birds, used for roosting and reproduction by many birds and mammals.

CAVITY HABITAT. Standing dead trees, broken-topped live trees, and down logs used by wildlife species that excavate and/or occupy cavities in these trees.

CAVITY NESTERS. Wildlife species that nest in cavities.

CHAIN. A non-metric measure of distance common to land surveying, forestry and fire management. One chain equals 66 feet.

CLASS OF FIRE (as to kind of fire). Class A fires are those that are burning solid fuels such as wood and vegetation. Class B fires are those that include flammable liquids. Class C fires involve electrical equipment and Class D fires involve burning metals.

CLASS OF FIRE (as to size of wildland fires). Class A = 0.25 acres or less, Class B = 0.25-<10 acres, Class C = 10-<100 acres, Class D = 100-<300 acres and Class E = 300+ acres.

CLIMAX. The terminal plant community of a succession; it remains relatively unchanged (dynamic stability) unless the environment changes. Species are capable of reproducing themselves within the community and excluding new species, especially potentially dominant species.

CLONE. A vegetatively reproduced offspring of one tree; both parent and offspring are of the same genotype.

CLOSED CANOPY. The condition that exists when the canopy created by trees or shrubs or both is dense enough to exclude most of the direct sunlight from the forest floor.

CLOSED ROAD. A national forest road or segment, which is restricted from certain types of use during certain seasons of the year. The prohibited use and the time period of closure must be specified. The closure is legal when the Forest Supervisor has issued an order and posted it in accordance with Chapter 36 of the CFR section 261.

COARSE WOODY DEBRIS. Sound and rotting dead woody plant material, standing or fallen, generally greater than 3 inches in diameter. It provides habitat for wildlife and plants and is a source of nutrients and structures for soil protection and development.

CODE OF FEDERAL REGULATIONS (CFR). The official, legal tabulation, or regulations directing federal government activities.

COMMUNITY. A group of one or more populations of plants and animals in a common spatial arrangement; an ecological term used in a broad sense to include groups of various sizes and degrees of integration.

COMPACTION. A physical change in soil properties from compression, vibration, or shearing that increases soil bulk density and decreases porosity, air exchange, root penetration, infiltration, and permeability.

CONFINE A FIRE. To restrict the fire within determined boundaries established either prior to the fire or during the fire. (Obsolete terminology)

CONTAIN A FIRE. To take suppression action, as needed, which can be reasonably expected to check the fire's spread under prevailing conditions. (Obsolete terminology)

CONTROL A FIRE. To complete a control line around a fire, any spot fires there from, and any interior islands of unburned fuel to be saved; burn out any unburned area adjacent to the fire side of the control lines; and cool down any hotspots that are immediate threats to the control line, until the lines can reasonably be expected to hold under foreseeable conditions. See suppress a fire. (Obsolete terminology)

CONTROLLED BURNING. See prescribed burning.

CONTROL LINE (Fire Line). An inclusive term for all constructed or natural fire barriers and treated fire edge used to control a fire.

CONIFER. Any of a group of needle and cone-bearing evergreen trees, typically referring to gymnosperms.

CONVECTION COLUMN. The thermally produced, ascending column of gases, smoke, and debris produced by a fire.

CORRIDORS. An area through which species can move from one place to another over time in response to changes in environment or as a natural part of their life history.

COST. The negative or adverse effects or expenditures resulting from an action. Costs may be monetary, social, physical, or environmental in nature.

COST EFFICIENCY. The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned

monetary values but are achieved at specific levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates of return may be appropriate.

COUNCIL OF ENVIRONMENTAL QUALITY (CEQ). An advisory council to the President established by the National Environmental Policy Act of 1969. It reviews federal programs for their affect on the environment, conducts environmental studies, and advises the President on environmental matters.

COVER. Vegetation used by wildlife for protection from predators, breeding, and rearing of young (hiding cover), or to ameliorate conditions of weather (thermal cover).

COVER/FORAGE RATIO. The ratio, in percent, of the amount of area in cover conditions to that in forage conditions.

CROWN FIRE. A fire that advances from the top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either dependent or independent, to distinguish the degree of independence from the surface fire's influence. See crown out.

CROWN OUT. With reference to wildland fire, to rise from ground level and begin advancing through the vegetation crowns. To intermittently ignite the crowns as the surface fire advances.

CUBIC FOOT. The amount of wood volume equivalent to a cube 1 foot by 1 foot by 1 foot.

CUT SLOPE. Road construction slopes that are made by excavation.

CULTURAL RESOURCES. The physical remains of human activity (e.g., artifacts, ruins, burial mounds, petroglyphs, etc.) having scientific, prehistoric, or social values.

CUMULATIVE EFFECT. The impact on the environment, which results from the incremental impact of past, present, and reasonably foreseeable actions. Cumulative impacts can also result from individually minor but collectively significant actions over a period of time.

DECADENT. Deteriorating; when used in reference to the conditions of groups of trees, there are inferences of the loss of trees from the overstory and of the presence of disease, or indications of loss of vigor in dominant trees.

DECIDING OFFICER. The Forest Service employee who has the authority to select and/or carry out a specific planning action. May also be referred to as the "Responsible Official".

DECISION AREA. The geographic area defining the scope of an environmental analysis document and the alternatives proposed by it.

DECIVIEWS. A measure for describing perceived changes in visibility.

DECOMMISSION. To remove those elements of a road or buildings that reroute hillslope drainage and present slope stability hazards – *synonym* hydrologic obliteration.

DEGRADATION. This occurs when a stream has excess energy and more sediment leaves a reach than enters it. This is associated with channel scouring.

DENNING SITE. A place of shelter for an animal; also where an animal gives birth and raises young.

DETRIMENTAL SOIL CONDITION. The condition where established soils quality standards are not met and the result is a significant change in soil quality.

DESIGNATED ROADS AND TRAILS. Specific roads and trails identified by the agencies where some type of motorized vehicle use is appropriate and allowed either yearlong or seasonally.

DESIRED NON-NATIVE SPECIES. Those species of plants or animals, that are not indigenous to an area but which represent an important social or economic benefit.

DESIRED FUTURE CONDITION. A portrayal of the land or resource conditions which are desired to result in the future with, or without active management.

DEVELOPED RECREATION. Recreation that occurs where improvements enhance recreation opportunities and accommodate intensive recreation activities in a defined area.

DEVELOPED RECREATION SITES. Relatively small, distinctly defined areas where facilities are provided for concentrated public use (i.e., campgrounds, picnic areas, and swimming areas).

DIRECT EFFECTS. Effects on the environment which occur at the same time and place as the initial cause or action.

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

DISPLACEMENT (Soil Displacement). The removal and horizontal movement of soil from one place to another, usually by mechanical forces such as dozer blades, repeated vehicular traffic, or the yarding of logs.

DISPLACEMENT AREA. An area of suitable habitat reserved for use by a local population of a wildlife species while that population is displaced from, or caused to vacate its former habitat by disturbance from human activities.

DISTURBANCE. Any event that affects the structure, function, composition, and/or successional development of a plant community (e.g., fire, insect attack, windthrow, timber harvest).

DIURNAL. Daily, especially pertaining to cyclic actions which are completed within 24 hours, and which recur every 24 hours, such as temperature, relative humidity and wind.

DIVERSITY. The relative distribution and variety of plant and animal communities and species within an area.

DOWN WOODY COMPONENT. A component of forest habitats used by wildlife for feeding, denning, and shelter.

DRAINAGE RELATED DEFERRED MAINTENANCE. Road maintenance that has been deferred over an extended period of time, but is needed to restore or improve the roads functional drainage characteristics.

DUFF. The partially decomposed organic material of the forest floor beneath the litter or freshly fallen twigs, needles and leaves. See litter.

DYSGENIC. Being detrimental to the genetic qualities of future generations.

ECOBURN. A prescribed fire for which at least one objective is to restore or enhance the condition of an area by approximating the results of a fire burning under conditions of the natural fire regime.

ECOLOGICAL COMPOSITION. The biological components of an ecological system, which are the foundation of diversity at the genetic, species, and landscape scales. Genetic diversity is the variation in inheritable characteristics within and among individual organisms and populations. Species diversity is the number and different kinds of species present in a given area. Landscape diversity is the variety of plant communities (including their identity, distribution, juxtaposition, and seral stage) and habitats evaluated at the landscape scale.

ECOLOGICAL SUSTAINABILITY. The maintenance or restoration of ecological system composition, structure, and function which are characteristic of an area over time and space, including but not limited to ecological processes, biological diversity, and the productive capacity of ecological systems.

ECOSYSTEM. The complete system formed by the interaction of a group of organisms and their environment. In the context of activities on national forest lands, humans are considered part of the ecosystem.

ECOSYSTEM INTEGRITY. The completeness of an ecosystem that, at multiple geographic and temporal scales, maintains its characteristic diversity of biological and physical components, spatial patterns, and structure and functional processes within its approximate range of historic variability. These processes include disturbance regimes,

nutrient cycling, hydrologic functions, vegetation succession, and species adaptation and evolution. Ecosystems with integrity are resilient and capable of self-renewal in the presence of the cumulative effects of human and natural disturbance.

ECOSYSTEM MANAGEMENT. Using an ecological approach to achieve the multiple-use management goals of national forest and grasslands by blending the needs of people and environmental values in such a way that represents diverse, healthy, productive, and sustainable ecosystems.

ECOSYSTEM STRUCTURE. The biological and physical attributes that shape ecological systems. Biotic attributes include: population size, structure, and range; foliage density and layering; snags; large woody debris; or the size, shape, and spatial relationships of cover types within a landscape. Physical attributes include: soil and geologic substrate variables, slope and aspect, or stream gradient.

EFFECTIVE GROUND COVER. Effective ground cover consists of vegetation, fine organic matter, coarse woody material, and rock fragments larger than three-fourths inch in diameter in contact with the soil surface.

EFFECTIVE WIND SPEED. The mid-flame wind speed adjusted for the upslope effect on fire spread.

EFFECTS. Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable, or cumulative.

ELK HABITAT EFFECTIVENESS (EHE). An index of the capability of an area to provide protection for elk. It is based on the density of roads open to public motorized use per square mile.

ELK SECURITY AREA. A contiguous block of cover over 250 acres in size and at least 1/2 mile from an open road.

ENDANGERED SPECIES. Any plant or animal species which is in danger of extinction throughout all or a significant portion of its range (Endangered Species Act of 1973).

ENDEMIC. Native or characteristic of a particular geographic area.

ENVIRONMENTAL ANALYSIS. An analysis of proposals and their predictable environmental effects, including physical, biological, economic, and social consequences and their interactions; short and long-term effects; and direct, indirect, and cumulative effects.

ENVIRONMENTAL ASSESSMENT (EA). A concise public document which serves to: (a) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a Finding of No Significant Impact; (b) aid in agency's compliance with the National Environmental Policy Act when no environmental impact statement is necessary; and (c) facilitate preparation of an environmental impact statement when necessary.

ENVIRONMENTAL IMPACT STATEMENT (EIS). A detailed statement prepared by the responsible official in which a major federal action which significantly affects the quality of the human environment is described, alternatives to the proposed action provided, and effects analyzed.

EPHEMERAL STREAMS. Streams that flow only as a direct response to rainfall or snowmelt events. They have no baseflow.

EPIDEMIC. The populations of plants, animals, and diseases that buildup, often rapidly, to highly abnormal and generally injurious levels.

ENERGY RELEASE COMPONENT (ERC). Based upon the estimated potential available energy released per unit area in the flaming zone of a fire. It is dependent upon the same fuel characteristics as the spread component (SC). The day-to-day variations of the ERC are caused by changes in the moisture contents of the various fuel classes, including the 1000-hour time lag class. ERC is derived from predictions of the rate of heat release per unit area during flaming combustion and the duration of the burning. Expressed in BTU's per square foot.

EQUIVALENT CLEARCUT AREA (ECA). Equivalent Clearcut Area is an indicator of basin condition and is calculated from the total amount of crown removal that has occurred from harvesting, road building, and other activities based on the current state of vegetative recovery.

EROSION. Detachment or movement of soil or rock fragments by water, wind, ice, or gravity. Accelerated erosion is much more rapid than normal, natural, or geologic erosion, primarily as a result of the influence of activities of people, animals, or natural catastrophes.

ESCAPED FIRE. A fire that has exceeded initial attack capabilities.

EVEN-AGED MANAGEMENT. Deliberate planned actions that result in stands of trees of essentially the same age, growing together. Clearcut, shelterwood, or seed tree regeneration methods produce even-aged stands.

EXCAVATOR PILING. A mechanized fuel reduction treatment in which an excavator with a thumb grapple is used to pile slash prior to burning. As with other mechanized fuel treatments excavator piling is preferred to hand piling when fuel loads or unit size precludes handpiling or other prescribed fire treatment. Like most conventional tracked equipment excavators are limited by slope.

EXTREME FIRE BEHAVIOR. Implies a level of wildfire behavior characteristics that ordinarily precludes methods of direct attack. One or more of the following is usually involved: High rates of spread; prolific spotting and or crowning; presence of fire whirls; a strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment, behaving erratically and sometimes dangerously.

FILL SLOPE. Road construction slopes that are made by depositing soil from excavated areas.

FINE FUELS. Fuels such as grass, needles, fern, tree moss, some slash types & leaves which ignite readily and are consumed rapidly when dry. Also called flash fuels.

FINE FUEL MOISTURE. The probable moisture content of fast-drying a fuel, which have a time lag constant of one hour or less; such as, grass, leaves, ferns, tree moss, draped needles, and small twigs.

FINE ORGANIC MATTER. Organic materials such as plant litter, duff, and woody material less than 3 inches in diameter in contact with the soil.

FINGERS OF THE FIRE. The long narrow tongues of a fire projecting from the main perimeter.

FIRE BEHAVIOR. The manner in which a fire reacts to the influences of fuel, weather, and topography.

FIREBRAND. Any source of heat, natural or manmade, capable of igniting wildland fuels. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels.

FIREBREAK. A natural or constructed barrier utilized to stop or check fire spread that may occur or to provide a control line (fire line) from which to work. Sometimes referred to as a fire lane.

FIRE CYCLE. (Also called Fire Return Interval) The average time between fires in a given area.

FIRE-DEPENDENT. Forests, grasslands, and other ecosystems historically composed of species that evolved with and are maintained by periodic fire.

FIRE HAZARD. The rapid ignition of fuels dependent on arrangement, volume, and conditions to sustain fire.

FIRE INTENSITY. The rate of heat release for an entire fire at a specific point in time. See fireline intensity.

FIRE LINE. The part of a control line that is scraped or dug to mineral soil. Sometimes referred to as a fire trail. See control line.

FIRELINE INTENSITY. The rate of heat energy released during combustion per unit length of fire front. It is usually expressed in BTUs/second/foot.

FIRE MANAGEMENT PLAN. A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans and prevention plans. (NWCG terminology adopted 06/12/97)

FIRE REGIME. The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, seasonality, and extent in an ecosystem. Examples include: nonlethal, lethal (stand-replacing), and mixed lethal.

FIRE RISK. The chance that a fire will ignite as affected by the nature and incidence of causative agents (also see Fire Hazard).

FIRE SEASON. The period or periods of the year during which wildland fires are likely to occur, spread and do sufficient damage to warrant organized fire suppression activities.

FIRE SEVERITY. See Burn Severity.

FIRE-TOLERANT. A plant which has properties or characteristics which enable it to survive fire.

FIRE USE. The combination of wildland fire use and prescribed application of fire to meet resource objectives.

FISH HABITAT. The place where a population of fish species lives and its surroundings; provides life requirements such as food and cover.

FISHERY. The total population of fish in a stream or body of water and the physical, chemical, and biological factors affecting that population.

FLAME HEIGHT. The average height of flames as measured on a vertical axis. It may be less than flame length if the flames are angled.

FLAME LENGTH. . The distance measured from the tip of the flame to the middle of the flaming zone at the base of the fire. It is measured on a slant when the flames are tilted due to the effects of wind and/or slope.

FLAMING FRONT. The zone of a moving fire within which the combustion is primarily flaming. Behind this flaming zone, combustion is primarily glowing. Light fuels typically have a shallow, flaming front whereas heavy fuels have a deeper front.

FLOODPLAIN. The lowland and relatively flat areas adjoining inland and coastal waters, including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

FOREST COVER TYPE. A descriptive classification of forestland based on the present vegetative species composition and/or locality (e.g., lodgepole pine, mixed conifer).

FOREST PLAN. Refers to the various Forest Plans for each national forest, or specifically to the Bitterroot National Forest Plan.

FORESTED FORAGE. Big game forage available under tree cover that does not meet open forage, hiding cover, or thermal cover conditions.

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

FRAGMENTATION. The process of removing links between areas of habitat suitable for a species, or the reduction of contiguous blocks of vegetation with similar structure and form into smaller isolated parts.

FUEL BED. An array of fuels usually constructed with specific loading, depth, and particle size to meet experimental requirements; also, commonly used to describe the fuel composition in natural settings.

FUELBREAK. A wide strip or block of land on which the native vegetation has been permanently modified so that fires burning into it may be more readily suppressed. May or may not have firelines constructed in it prior to a fire occurrence.

FUELBREAK SYSTEM. A series of fuelbreaks creating a strategically located system.

FUEL LOADING. The amount of fuel present expressed quantitatively in terms of weight of fuel per unit area, usually expressed in tons per acre.

FUEL MOISTURE CONTENT (FMC). The quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212F.

FUEL REDUCTION. Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.

FUEL TYPE. An identifiable association of fuel elements of a distinctive plant species, form, size, arrangement, or other characteristics that will cause a predictable rate of fire spread or difficulty of control under specified weather conditions. Also referred to as fuel model.

FUELS MANAGEMENT. Manipulation or reduction of fuels to meet Forest protection and management objectives while preserving and enhancing environmental quality.

FUELS TREATMENT. The rearrangement or disposal of fuels to reduce the fire hazard.

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 fisherman under State or federal laws, codes, and regulations.

GENOTYPE. The genetic composition of an individual.

GIRDLING. The removal or killing of a ring of bark around the tree bole so that the flow of carbohydrates from crown to roots is blocked. The roots die and the whole tree is killed.

GROUND FIRE. Fire that consumes the organic material beneath the surface litter.

GROUND FUELS. All combustible fuels lying beneath the ground surface including deep duff, roots, rotten buried logs, peat and other woody debris.

GROUP SELECTION CUTTING. A regeneration method used to develop and maintain uneven-aged stands by removing small groups of trees to meet a predetermined goal of size distribution and species composition in remaining stands.

HABITAT. The sum total of environmental conditions of a specific place occupied by a wildlife species or a population of such species.

HABITAT COMPONENT. A simple part, or a relatively complex entity regarded as a part, or an area or type of environment in which an organism or biological population normally lives or occurs.

HABITAT CONNECTIVITY. Vegetative cover in sufficient quantity an arrangement to allow for the movement of lynx. Narrow forested mountain ridges or shrub-steppe plateaus may provide a linkage between more extensive areas of lynx habitat. Wooded riparian communities may provide travel cover across otherwise open valley floors between mountain ranges, or lower elevation ponderosa pine may link high elevation forests.

HABITAT DIVERSITY. The variation in types, sizes, and shapes of landscape elements or vegetation types.

HABITAT EFFECTIVENESS. The ability of an area to support a species (individual or population) based on a potential of 100%.

HABITAT TYPE. An aggregation of all land areas potentially capable of producing similar plant communities at the climax phase of succession.

HABITAT TYPE GROUP. A category of habitat types with similar ecological amplitudes and environmental conditions. Combined with information on stand conditions, habitat type groups can be used to develop silvicultural stand treatment priorities during the planning process.

HANDPILE and BURN. Fuels treatment method used to reduce hazardous fuels concentrations. Material is piled by hand. Piles are burned under conditions when the risk of fire spread is minimal.

HAZARD. A fuel complex defined by kind, arrangement, volume, condition, and location that form a special threat of ignition or suppression difficulty.

HIDING COVER. Vegetation capable of hiding 90% of a standing adult deer or elk at 200 feet or less. Includes some shrub stands and all forested stand conditions with adequate tree stem density or shrub layer to hide animals. In some cases, topographic features also can provide hiding cover.

HISTORICAL RANGE OF VARIABILITY. The limits of change in composition, structure, and processes of the biological and physical components of an ecosystem resulting from natural variations in the frequency, magnitude, and patterns of natural disturbance and ecological processes characteristic to an area before European settlement. Estimates are made for a specified period of time and include the effects of pre-European settlement human activities.

HYDROLOGIC FUNCTION. Soil hydrologic function is the ability of the soil to absorb, store, and transmit water, both vertically and horizontally. Changes in soil bulk density, soil structure, and ground cover can alter the hydrologic function of the soil.

IMMEASURABLE EFFECT. An effect that is too small to be detected and quantified by the applicable monitoring methodology.

IMPROVEMENT CUTTING. Removing trees of undesirable species, form, or condition from the main canopy in stands past the sapling stage to improve the composition and quality of the remaining stand.

INDIRECT EFFECTS. Secondary effects which occur in locations other than where the initial action occurs or significantly later in time.

INFISH (Inland Native Fish Strategy). On July 31, 1995, the Decision Notice for Inland Native Fish Strategy Environmental Assessment (INFISH) was signed. This strategy was developed to provide interim direction to protect habitat and populations of native resident fish until longer-term conservation strategies such as the Upper Columbia River Basin and federal recovery plans replaced it .

INITIAL ATTACK. An aggressive suppression action consistent with firefighter and public safety and values to be protected.

INSIGNIFICANT EFFECT (Endangered Species Act). Insignificant effects relate to the size of the impact and should never reach the scale where “take” occurs. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects. The term “negligible” is the same as “insignificant” (US Fish and Wildlife Service, 1998).

INSTREAM FLOWS. The minimum water volume (cubic feet/second) in each stream necessary to meet seasonal streamflow requirements for maintaining aquatic ecosystems, visual quality, recreational opportunities, and other uses.

INTERDISCIPLINARY TEAM (ID Team). A group of resource professionals with different expertise that collaborate to develop and evaluate resource management proposals. The team is assembled out of recognition that no one scientific discipline is sufficiently broad to adequately address resource management activities.

INTERMEDIATE HARVEST. Any harvest in a even-aged stand rotation which retains the major stand components and does not regenerate the stand.

INTERMEDIATE TREATMENT. Any treatment or tending designed to enhance growth, quality, vigor, and composition of the stand after establishment or regeneration and prior to final harvest. Thinning, salvage, and improvement cuts are all types of intermediate treatments.

INTERMITTENT STREAM. A stream which flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow. An intermittent stream shows clear evidence of annual scour. Gullies that washed out during flood events are not considered intermittent streams.

INVENTORIED ROADLESS AREA. 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 (RAREII) process, subsequent assessments, or Forest planning.

IRREVERSIBLE. A term that describes the loss of future options. Applies primarily to the effects of use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity that are renewable only over long periods of time.

IRRETRIEVABLE. A term that applies to the loss of production, harvest, or use of natural resources. For example, some or all of the timber production from an area is lost irretrievably while an area is serving as a winter sports site. The lost production is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume timber production.

ISSUE INDICATORS. Units of measure developed to facilitate comparison of major issues.

JACKPOT BURNING. A fuel reduction/site preparation treatment in which a continuous fuel bed is not present. Jackpot burning is conducted when fuels tend to be scattered with isolated accumulations distributed across the treatment unit.

LADDER FUELS. Fuels which provide vertical continuity between strata. Fire is able to carry from surface fuels by convection into the crowns with relative ease.

LANDSLIDE PRONE AREAS. Areas which have a tendency toward instability (e.g., very steep slopes on erosive soils, old landslides, and areas with springs).

LANDTYPE. A unit of land with similar designated soil, vegetation, geology, topography, climate, and drainage. The basis for mapping units in the land systems inventory.

LARGE WOODY DEBRIS (LWD). Branches and/or tree trunks located within a stream channel, originating from trees growing in or near the channel. Such material is considered "large" if it is of sufficient size that it remains at least partially submerged during all but major flood events. These materials are important in stream systems because they serve a variety of functions related to channel hydraulics and morphology. In mountain streams, LWD is very important because it provides excellent hiding cover and forms pools, which are the best fish habitats. Functions would include flow energy reduction due to friction and turbulence on downstream side of debris, and sediment storage on upstream side of materials. LWD is delivered to stream channels by decay and/or windfall of trees in close proximity.

LATE SUCCESSIONAL SPECIES. Species that are shade-tolerant and usually grow under early successional species. Examples of late successional tree species include subalpine fir, Douglas-fir, and grand fir.

LETHAL FIRES. A descriptor of fire response and effect in forested ecosystems of high-severity or severe fire that burns through the overstory and understory which consumes large woody surface fuels and may consume entire duff layer.

LITTER. The uppermost layer of loose debris composed of freshly fallen or slightly decomposed organic materials such as dead sticks, branches, twigs, and leaves or needles.

MANAGEMENT AREA. Geographic areas, not necessarily contiguous, which have common management direction, consistent with the Forest Plan allocations.

MANAGEMENT INDICATOR SPECIES (MIS). A fish or wildlife species selected for monitoring because their population changes are believed to indicate the effects of management activities on other species of selected major biological communities or on water quality.

MANAGEMENT IGNITED FIRE. See prescribed burning. (Obsolete terminology)

MASS EROSION (MASS WASTING). Downslope movement of a unit of soil. Mass erosion includes landslides, debris flows, debris avalanches, debris torrents, slumps, and soil creeping.

MATURE. On lands allocated for timber harvest, mature is defined as trees or stands that have reached rotation age, generally around 100 years. In the context of wildlife, refers to mature forest habitat with characteristics needed to provide habitat for species such as pine marten and pileated woodpecker (generally occurs around age 100).

MIDFLAME WINDS. The wind speed that affects a surface fire and is used in the mathematical fire behavior prediction models. It is usually less than the standard 20 foot wind speed.

MID-SERIAL. A middle transitory stage in forest succession.

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

MIXED LETHAL FIRES. A descriptor of fire response and effect in forested ecosystems of moderate fire, burns in surface fuels but may involve a tree understory. It consumes litter, upper duff, understory plants, and foliage on understory trees. Individuals and groups of overstory trees may torch out if fuel ladders exist. Enough of the stand's overstory survives to provide for the major portion of the regeneration that results.

MIXED SEVERITY. Units that have a combination of high, moderate, and low degrees of severity and may depend on fuel loading and placement.

MONITORING AND EVALUATION. The evaluation of Forest Plan management practices to determine how well objectives are being met, as well as the effects of those management practices on the land and environment.

MONTANA WILDERNESS STUDY ACT AREA. Those areas that are required to be studied for their wilderness suitability under the Montana Wilderness Study Act of 1977 (Public Law 95-150).

MULTI-STORY. A forest stand or plant community having more than two main canopy layers.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS). A legal limit on the level of atmospheric contamination. The level is established as the concentration limits needed to protect all of the public against adverse effects on public health and welfare, with an adequate safety margin. Primary standards are those related to health effects. Secondary standards are designed to protect the public welfare from effects such as visibility reduction, soiling, material damage and nuisances.

NATIONAL FOREST MANAGEMENT ACT (NFMA). A law passed in 1976 as amendments to the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of Regional and Forest Plans and the preparation of regulations to guide that development.

NATIVE SPECIES. Those plant and animal species indigenous to the planning or assessment area.

NEW ROAD CONSTRUCTION. Activity that results in the addition of Forest classified or temporary road miles.

NONATTAINMENT AREA. An area identified by an air quality regulatory agency through ambient air monitoring (and designated by the Environmental Protection), that presently exceed federal ambient air standards.

NONDESIGNATED ROADS AND TRAILS. Roads and trails that have not yet gone through site-specific travel planning to determine if they should be open, closed, or restricted to motorized vehicle use, or roads and trails that have gone through travel planning and determined that motorized use is not appropriate and is not allowed.

NONGAME SPECIES. All wild animals not subject to sport hunting, trapping, or fishing regulation.

NON-LETHAL FIRES. A descriptor of fire response and effect in forested ecosystems of low severity or cool fire. Has minimal impact on the site. It burns in surface fuels consuming only the litter, herbaceous fuels, foliage, and small twigs on woody undergrowth. Little heat travels downward through the duff.

NONSTOCKED. A stand of trees or aggregation of stands that have a stocking level below the minimum specified for meeting the prescribed management objectives.

NOXIOUS WEEDS. Rapidly spreading plants which can cause a variety of major ecological impacts to both agricultural and wild lands. A plant species designated as possessing one or more of the following characteristics:

aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the United States. According to the Federal Noxious Weed Act (PL 93-639) a noxious weed is one that causes disease or has other adverse effects on people or their environment and therefore is detrimental to the agriculture and commerce of the United States and to the public health.

OFF-HIGHWAY VEHICLE. Any motorized wheeled vehicle designed for cross-country travel over any type of terrain.

OFF-ROAD VEHICLE DESIGNATIONS (FS).

Open: Areas and trails on which all types of motorized vehicles may be operated off roads without restrictions.

Restricted: Areas and trails on which motorized vehicle use is restricted by times or specified in orders issued under the authority of 36 CFR 261 or by law.

Closed: Areas and trails on which all motorized vehicle use is prohibited, except by permit, under authority of 36 CFR 361 or by law.

OLD-GROWTH HABITAT. Old-growth is a distinct successional stage in the development of a timber stand that has special significance for wildlife, generally characterized by: (1) large diameter trees (often exceeding 19" dbh) with a relatively dense, often multilayered canopy; (2) the presence of large, standing dead or dying trees; (3) down and dead trees; (4) stand decadence associated with the presence of various fungi and heartrots; and (5) an average age often in excess of 200 years.

OPEN ROAD DENSITY. A measure of the amount of open roads per area of land, usually expressed as miles per square mile.

OVERMATURE. The condition that exists after a tree reaches maturity. The point in time a decline in vigor, health, and soundness begins.

OVERSTOCKED. Stands exceeding a prescribed standard or expected number of trees or basal area per acre.

OVERSTORY. The portion of trees in a forest which forms the uppermost layer of foliage.

PARTICULATE MATTER (PM). Any liquid or solid particles. "Total suspended particulates" as used in air quality are those particles suspended in or falling through the atmosphere. They generally range in size from 0.1 to 100 microns.

PATCH. An area of vegetation that is relatively homogeneous internally with respect to composition and successional stage and that differs from what surrounds it.

PEAK FLOW. The greatest flow attained during the melting of the winter snowpack.

PERENNIAL STREAMS. Streams that flow continuously throughout the year.

PHENOTYPE. The product of the interaction of the genes of an organism (genotype) with the environment

PRECOMMERCIAL THINNING. When trees are cut in an immature stand in order primarily to accelerate growth and also, by suitable selection, to improve the average form of trees that remain. Usually occurs in crowded stands to give remaining trees (a prescribed desired number of trees) a competitive advantage for full development.

PRESCRIBED BURNING OR PRESCRIBED FIRE. Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions which allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and spread required to attain planned and approved resource management objectives. Also called controlled burning or formerly referred to as management ignited prescribed fire. A written, approved prescribed fire plan must exist and, requirements of the National Environmental Policy Act must be met, prior to ignition. (NWCG terminology adopted 06/12/97)

PRESCRIBED NATURAL FIRE (PNF). A naturally occurring fire which is managed under prescribed conditions and allowed to "run its' course" without endangering public safety or significant resource losses. (Obsolete terminology)

PRESCRIPTION. Measurable criteria that guide selection of appropriate management response and actions. Prescription criteria may include safety, economic, public health, environmental, geographic, administrative, social or legal considerations. (NWCG terminology adopted 06/12/97)

PREVENTION OF SIGNIFICANT DETERIORATION (PSD). A program identified by the Clean Air Act to prevent air quality and visibility degradation and to remedy existing visibility problems. Areas of the country are grouped into three classes which are allowed certain degrees of pollution depending on their uses. National Parks and Wilderness areas meeting certain criteria are "Class I" or "clean areas" in that they have the smallest allowable increment of degradation..

PROJECT AREA. The geographic area defining the scope of this document and the alternatives proposed by it.

PROJECT FILE. An assemblage of documents that contains all the information developed or used during an environmental analysis. The Project File becomes part of the administrative record for judicial review in case of legal action.

PROPOSED ACTION. In terms of the National Environmental Policy Act, the project, activity, or action that a federal agency intends to implement or undertake and which is the subject of an environmental analysis.

PUBLIC INVOLVEMENT. A Forest Service process designed to broaden the information base upon which agency decisions are made by: (1) informing the public about Forest Service activities, plans, and decisions; and (2) encouraging public understanding about and participation in the planning processes which lead to final decision-making.

PUBLIC ISSUE (PUBLIC CONCERN). A subject or question of widespread public interest relating to management of the National Forest System.

RATE OF SPREAD (ROS). The relative activity of a fire in extending its horizontal dimensions over time. Expressed as a rate of increase of the total perimeter of the fire, as a rate of forward spread of the fire front, or as a rate of increase in area, depending upon the intended use of the information. Usually it represents the forward spread and is expressed in chains per hour or meters per hour for a specific period in the fire's history.

REACH. A segment of a stream that contains similar physical characteristics (e.g., gradient, width, stream bottom materials). In general, most reaches are between 1 mile and 3 miles in length.

REBURN. 1. Subsequent burning of an area in which fire has previously burned but has left flammable fuel that ignites when burning conditions are more favorable. 2. An area that has reburned.

RECORD OF DECISION. A concise public document disclosing the decision made following preparation of an EIS and the rationale used by the Deciding Officer to reach that decision.

RECREATION OPPORTUNITY SPECTRUM (ROS). A range of possible combinations or recreation activities, settings, and experience opportunities, from Primitive to Urban, arranged along a continuum. Classes used herein are:

Primitive (PRIM) - Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other area users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Motorized use within the area is not permitted.

Non-Motorized (SPNM) - Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. 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.

Semi-Primitive motorized (SPM) - Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other

area 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 permitted.

Roaded Natural Appearing (RNA) - Area is characterized by predominantly natural-appearing environment with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in the construction standards and design facilities.

Rural (R) - Area is characterized by substantially modified natural environment. Resource modification and utilization practices are primarily to enhance specific recreation activities and to retain vegetative cover and soil. Sights and sounds of man are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.

REGENERATION. The renewal of a tree crop, whether by natural or artificial means. This term may also refer to the crop (i.e., seedlings, saplings) itself.

REGENERATION HARVEST. Used in reference to clearcut, seedtree, and shelterwood harvest methods which remove an existing stand to prepare a site for regeneration.

RESERVE TREE. Trees retained after the regeneration period (pole-sized or larger) under the clearcutting, seed tree, or shelterwood methods.

RESIDUAL TREE. Trees remaining after any harvest.

RESISTANCE TO CONTROL. The relative difficulty of constructing and holding a fireline as affected by resistance to line construction and by fire behavior. Also called difficulty of control.

RESPONSIBLE OFFICIAL. The Forest Service line officer who has the authority and responsibility to oversee the planning process and make decisions on proposed actions. May also be referred to the Deciding Official.

RESTORATION. Treatments that restore vital soil functions to their inherent range of variability. It is recognized that treatments may need to occur over a period of years and may need to be maintained. Restoration treatments could include, but are not limited to, tillage, ripping, seeding, mulching, recontouring of temporary roads, and water barring.

RILL/GULLY. A channel or miniature valley cut by concentrated runoff, through which water commonly flows only during and immediately after heavy rains or during the melting of snow.

RIPARIAN AREAS/HABITATS. Land where the vegetation and microclimate are influenced by perennial and/or intermittent water.

RIPARIAN HABITAT CONSERVATION AREA (RHCA). As established by the Inland Native Fish Strategy, RHCAs are portions of watersheds where riparian-dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines. Examples of RHCAs include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems.

RIPARIAN MANAGEMENT OBJECTIVE (RMO). Objectives specified by the Inland Native Fish Strategy regarding how Riparian Habitat Conservation Areas are to be managed. These objectives apply to factors such as pool frequency, large woody debris, mean-maximum temperature, and mean wetted width-depth ratios.

ROAD. A motor vehicle travelway over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary.

Classified Roads. Roads wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long-term motor vehicle access, including State roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service.

ARTERIAL ROAD. A Forest road that provides service to a large land area and usually connects with other arterial roads or public highways.

COLLECTOR ROAD. A Forest road that serves smaller land areas than an arterial road, and usually connects Forest arterial roads to local Forest roads or terminal facilities.

LOCAL ROADS. A Forest road that connects terminal facilities with Forest collector, Forest arterial, or public highways. Usually Forest local roads are single purpose transportation facilities.

Temporary Roads. Roads 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.

Unclassified Roads. Roads on National Forest System lands that are not managed as part of the Forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization.

ROAD DENSITY. Number of miles of open road per square mile.

ROAD MAINTENANCE. The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

ROADED NATURAL RECREATION SETTING. A classification on the recreation opportunity spectrum where timber harvest or other surface use practices are evident. Motorized vehicles are permitted on all or parts of the road system.

ROSGEN CHANNEL CLASSIFICATION. A system of measure that utilizes various channel features to rate a stream or river into reproducible classes.

ROTATION. The planned number of years required to establish (including a regeneration period) and grow timber crops to a specified condition

RUTTING. Deformation of the soil under saturated conditions resulting in detrimental changes to soil structure and reduced porosity.

SALMONIDS. Members of the family of elongate soft-finned fishes Salmonidae - the trout and salmon family.

SANITATION HARVEST. The removal of dead, damaged, or susceptible trees, essentially to prevent the spread of pests or pathogens and to promote forest health.

SAWLOG. A log that meets minimum regional standards of diameter, length, and defect, intended for sawing.

SAWTIMBER. Trees containing at least one 8-foot piece with a 5.6 inch diameter inside bark at the small end and meeting Regional specification for defect percentage. Trees must be at least 8 inches in diameter at breast height for all species except lodgepole pine which will be 7 inches at breast height.

SCOPING. The procedures by which the Forest Service collects input in the environmental analysis process. This information is used to determine: the extent of analysis necessary; the range of actions, alternatives, and impacts to be addressed; the significant issues related to the proposed action; and the depth of environmental analysis, data, and task assignments needed.

SCORCH HEIGHT. Average heights of foliage browning caused by a fire. Also referred to as scorch line.

SEDIMENT. Any material carried in suspension by water, which will ultimately settle to the bottom. Sediment has two main sources: from the stream channel area itself and from disturbed sites.

SEDIMENT TRAP. Any natural or man-made feature in a stream that traps sediment.

SEEDLING AND SAPLINGS. Non-commercial-sized young trees, generally occurring in plantations.

SELECTION HARVEST. The periodic removal of trees, usually at 10-20 year intervals, individually or in small groups, from an uneven-aged forest in order to realize yield and establish regeneration of irregular constitution.

SENSITIVE SPECIES. Those species identified by the Regional Forester for which population viability is a concern as evidenced by significant current or predicted downward trends in (a) population numbers or density, or (b) habitat capability that would reduce a species' existing distribution.

SENSITIVITY LEVEL. A particular degree or measure of viewer interest in the scenic qualities of the landscape.

SERAL STAGE (Successional Stage). The series of plant community conditions that develop during ecological succession from bare ground (or major disturbance) to the climax stage. *Early seral stage* is a condition in which plants are present soon after a disturbance or at the beginning of a new successional process (seedling or saplings in a forest). Grass, herbs, or brush are abundant, diversity is high. A *mid-seral stage* is characterized in a forest setting has almost full crown closure in pole-to medium-sized trees. Understory vegetation and species diversity is less due to tree shading. A *late seral stage* is a condition with mature trees, often of old forest character. Tree growth has slowed, mortality has increased, understory forage is minimal, structural diversity may be high, and species diversity is generally less.

SIGNIFICANT. As used in NEPA, requires consideration of both context and intensity. Context means that the significance of an action must be analyzed in several contexts such as society as a whole, and the affected region, interests, and locality. Intensity refers to the severity of impacts (40 CFR 1508.27).

SILVICULTURE. The art and science of growing and tending forest vegetation (i.e., controlling the establishment, growth, composition, health, and quality of forests) for specific management goals on a sustainable basis.

SILVICULTURAL DIAGNOSIS. The processes of comparing existing stand conditions to a desired condition or “target stand”, and determining a need for treatment to bring the stand to the desired condition.

SILVICULTURAL EXAMINATION. The process used to gather the detailed in-place field data needed to determine management opportunities and direction for the timber resource within a small subdivision of a forest area such as a stand.

SILVICULTURAL SYSTEM. A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. The system name is based on the number of age classes (e.g., even-aged, two aged, uneven-aged) or the regeneration method (e.g., clearcutting, seed tree, shelterwood, selection) used.

SLASH. Debris left after logging, pruning, thinning or brush cutting. Includes logs, chunks, bark, branches, stumps, and broken understory trees or brush.

SLASH DISPOSAL. Treatment of slash to reduce the fire hazard or for other purposes.

SLASHING. An intermediary treatment conducted prior to piling, underburning, or jackpot burning. Slashing consists of felling and limbing small diameter vegetation to increase fuel consumption during burning or to facilitate piling.

SMOKE MANAGEMENT PLAN. A forecast issued daily during specific periods advising fire managers of atmospheric conditions with special emphasis on elements which will affect the dispersal of pollutants from a fire.

SMOLDERING FIRE. Behavior of a fire burning without flame and spreading very slowly.

SNAG. A dead standing tree.

SNAG-DEPENDENT WILDLIFE. Wildlife species that are dependent on standing dead trees for nesting or roosting habitat or for food.

SOIL FUNCTION. Primary soil functions are: (1) the sustenance of biological activity, diversity, and productivity, (2) soil hydrologic function, (3) filtering, buffering, immobilizing, and detoxifying organic materials, and (4) storing and cycling nutrients and other materials.

SOIL MASS MOVEMENT. The detachment and downslope movement of soil or the surface mantle in the form of debris slides/avalanches or deep-seated rotational failures or slumps.

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

SOIL QUALITY. The capacity of a specific soil function within its surroundings, support plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation.

SPECIAL-USE PERMIT. A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of national forest land for some special uses.

SPECIES. A unit of classification of plants and animals consisting of the largest and most inclusive array of sexually reproducing and cross-fertilizing individuals which share a common gene pool.

SPECIES VIABILITY. A species consisting of self-sustaining and interacting populations that are well distributed through the species' range. Self-sustaining populations are those that are sufficiently abundant and have sufficient genetic diversity to display the array of life history strategies and forms to provide high likelihood for their long-term persistence and adaptability over time.

SPYDERPILING. A mechanized fuel reduction treatment in which low ground pressure equipment (e.g., walking excavator is used to pile slash prior to burning).

STAGNATION. Refers to stand growth, implying that there is a failure to express dominance due to poor site conditions, and competition from other trees that limits development of the crowns suppressing individual tree growth and over all stand development. Usually diameter growth is severely limited and height growth still occurs, but slowly.

STAND. A community of trees or other vegetation uniform in composition, constitution, spatial arrangement, or condition to be distinguishable from adjacent communities.

STAND COMPOSITION. The representation of tree species in a forest stand, expressed by some measure of dominance (i.e., % volume, number, basal area).

STAND DENSITY. A measure of the degree of crowding of trees within a stocked area, commonly expressed by various growing-space ratios such as crown length to tree height, crown diameter to diameter at breast height, crown diameter to tree height, or stem spacing to tree height.

STAND-REPLACING FIRE. A fire that kills most or all of a stand of trees.

STAND STRUCTURE. The horizontal and vertical arrangement of the vegetation in a stand. The components of stand structure might include tree diameter, heights, crown layers, number of stems, shrubs, herbaceous understory, snags, and down logs.

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.

STATE IMPLEMENTATION PLANS. A plan required by the Clean Air Act and prepared by an Air Quality Regulatory Agency, which describes how the state will attain and maintain air quality so as to not violate National Air Ambient Air Quality Standards.

STOCKING. The degree to which trees occupy the land, measured by basal area and/or number of trees by size and spacing, compared with a stocking standard; that is, the basal area and/or number of trees required to fully utilize the land's growth potential.

STREAM. A natural watercourse of perceptible extent that has a generally sandy or rocky bottom or definite banks and that confines and conducts continuously or intermittently flowing water. "Perceptible extent" means that 50% of a 100-foot segment meets the definition of a stream (Montana Streamside Management Law).

STREAM CHANNEL STABILITY. A classification system that utilizes ocular estimates of various channel, bank, and riparian area features to evaluate channel health.

STREAM ORDER. It is often convenient to classify streams within a drainage basin by systematically defining the network of branches. Each nonbranching channel segment (smallest size) is designated a first-order stream. A stream which receives only first-order segments is termed a second-order stream, and so on. The order of a particular drainage basin is determined by the order of the principle or largest segment.

STRUCTURAL DIVERSITY. The variation in sizes and shapes of landscape elements, as well as diversity of pattern (i.e., heterogeneity).

SUBPOPULATION. A geographically distinct segment of a larger population. For example, the bull trout in Mill Creek are a subpopulation of the larger bull trout population in the entire Bitterroot River Drainage.

SUCCESSION. A series of dynamic changes in vegetation and in animal life over time as a result of one community replacing another leading to a climax stage.

SUCCESSIONAL STAGE. A stage or recognizable condition of a plant community which occurs during its development from bare ground to climax.

SUMMER RANGE. A range, usually at higher elevation, used by deer and elk during the summer; a summer range is usually much more extensive than a winter range.

SUPPRESSED. Refers to individual trees, which are growing very slowly; their crowns are entirely below the general level of the crown cover, receiving no direct light either from above or from the sides. They are common in stands that are considered overstocked.

SUPPRESSION (FIRE SUPPRESSION). Any act taken to extinguish, slow, or stop a fire beginning with its discovery. Examples of suppression activities include fireline construction, backfiring, and applying water or chemical fire retardants.

SURFACE EROSION. The detachment and transport of individual soil particles by wind, water, or gravity. Surface erosion is the loss of soil in a fairly uniform layer across the land surface (sheet erosion), in many small rills, or as larger gullies.

SURFACE FIRE. Fire that burns surface litter, other loose debris and small vegetation.

SURFACE FUELS. All materials lying on, or immediately above, the ground, including needles or leaves, duff, grass, small dead wood, downed logs, stumps, large limbs, low brush and reproduction.

SURFACE WIND. The wind measured 20 feet above the average top of the vegetation. Often a combination of local and general winds. Referred to as "20 Foot winds".

TARGET STAND. A description of individual forest stands that reflects the desired future attributes and conditions that have the potential to meet management objectives.

THERMAL COVER. Vegetation used by animals to modify the adverse effects of weather. A forest stand that is a least 40 feet in height with tree canopy cover of at least 70 percent provides thermal cover. These stand conditions are achieved in closed sapling-pole stands and by all older stands unless the canopy cover is reduced below 70 percent. Deciduous stands may serve as thermal cover in summer, but not in winter.

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

THIN-FROM ABOVE. The removal of trees from the dominant (high) crown classes to enhance growth of trees from lower crown classes.

THIN-FROM-BELOW. Removing trees from the lower crown classes to favor those in the upper crown classes.

THREATENED SPECIES. Any species of plant or animal which is likely to become endangered within the foreseeable future throughout all of a significant portion of its range.

TIMBER BASE. The lands within the Forest that are suitable for timber production.

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.

TIMBER STAND IMPROVEMENT. All noncommercial intermediate cuttings and other treatments to improve composition, condition, and volume growth of a timber stand.

TIMBER TYPES. A descriptive classification of forestland based on present occupancy of an area by tree species (i.e., lodgepole, mixed conifer, etc.). More appropriately called forest cover types, this category is further defined by the composition of its vegetation and/or environmental factors that influence its locality.

TORCHING. Fire burning principally as a surface fire that intermittently ignites the crowns of trees or shrubs as it advances.

TURBIDITY. An optical measure of how fine sediment inhibits light transmission in a given water sample due to scattering and absorption by suspended particles.

TWO-STORIED. A forest stand or plant community having two main canopy layers.

UNDERBURN. A fuel reduction/site preparation treatment in which surface fuels are ignited under controlled conditions and are allowed to burn with specified parameters. Underburns are usually conducted in areas where the fuel bed is fairly continuous and conditions are such that fire will spread in a predictable and consistent fashion. Underburning implies that there is a live overstory present and often a live understory as well. Prescriptions for underburning usually include an acceptable mortality level in the live component.

UNDERSTORY. Vegetation (e.g., trees or shrubs) growing under the canopy formed by taller trees.

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

UNIT. A treatment area that may undergo activity such as harvest, salvage, burning, or other purposes that is specified within boundaries.

UNMERCHANTABLE. Timber that does not meet minimum height and diameter specifications which would make it suitable for commercial sawtimber.

UNROADED AREAS. Any area without the presence of a classified road (i.e., a road at least 50 inches wide and constructed or maintained for vehicle use) of a size and configuration sufficient to protect the inherent characteristics associated with its roadless condition. Unroaded areas do not overlap with inventoried roadless areas.

UNSUITABLE RANGE. Land that should not be grazed by livestock because of unstable soils, steep topography, or inherent low potential for forage production.

VALUES AT RISK. Natural resources, improvements, or other values that may be jeopardized if a fire occurs.

VEGETATION RESPONSE UNITS (VRU). Groupings of habitat types, and identify forested areas with similar fire regimes or disturbance patterns and vegetation potential, including species composition and stand structure.

VERTICAL DIVERSITY. The diversity in an area that results from the complexity of the above ground structure of the vegetation; the more tiers of vegetation or the more diverse the species makeup is, the higher the degree of vertical diversity.

VIABLE POPULATION. A wildlife population of sufficient size to maintain its existence over time in spite of normal fluctuations in population levels.

VISUAL QUALITY OBJECTIVE (VQO). A system of indicating the potential expectations of the visual resource by considering the frequency an area is viewed and the type of landscape. VQOs are listed below:

Maximum Modification: Human activities may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.

Modification: Human activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as natural occurrence when viewed in foreground or middleground.

Partial Retention: Human activity may be evident but must remain subordinate to the characteristic landscape.

Retention: Human's activities are not evident to the casual Forest visitor.

Preservation: Provides for ecological change only.

Variety Class: Diversity of the landscape character.

Sensitivity Level: A particular degree or measure of viewer interest in the scenic qualities of the landscape.

VISUAL RESOURCE. The composite of landforms, water features, vegetative patterns, and cultural features which create the visual environment.

WALLOW. A depression, pool of water, or wet area produced or utilized by elk or moose during the breeding season.

WATER YIELD. The measured output of the Forest's streams.

WETLANDS. Those areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include marshes, bogs, sloughs, potholes, river overflows, mud flats, wet meadows, seeps, and springs.

WHOLE TREE YARDING. During timber harvesting, entire trees are yarded to the landing. Tops, limbs, and other unmerchantable material is piled for later treatment or utilization at the landing site.

WILDERNESS. All lands included in the National Wilderness Preservation System by public law; generally defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation.

WILDLAND-URBAN INTERFACE (WUI). Includes those areas of resident human populations at imminent risk from wildland fire, and human developments having special significance. These areas include developments and structures that if destroyed by fire, would result in hardships to individuals and communities. These areas encompass not only the sites themselves but also the continuous slopes and fuels that lead directly to the sites, regardless of the distance involved.

WINTER RANGE. A range, usually at lower elevation, used by migratory deer and elk during the winter months. It is usually better defined and smaller than summer range.

WOODY DEBRIS RECRUITMENT. The process of trees naturally falling over and landing in stream channels.

YEAR-ROUND CLOSURE. Gate, earthen barrier, or sign closing a road or area all year long. These areas are sometimes open during harvest or other land management activities.

YARDING. A method of bringing logs to a roadside or landing, for truck transport. Methods include forms of skyline cabling, ground-based skidding, balloon, and helicopter.

YARDING UNMERCHANTABLE MATERIAL (YUM). A fuel reduction treatment in which all unmerchantable material is skidded to the landing for later treatment or utilization.

ABBREVIATIONS AND ACRONYMS

ALT	Alternative
ATV	All-terrain Vehicle, same as OHV and ORV
BA	Biological Assessment
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CFS	Cubic Feet Per Second
CWA	Clean Water Act
CWD	Coarse Woody Debris
DBH	Diameter at Breast Height (measured at a point 4.5' off the ground)
ECA	Equivalent Clearcut Acres
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FDR	Forest Development Road
FP	Forest Plan
FSH	Forest Service Handbook
FSM	Forest Service Manual
GIS	Geographical Information System
IDT	Interdisciplinary Team
INFISH	Inland Native Fish Strategy
IRA	Inventoried Roadless Area
LWD	Large Woody Debris
MA	Management Area
MIS	Management Indicator Species
MBF	Thousand Board Feet
MFWP	Montana Fish Wildlife and Parks
MMBF	Million Board Feet
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NAAQS	National Ambient Air Quality Standards
NFMA	National Forest Management Act
OHV	Off-highway vehicle
ORV	Off-road vehicle
PNV	Present Net Value
RHCA	Riparian Habitat Conservation Area
RMO	Riparian Management Objective
ROS	Recreation Opportunity Spectrum
SHPO	State Historic Preservation Officer
UCRB	Upper Columbia River Basin
USFS	United States Forest Service
USFWS	USDI-Fish & Wildlife Service
VQO	Visual Quality Objectives
VRU	Vegetation Response Unit