

GLOSSARY/ACRONYMS

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.

Affected Environment- The natural, physical, and human-related environment that is sensitive to changes due to proposed activities

Airshed - Units in which Basic geographic air quality is managed.

Allotment - See Grazing Allotment

Alternative - A combination of management prescriptions applied in specific amounts and locations to achieve a desired management emphasis as expressed in goals and objectives. One of the several policies, plans or projects, proposed for decision-making. An alternative need not substitute for another in all respects.

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 extend beyond the boundaries of the proposed action.

Aquatic – Biological and physical attributes and their interaction to water.

Bark Beetle Hazard – The degree of vulnerability of a stand to a particular bark beetle.

Benefit-Cost Ratio - Measure of economic efficiency, computed by dividing total discounted primary benefits by total discounted economic costs.

Benefit (Value) - Inclusive terms to quantify the results of a proposed activity, project or program expressed in monetary or non-monetary terms.

Best Management Practices (BMPs) - The set of practices in the Forest Plan which, when applied during implementation of a project, ensures that water related beneficial uses are protected and that State water quality standards are met. BMP's can take several forms. State regulation or memoranda of understanding between the Forest Service and the States define some. Others are defined by the Forest interdisciplinary planning team for application Forest-wide. Both of these kinds of BMP's are included in the Forest Plan as Forest-wide Standards. A third kind is identified by the interdisciplinary team for application to specific management areas; these are included as Management Area Standards in the appropriate management areas. A fourth kind, project level BMP's, are based on site specific evaluation and represent the most effective and practicable means of accomplishing the water quality and other goals of the specific area involved in the project. These project level BMP's can either supplement or replace the Forest Plan standards for specific projects.

Big Game - Those species of large mammals normally managed as a sport hunting resource.

Big Game Winter Range - The area available to and used by big game through the winter season.

Biodiversity - "The variety and variability among living organisms and the ecological complexes in which they occur (OTA 1987)". "The variety of biotic communities, species and genes, and their interactions with ecological processes and functions, within ecosystems and across landscapes" (Hann 1990).

Biological Assessment (BA) - "A 'biological evaluation' conducted for major Federal construction projects requiring an environmental impact statement, in accordance with legal requirements under section 7 of the Endangered Species Act (16 USC 1536(c)). The purpose of the assessment and resulting document is to determine whether the proposed action is likely to affect an endangered, threatened, or proposed species" (FSM 2670.5.2).

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Biological Evaluation (BE) - "A documented Forest Service review of Forest Service programs or activities in sufficient detail to determine how an action or proposed action may affect any threatened, endangered, proposed, or sensitive species" (FSM 2670.5.3).

Biomass – The sum total of living plants and animals above and below the ground.

Board Foot (BF) - A unit of measurement represented by a board one foot square and one inch thick. Timber volumes are often expressed in terms of thousands of board feet (MBF) or millions of board feet (MMBF).

Burn Intensity – The effect of fire on the vegetative component relating to the proportion of vegetation blackened or consumed.

Burn Severity – The effect of fire on the ecosystem primarily concerned with the soils and usually only loosely correlated to burn intensity.

Canopy - The more or less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth.

Capability - The potential of an area of land and/or water to produce resources, supply goods and services, and allow resource uses under a specified set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils and geology, as well as the application of management practices, such as silviculture or protection from fires, insects, and disease.

Cavity - A hollow in a tree that is used by birds or mammals for roosting and reproduction.

Cavity Nesters – Wildlife species that utilize cavities for nesting purposes.

Closed Road – A national forest road or segment, which is restricted from certain types of use during certain seasons of the year.

Closure - The administrative order that does not allow specified uses in designated areas or on Forest development roads or trails.

Coarse Woody Debris – Sound and rotting dead woody plant material standing, or fallen, usually greater than 3" in diameter.

Code of Federal Regulations (CFR) – The official, legal tabulation of regulations directing government activities.

Coefficient (Cost, Value, Yield) - The numeric units used to include costs, values, and outputs in the analysis model used in the formulation of the Forest Plan.

Commercial Forest Land - Land that is producing, or is capable of producing, crops of industrial wood and (1) has not been withdrawn by Congress, the Secretary of Agriculture or the Chief of the Forest Service (suitable timber lands); (2) where existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity or watershed conditions; and (3) where existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be obtained within years after final harvesting.

Community – A group of one or more populations of plants and animals in a common spatial arrangement, an ecological term used to include groups of various sizes and degrees of integration.

Compaction – A physical change in soil properties from compression, vibration, or shearing that increases bulk soil density and decreases porosity, infiltration, and permeability.

Compartments – A geographic area delineated by watershed drainage for management planning purposes.

Conifer – Any group of needle and cone-bearing evergreen trees.

Contain (Fires) – Keeping the fire within the established boundaries under prevailing conditions and reasonable constraints.

Corridors - Travel ways, often forested, which are required by some species for movement and transfer of genetic material.

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 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.

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

Crown - The upper part of a tree or other woody plant, carrying the main branch and foliage, and surmounting at the crown base a more or less clean stem.

Crown Fire - A fire burning into the crowns of the vegetation, generally associated with an intense understory fire.

Cumulative Effects - The effects that “result from spatial (geographic) and temporal (time) crowding of environmental perturbations” (Council of Environmental Quality, 1997). It is recognized that effects of human activities will accumulate when a second perturbation occurs at a site before the ecosystem can fully rebound from the effect of the first perturbation. Cumulative effects can be either positive or negative. Cumulative effects are analyzed, therefore, by studying the incremental impact of an action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taken place over a period of time (40 DFR 1508.7).

Deadfall - Dead trees that have fallen.

Deciding Officer - The Forest Service employee who has the authority to select and/or carry out a specific planning action.

Decommissioning - Activities that result in the stabilization and restoration of unneeded roads to a more natural state (Federal Register, Jan 12, 2001).

Deferred Maintenance - Maintenance activities, which can be delayed without critical loss of facility serviceability until such time as the work can be economically or efficiently performed.

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

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.

Detrimental Soil Condition - The condition where established soil quality standards are not met and the result is a significant change in soil quality.

Diameter Breast Height (DBH) - The diameter of a tree measured four and one-half feet above the ground.

Direct Effects - Effects on the environment, which occur at the same time and place as the initial cause or action.

Displacement - Lack of security causes wildlife to be displaced (or move out of) their normal use areas. The removal and movement of soil from one place to another, usually by mechanical

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forces, such as dozer blades, repeated vehicle traffic, or yarding of logs is considered to be soil displacement.

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

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

Duff – An organic surface soil layer, below the ground cover, in which the original form of plant and animal matter cannot be identified with the unaided eye.

Economic Efficiency – The usefulness of inputs (costs) to produce outputs (benefits) and effects when all costs and benefits that can be identified and valued are included in the computations. Economic efficiency is usually measured using present net value, though the use of benefit-cost ratios and rates of return may be appropriate.

Ecosystem - A complete, interacting system of organisms considered together with their environment (for example; a marsh, a watershed, or a lake).

Effects - Physical, biological, social and economic results (expected or experienced) resulting from implementation of an action. Effects can be direct, indirect and cumulative.

Elk Security - "The protection inherent in any situation that allows elk to remain in a defined area despite an increase in stress or disturbance associated with the hunting season or other human activities" (Lyon and Christensen 1990).

Endangered Species - Any species, plant or animal, which is in danger of extinction throughout all or a significant portion of its' range. Endangered species are identified by the Secretary of the Interior in accordance with the 1973 Endangered Species Act. [ESA Section 3(6)]

Environmental Analysis - An analysis of alternative actions and their predictable short and long-term environmental effects which include physical, biological, economic, social, and environmental design factors and their interactions.

Environmental Assessment - A concise public document for which a Federal agency is responsible that serves to:

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.
2. Aid an agency's compliance with the National Environmental Policy Act when no environmental impact statement is necessary.
3. Facilitate preparation of an environmental impact statement when one is necessary.

Environmental Impact Statement, Draft (DEIS) - A detailed written statement as required by Sec. 102(2)(C) of the National Environmental Policy Act.

Environmental Impact Statement, Final (FEIS) - The final version of the public document required by NEPA. (See above)

Epidemic – The populations of plants, animals, and diseases that build up, often rapidly to highly abnormal and generally injurious levels

Erosion - The group of processes whereby earthy or rocky material is worn away by natural sources such as wind, water or ice and removed from any part of the earth's surface.

ESA – The Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 et seq.

Existing Visual Condition (EVC) - A measure of the level of disturbance to the visual resource, expressed in acres. The different classes are defined as follows:

Untouched: Those areas of significant size in which only ecological change has taken place, with the exception of trail construction.

Unnoticed: Areas where changes in the landscape are not visually evident to the average person unless pointed out.

Minor Disturbance: Changes in the landscape that are generally noticed by the average person, but they do not attract attention. The natural appearance of the landscape still remains dominant. Included in this category are older roads that have "healed" and logged areas that have revegetated to a natural appearing state.

Disturbed: Areas where changes are easily noticed by the average person and may attract some attention.

Major Disturbance: Includes strong changes that would be obvious to anyone. These changes stand out as a dominant impression on the landscape, yet they are shaped so they might resemble natural patterns or have recovered to a point where they appear somewhat natural.

Drastic Disturbance: Areas in glaring contrast to the natural appearance: rehabilitation may be necessary.

Even-Aged Management - The application of a combination of actions that result in the creation of stands in which trees of essentially the same age grow together. Managed even-aged Forests are characterized by a distribution of the stands of varying ages (and, therefore, tree sizes) throughout the Forest area. The difference in ages between trees forming the main canopy level of the stand does not usually exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Cutting methods include clearcutting, shelterwood cutting, and seed tree cutting.

Fine Fuels – Fast-drying fuels, generally with a comparatively high surface area-to-volume ratio, which are less than ¼ inch in diameter and have a lag time of one hour or less. When dry, these fuels readily ignite and are rapidly consumed by fire.

Fines - Sediments less than .25 inches in diameter.

Fire Behavior – The manner in which a fire reacts to the influences of fuel, weather, and topography.

Fire Hazard – The rapid ignition of fuels dependent on arrangement, volume, and conditions to sustain fire.

Fish Habitat – The place where a population of fish species lives and its surroundings; providing 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.

Forage - All browse and nonwoody plants available to livestock or wildlife for feed.

Forest Plan (FP) - Gallatin National Forest Land and Resource Management Plan, September 1987

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 include areas for crops, improved pasture, residential, or administrative areas, improved constructed roads of any width, and adjoining road clearing and powerline clearing of any width.

Forest Supervisor - The official responsible for administering the National Forest System lands in a Forest Service Administrative unit, which may consist of one or more National Forests or all the National Forests within a State.

Forest System Road- Also called Forest Development Road. A road wholly or partly within or adjacent to and serving the National Forest System and which is necessary for the protection, administration and utilization of the National Forest System and the use and development of its resources.

Forest Transportation Plan – An inventory, description, display, and other associated information that are important to the management and use of National Forest System lands or to the development and use of resources upon which communities within or adjacent to National Forest System lands.

Forest-Wide Management Guidelines - An indication or outline of policy or conduct dealing with the basic management of the Forest. Forest-wide management guidelines apply to all areas of the Forest regardless of the other management prescriptions applied.

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

Fuel Break - A zone in which fuel quantity has been reduced or altered to provide a position for suppression forces to make a stand against wildfire. Fuel breaks are designated or constructed before the outbreak of a fire. Fuel breaks may consist of one or a combination of the following: Natural barriers, constructed fuel breaks, man-made barriers.

Fuels - Include both living plants; dead, woody vegetative materials; and other vegetative materials which are capable of burning.

Fuels Management - Manipulation or reduction of fuels to meet Forest protection and management objectives while preserving and enhancing environmental quality.

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

Fuels Treatment - The rearrangement or disposal of natural or activity fuels.

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.

Goshawk - A Management Indicator Species in the Gallatin National Forest Plan. The goshawk was chosen as an indicator old growth dependent species, dry Douglas fir sites (FP pg. II-19).

Grazing Allotment - A designated area of land available for livestock grazing upon which a specified number and kind of livestock may be grazed under a range allotment management plan. It is the basic land unit used to facilitate management of the range resource on National Forest System and associated lands administered by the Forest Service.

Grizzly Bear Recovery Zone - The area comprised of Management Situations 1 and 2 for grizzly bear as decided by an interagency team. The Bear Creek drainage is within the Recovery Zone.

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

Habitat Effectiveness - The percentage of available habitat that is usable by elk during the non-hunting season (Lyon and Christensen 1990)

Habitat Effectiveness Index (HEI) - A calculation of how habitat is influenced by the presence of roads and cover. The HEI ranges between zero and one; with one representing 100% HEI (or 100% habitat availability); 0.7 mile of road per square mile is equal to 70 percent HEI.

Habitat Type - An aggregation of all land areas potentially capable of producing similar plant communities at climax.

Heritage Resources - The physical remains of human activity (artifacts, ruins, burial mounds, petroglyphs, etc.) and conceptual content or context (as a setting for legendary, historic, or prehistoric events, as a sacred area of native peoples, etc.) of an area of prehistoric or historic occupation.

Hiding Cover - "Vegetation capable of hiding 90 percent of an adult elk from the view of a human at a distance equal to or less than 200 feet" (Lyon and Christensen 1990). A component of security.

Indirect Effects - Secondary effects which occur in locations other than the initial action or significantly later in time.

INFISH - The Inland Native Fish Strategy Environmental Assessment signed in 1995, developed to provide interim direction to protect habitat and populations of native resident fish until longer-term conservation strategies replace it.

Interdisciplinary (ID) Team - A group of individuals with different training assembled to solve a problem or perform a task. The team is assembled out of recognition that no one scientific discipline is sufficiently broad to adequately solve the problem. Through interaction, participants bring different points of view to bear on the problem.

Inventoried Roadless Area - An area identified and classified as roadless. These areas were identified during the Roadless Area Review and Evaluation (RARE II). See *Roadless Area*.

Issue - A point of discussion, debate, or dispute about environmental effects. An issue is the focus of analysis related to the environmental effects of a proposed action.

Issue Indicators – Units of measure developed to facilitate comparison of major issues.

Large Woody Debris (LWD) – Branches and/or tree trunks located within a stream channel of sufficient size to remain partially submerged during all but major flood events. These materials are important to stream systems serving in a variety of functions related to channel hydraulics and morphology. Large woody debris is delivered to stream channels by means of decay or windfall of trees in close proximity.

Lethal Fires – A descriptor of fire response of high-severity or severe that burns through the overstory and understory, which consumes large woody surface fuels and may consume the entire duff layer.

Lop And Scatter - A term used in treating fuels during and after harvesting is complete where the unmerchantable portions of the tree (usually the smaller top of a tree and the limbs) are cut off and scattered about to reduce slash concentrations.

Lynx Analysis Unit (LAU) – The LAU is a project analysis unit upon which direct, indirect, and cumulative effects analyses are performed. It is an area of at least the size used by an individual lynx, about 25-50 square miles.

Management Area – Geographic areas, not necessarily contiguous, which have common management direction, consistent with Forest Plan Direction.

Management Indicator Species - Species identified in a planning process that are used to monitor the effects of planned management activities on viable populations of wildlife and fish including those that are socially or economically important.

Mature Timber - Individual trees or stands of trees that in general are at their maximum rate in terms of the physiological processes expressed as height, diameter, and volume growth.

Mistletoe – Small, leafless, parasitic plants dependent on conifer hosts for growth and survival.

Mitigate - To lessen the severity.

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

Mixed Severity – Units that have a combination of high, moderate, and low degree of severity, and may depend on fuel loading and placement.

Modification (VQO) - See Visual Quality Objective (VQO).

Monitoring And Evaluation - The periodic evaluation on a sample basis of Forest Plan management practices to determine how well objectives have been met and how closely management standards have been applied.

Moose Winter Range - The area where moose generally winter.

National Environmental Policy Act (NEPA) - An act which encourages productive and enjoyable harmony between man and his environment; promotes efforts to prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; enriches the understanding of the ecological systems and natural resources important to the Nation; and establishes a Council on Environmental Quality.

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.

National Forest System - All national forest lands reserved or withdrawn from the public domain of the United States, all national forest lands acquired through purchase, exchange, donation, or other means, the national grasslands and land utilization projects administered under Title III.

Natural Regeneration - Regeneration, which occurs due to germination of naturally occurring seed.

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 Service classified or temporary road miles

No Action Alternative - The management direction, activities, outputs, and effects most likely to exist in the future if the current plan would continue unchanged.

No Effect – The appropriate conclusion when a proposed action will not affect a listed species or designated critical habitat.

Nongame Species – All wild animals not subject to sport hunting, trapping, or fishing regulations.

Noxious Weed – A plant species designated by Federal or State law as generally 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.

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

Obliteration – A form of decommissioning that usually means recontouring.

Off-Road Vehicle (ORV) - Any vehicle capable of being operated off an established road or trail, e.g., motorbikes, four-wheel drives, and snowmobiles.

Old Growth - A multistoried stand that is past full maturity and showing a high degree of decadence--the last stage in forest succession.

Old growth is defined as having several characteristics:

1. Size of overstory trees should be 9 inches DBH for lodgepole pine, 14 inches DBH for Douglas fir, and 14 inches DBH for spruce/alpine fir. There should be at least 10 large trees per acre.
2. Crown closure--there should generally be 10-40 percent crown closure of the overstory.
3. Dead and down--this component should be at least 15 tons per acre of 3-inch diameter or larger material.
4. Snags--on the average, one or more snags per acre, at least 9 inches DBH for lodge pole and 14 inches DBH for Douglas fir or spruce/alpine fir.
5. Understory--a minimum of 200 trees per acre greater than 5 feet tall less than 5 inches DBH, with understory and overstory crown closure combined exceeding 70 percent
6. Distribution--areas selected for management, as old growth should be elevationally and spatially distributed. This definition represents an optimum condition. However, all these

characteristics do not necessarily have to be present for a stand of timber to provide adequate old growth habitat. This definition should serve as a guideline for identifying old growth stands on the project level.

Open Road Density - "A measure of access that addresses all types of roads and trails used by motorized vehicles and equates these to a common standard. Frequently used in the computation of Habitat Effectiveness" (Lyon and Christensen 1990). In this document, miles of road per square mile.

Overstory - The portion of the trees that form the uppermost canopy layer in a forest of more than one story.

Overstory Removal - The removal, usually for silvicultural purposes, of overstory trees from a stand.

Partial Retention (VQO) - See Visual Quality Objective (VQO).

Perennial Streams - Streams that flow continuously throughout most years.

Pine Marten - A Management Indicator Species in the Gallatin National Forest Plan. The pine marten was chosen as an indicator old growth dependent species, moist spruce sites (FP pg. II-19).

Pole Timber - Live trees of a commercial species at least five inches in diameter at breast height but smaller than saw timber size, and of good form and vigor.

Prescribed Burning - The intentional application of fire to wildland fuels in either their natural or modified state under such conditions as allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to further certain planned objectives (i.e., silviculture, wildlife management, etc.).

Prescribed Fire - A fire burning under specified conditions which will accomplish planned objectives in strict compliance with an approved plan and the conditions under which the burning takes place and the expected results are specific, predictable, and measurable.

Present Net Value (PNV) - The difference between the total discounted value of all outputs to which monetary values or established market prices are assigned and the total discounted costs for management.

Present Net Worth - The discounted value of price times quantity less cost.

Primitive Recreation Setting - A classification of the recreation opportunity spectrum that characterizes an essentially unmodified natural environment of a size or remoteness that provides significant opportunity for isolation from the signs and sounds of man and a feeling of vastness of scale. Visitors have opportunity to be part of the natural environment, encounter a high degree of challenge and pursue a maximum of outdoor skills but have minimum opportunity of social interaction.

Project Area - The geographic area defining the scope of this document and the alternatives proposed for 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.

Project-Specific Amendment - An amendment to the Forest Plan for a specific area or project. The Mill/Emigrant EIS included a site-specific amendment for HEI.

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.

Proposed Species - Any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under Section 4 of the ESA.

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.

Range Allotment – See grazing allotment.

Ranger District - Administrative subdivision of the Forest supervised by a District Ranger.

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 and 3 miles in length.

Reburn – Re-ignition and burning of incompletely burned fuels.

Recontour – A form of obliteration where the road prism is eliminated by pulling back fill material to re-establish the natural sideslope.

Recreation Opportunities - The combination of recreation settings, activities, and experience provided by the Forest.

Recreation Opportunity Spectrum (ROS) - Provides a framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences have been arranged along a continuum or spectrum divided into six classes:

Urban - Urban ROS class settings are characterized by high levels of human activity and concentrated development, including recreational development. Large numbers of users can be expected, both on-site and in nearby areas. In an urban setting, users will likely find many forms of regulation ranging from signs to physical barriers. The opportunity for challenge and risk is low and relatively unimportant. Man-made structures and green, open spaces are common.

Rural - The Rural class setting is characterized by moderate to high levels of use on developed sites, roads, trails, and water surfaces. Contact with other users is lower away from these areas. Controls such as signs and barriers exist but to a lesser degree than in the urban setting and they tend to be in harmony with the man-made environment. (Examples of the Urban and Rural settings include cities, villages, farms, ranches, parks, and campgrounds near heavily populated areas).

Roaded Natural Appearing - This setting has moderate levels of human activities and structures. Regeneration and controls are noticeable but tend to blend with the natural environment. There is an equal probability of encountering other users and experiencing isolation from humans. Opportunities for both motorized and non-motorized forms of recreation are possible. (Examples of the Roaded Natural Appearing setting include improved highways, developed campgrounds, small resorts, ski areas, livestock grazing, and timber harvesting operations).

Roaded Modified - A distinct subclass of setting features exists within the Roaded Natural class. This subclass occurs where human modification is locally dominant or codominant with a natural-appearing landscape, much like the rural setting. However, the recreation opportunities provided are significantly different from the rural setting. For example, although numerous, highly improved roads might exist in this subclass, there is a sense of remoteness because of the distances from major travelways. In addition, the density of recreation use is often low compared to the rural class. Also, users have the opportunity for exploration and to use both on-road recreation vehicles and ORV's. Camping is not confined to developed campsites, so users have considerable autonomy in choosing sites and using equipment.

Semi-primitive - Both the Semi-Primitive Motorized and Semi-Primitive Non-Motorized classes are characterized by predominately natural or natural-appearing landscapes. The size of these areas gives a strong feeling of remoteness from the more heavily used and developed areas. Within these settings, there are ample opportunities to practice wildland skills and to achieve feelings of self-reliance.

The most significant difference between the semi-primitive motorized, and non-motorized settings is the presence of absence of motorized vehicles. In the non-motorized settings, the presence of roads is tolerated, provided they are closed to public use, they are used infrequently for resource protection and management, and the road standards and locations are visually appropriate for the physical setting. In many cases, old roads are acceptable as non-motorized travelways so long as they do not reflect misuse or poor stewardship of the land. These roads would have motorized use in the semi-primitive motorized class, especially by ORVs. (An example of a semi-primitive non-motorized setting would be a backcountry area or trail where few other visitors are encountered and motorized use is prohibited. A semi-primitive motorized setting would likewise have few encounters with other users but motorized use may occur).

Primitive - The Primitive settings are characterized by essentially unmodified natural environments and their size and configuration assure remoteness from the sights and sounds of human activity. The use of motorized vehicles and equipment is not permitted except in extreme emergencies, such as preserving a life or the resource. In the Primitive class, the user is forced to be self-reliant and expects low levels of user density. In the semi-primitive and primitive settings, the use of the visual management system plays a critical role in assessing and maintaining conditions, which support the naturalness of the area. For example, it may not be enough to forbid motorized use in the non-motorized ROS classes. The character of any roads or other structures, such as buildings, bridges, or fences, must also be in harmony with the natural landscape. (The Lee Metcalf Wilderness is an example of the Primitive setting).

Reforestation - The renewal of forest cover by seeding, planting, and natural means.

Regeneration - The process where trees reproduce themselves by either artificial (hand planting of small seedlings) or natural (where trees reproduce themselves by seed) means. Often the term means the young trees themselves. A successfully regenerated stand occurs when seedlings have survived two growing seasons if artificial regeneration has occurred or three growing seasons if natural regeneration occurred on 90 percent of the reforestable land at prescribed stocking levels determined by the District silviculturist.

Regional Forester - The official responsible for administering a single Region of the Forest Service.

Responsible Line Officer - The Forest Service employee who has the authority to select and/or carry out a specific planning action.

Responsiveness Summary - A document whereby the Forest Service directly responds to various comments offered by the public.

Restoration - The process of restoring site conditions as they were before the land disturbance (NRCS Resource Conservation Glossary). It is recognized that these treatments may need to occur over a period of years and may need to be maintained. Restorations could include but is not limited to tillage, ripping, seeding, mulching, recontouring of temporary roads, and water barring.

Restriction - A restriction precludes use of the route or area during a specified time period (seasonal or yearlong) by either type of vehicle (such as log trucks) or type of traffic (such as motorized or public).

Retention (VQO) - See Visual Quality Objectives (VQO).

Riparian Areas - Areas with distinctive resource values and characteristics that are comprised of an aquatic ecosystem and adjacent upland areas that have direct relationships with the aquatic system. This is considered the horizontal distance of approximately 100 feet from the normal high water line of a stream channel, or from the shoreline of a standing body of water.

Ripping (Roads) – A form of obliteration; a method of aerating the surface and sub-surface material of a road, landing, and/or skid trail to allow infiltration by tilling the soil with a piece of machinery equipped with ripper bars.

Road Closure – A route or area is closed to all types of traffic, including foot traffic. This option is seldom used except in emergencies or special situations such as protection of an eagle nesting site (ATM guide – R1 – 1997). Page 5 in the ATM guide explains road closure signage and pages 14-16 discuss how closure is used in the CFRS.

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.

Road Management Objective – Defines the intended purpose of an individual road based on management area direction and access management objectives. Road management objectives contain design criteria, operation criteria, and maintenance criteria. (FSM 7721.31 and FSH 7709.55—33)

Roadless Area - A National Forest area which (1) is larger than 5000 acres, or if smaller than 5000 acres, is contiguous to a designated wilderness or primitive area; (2) contains no roads; and (3) has been inventoried by the Forest Service for possible inclusion in the wilderness preservation 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 between the formation and generation of trees and their harvest at a specified stage of maturity.

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

Salvage Harvest - The cutting of trees that are dead, dying, or deteriorating (e.g., because they are overmature or materially damaged by fire, wind, insects, fungi, or other injurious agencies) before they lose their commercial value.

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 the Regional specifications for freedom from defect. Softwood trees must be at least eight inches in diameter at breast height for all species except Lodgepole Pine, which will be seven inches at breast height.

Scoping - An early and open process designed to identify the environmental issues and significant factors to be addressed in the analysis process. During this process the Forest Service collects public input, which is used to determine the extent of analysis necessary, the range of alternatives needed, impacts to be addressed, and the significant issues related to the proposed action.

Security Area (Lyon and Christensen 1990) - "Any area because of its geography, topography, vegetation, or a combination, that will hold elk during periods of stress".

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

Seedling/Sapling - A size category for forest stands in which trees less than five inches in diameter are the predominant vegetation.

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 population densities or habitat capability.

Setting - Opportunity spectrum that characterizes a predominately natural or natural appearing environment of a 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.

Seral - That group of species that occupy a site during early to mid successional stages of vegetative development. These species are often sun loving and require bare mineral soil for successful germination.

Serotinous – Applies to the nature of lodgepole pine cones, which are closed until heated during fire, at which time they open so the seed can be released.

Shading (Planting) - Providing natural or artificial shade for seedlings. Shading is used to prevent sun damage to seedlings. Natural shade may be logs, branches or stumps. Artificial shade devices are biodegradable cards or screens, which provide shade generally from 1-3 years.

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).

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 planned program of silvicultural treatment during the whole life of a [timber] stand. It includes not only the reproduction cuttings but also any intermediate cuttings. The reproduction methods employed have such a decisive influence on the form and treatment of the stand that the name of the method is commonly applied to the silvicultural system; the shelterwood system, for example, leads to reproduction by means of the shelterwood method of cutting. (From: *The Practice of Silviculture*, D.Smith, 1962)

Site Preparation - A general term for a variety of activities that remove competing vegetation, slash, and other debris that may inhibit the reforestation effort.

Slash - The residue left on the ground after felling and other silvicultural operations and/or accumulating there as a result of storm, fire, girdling, or poisoning trees.

Snag - A standing dead tree usually greater than five feet in height and six inches in diameter at breast height.

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, to support plant and animal productivity, maintain or enhance water and air quality, and support human health and habitation.

Spot Fire – A fire ignited outside the perimeter of the main fire by flying sparks.

Stand - A community of trees or other vegetative growth occupying a specific area and sufficiently uniform in composition (species), age, spatial arrangement, and conditions as to be distinguishable from the other growth on adjoining lands, so forming a silvicultural or management entity.

Standard And Guideline - An indication or outline of policy or conduct.

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

Stream Channel Stability – A classification system that utilizes ocular estimates of various channel, bank and riparian areas.

Stream Order – A means of classifying streams within a drainage basin by systematically defining the network of branches. Each non-branching segment is designated a first-order stream (smallest). 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 principal or largest segment.

Structural Diversity – The variation in sizes and shapes of landscape elements, as well as diversity of pattern.

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 change.

Suitable Forest Land - Forest land (as defined in 36 CFR 219.4) for which technology is available that will ensure timber production without irreversible resource damage to soils, productivity, or watershed conditions; for which there is reasonable assurance that such lands can be adequately restocked (as provided in CFR 219.14); and for which there is management direction that indicates that timber production is an appropriate use of that area.

Sustained Yield - 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.

Surface Fuels - Loose litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, shrubs, seedlings, downed logs, and stumps interspersed with or partially replacing the litter.

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

Temporary Road - Those roads needed only for the purchaser or permittee's use. The Forest Service and the purchaser or permittee must agree to the location and clearing widths. Temporary roads are used for a single, short-term use, e.g., to haul timber from landings to Forest Development Roads, access to build water developments, etc. Temporary roads must be obliterated as part of a timber sale contract.

Thermal Cover - "For elk a stand of coniferous trees 40 feet or more tall with average crown closure of 70% or more. In some cases, topography or vegetation less than specific may meet animal needs for thermal regulation" (Lyon and Christensen 1990).

Threatened Species - Any species, plant or animal, which is likely to become an endangered species within the foreseeable future throughout all, or a significant portion, of its range. The Secretary of the Interior in accordance with the 1973 Endangered Species Act identifies threatened species.

Tiering - Refers to the elimination of repetitive discussions of the same issue by incorporating by reference the general discussion in an environmental impact statement of broader scope. For example, a project environmental assessment could be tiered to the Forest Plan EIS.

Timber - A general term for the major woody growth of vegetation in a forest area.

Timber Base - The lands within the forest that are suitable for timber production.

Timber Production - The purposeful growing, tending, harvesting, and regeneration of rotational 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 production of fuelwood or harvest from unsuitable lands.

Timber Stand Improvement (TSI) - All noncommercial intermediate cuttings and other treatments to improvement composition, condition, and volume growth of a timber stand.

Timber Types – A descriptive classification of forestland based on present occupancy of an area by a tree species (i.e. lodgepole, mixed conifer, etc.)

Total Maximum Daily Load (TMDL) - The maximum allowable load of a pollutant to a water body that will result in a stream's water quality meeting standards.

Trailhead - The parking, signing, and other facilities available at the terminus of a trail.

Transitory Range - Land that is suitable for grazing use for a period of time. For example, on particular disturbed lands, grass may cover the area for a period of time before being replaced by trees or shrubs not suitable for forage.

Understory - The trees and other woody species which grow under a more or less continuous cover of branches and foliage formed collectively by the upper portion of adjacent trees and other woody growth.

Ungulate - A mammal with hooves.

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.

Unsuitable Forest Land - Lands not selected for timber production in the suitability analysis during the development of the Forest Plan due to (1) the multiple-use objectives for the alternative preclude timber production, (2) other management objectives for the alternative requirements set forth in 36 CFR 219.27 cannot be met, and (3) the lands are not cost-efficient over the planning horizon in meeting forest objectives that include timber production. Land not appropriate for timber production shall be designated as unsuitable in the Forest Plan.

Values at Risks - Natural resources, improvements, or other values that may be jeopardized if a fire occurs.

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 diversity of species makeup, the higher the degree of vertical diversity.

Viable Population – A fish, wildlife or plant population of sufficient size to maintain its existence over time in spite of normal fluctuations in population levels.

Visual Quality Objective (VQO) - A desired level of scenic quality and diversity of natural features based on physical and sociological characteristics of an area. Refers to the degree of acceptable alterations of the characteristic landscape.

Preservation: Only ecological changes are allowed to alter the natural landscape.

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

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

Modification: Human activity may dominate the characteristic landscape, but should appear as natural when viewed as background.

Enhancement: A short-term management alternative, which is done with the express purpose of increasing positive visual variety where little variety now exists.

Visual Resource - The composite of basic terrain, geologic 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.

Vulnerability - "A measure of elk susceptibility to being killed during the hunting season. Note that this is the antonym of Security during the hunting season" (Lyon and Christensen 1990). In

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this document, vulnerability is also used as it relates to hunting or trapping of species other than elk.

Water Quality Limited Segment (WQLS) - Stream segments, which are not expected to meet water quality standards or are not sufficient to meet beneficial uses even after the application of technology-based controls.

Watershed Treatment – Planned land management action designed to maintain or improve a desired watershed condition. (adapted from Black, Watershed Hydrology, 1996 Glossary for watershed management).

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 conditions, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

WholeTree Yarding – During timber harvest, entire trees are yarded to the landing. Tops, limbs, and other merchantable materials are piled for later treatment or utilization at the landing site.

Wildfire (Wildland Fire) – Any non-structure fire (not a prescribed fire) in the wildlands. May be ignited naturally or by arson.

Wildland-Urban Interface - Includes those areas of resident human populations at imminent risk from wildfire, and human developments having special significance. These areas include not only the sites themselves, but also the continuous slopes and fuels that lead directly to the sites, regardless of the distance involved.

Windthrow - The action of uprooting trees by the force of the wind.

Winter Range - The area available to and used by big game during the winter season. Must contain forage or browse to feed big game. Winter range areas tend to have a relatively low amount of snow cover which enables the animals to reach the forage.

Woody Debris Recruitment - The process of trees naturally falling over and landing in stream channels.

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

ABBREVIATIONS AND ACRONYMS

ACHP	Advisory Council on Historic Preservation
AIRFA	American Indian Religious Freedom Act
BA	Biological Assessment
BCR	Benefit Cost Ratio
BE	Biological Evaluation
BEHAVE	Interactive Computer program for fire behavior prediction and modeling
BLM	Bureau of Land Management
BMA	Bear Management Analysis Area
BMP	Best Management Practice
BMU	Bear Management Unit
CE	Categorical Exclusion
CCF	Cubic Feet

CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
COR	Contracting Officer Representative
CWD	Coarse Woody Debris
DBH	Diameter Breast Height
DEIS	Draft Environmental Impact Statement
DEQ	Department of Environmental Quality
DN	Decision Notice
DNRC	Department of Natural Resource and Conservation
EA	Environmental Assessment
EEC	Elk Effective Cover
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FOFEM	First Order Fire Effects Model
FONSI	Finding of No Significant Impact
FP	Gallatin National Forest Land and Resource Management Plan
FS	Forest Service
FSH	Forest Service Handbook
FSM	Forest Service Manual
FVS-FFE	Forest Vegetation Simulation-Fire/Fuel Effects extention
FWP	Fish, Wildlife, & Parks
GBCS	Grizzly Bear Conservation Strategy
GIS	Geographic Information System
GNF	Gallatin National Forest
GNFP	Gallatin National Forest Plan
GYA	Greater Yellowstone Area
HAU	Habitat Analysis Unit
HE	Habitat Effectiveness
HEI	Habitat Effectiveness Index
IDT	Interdisciplinary Team
IGBC	Interagency Grizzly Bear Committee
INFISH	Inland Native Fish Strategy
LAU	Lynx Analysis Unit
LCS	Canada Lynx Conservation Assessment and Strategy
LRMP	Land and Resource Management Plan

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LWD	Large Woody Debris
MA	Management Area
MBF	Thousand Board Feet
MBTA	Migratory Bird Treaty Act
MCA	Montana Conservation Act
MDFWP	Montana Department of Fish Wildlife and Parks
MIS	Management Indicator Species
MMBF	Million Board Feet
MNHP	Montana Native Heritage Program
MOU	Memorandum of Understanding
MOUCA	Memorandum of Understanding and Conservation Agreement
MSDL	Montana State Department of Lands
MTSHPO	Montana Historic Preservation Office
MUTCD	Manual on Uniform Traffic Control Devices
MFWP	Montana Fish, Wildlife and Parks
NAAQS	National Aviation Air Quality Standards
NEPA	National Environmental Policy Act
NEXUS-	an Excell spreadsheet that links surface and crown fire prediction models
NF	National Forest
NFMA	National Forest Management Act
NFS	National Forest System (lands)
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PA	Proposed Action
PCA	Primary Conservation Area
PGV	Predicted Gross Value
PM	Particulate Matter
PNV	Present Net Value
PSD	Prevention of Significant Deterioration
R	Rural
R1	Region One
R1R4	Region 1/ Region 4
RN	Roaded Natural
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
SAM	Sale Area Map
SIP	State implementation Plan
SMS	Scenery Management System

SMZ	Streamside Management Zone
SPM	Semi Primitive Motorized
SWCP	Soil and Water Conservation Practices
T&E	Threatened and Endangered Species
TE	Transactions Evidence
TES	Threatened, Endangered, and Sensitive Species
TMDL	Total Maximum Daily Load
TPA	Trees per Acre
TSA	Timber Sale Administrator
TSC	Timber Sale Contract
TSMRS	Timber Stand Management Record System (data base)
TU	Trout Unlimited
UMWCT	Upper Missouri Short Term Strategy for Conserving Westslope Cutthroat Trout
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	USDA-Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VQO	Visual Quality Objectives
WATSED	Water and Sediment Yield (model)
WCT	Westslope Cutthroat Trout
WQLS	Water Quality Limited Segment
WRA	Weed risk Assessment
WRAP	Westernn Regional Air Partnership
YCT	Yellowstone Cutthroat Trout