APPENDIX I: GLOSSARY

Many of the definitions in this glossary are referenced to the following sources. The sources are identified by a number in parentheses following the definition. This number corresponds to the list below. Some other terms will be referenced to Forest Service Manuals (FSM), Forest Service Handbooks (FSH), or other sources which are too numerous to list. Finally, many other definitions are not referenced, but are those in general use on the Forest.

SOURCE LIST

1) CFR 219 National Forest Management Act Regulations.
2) Regional Guide for the Pacific Northwest Region, 1984.
3) SAF Dictionary of Forestry Terms, 1971.
4) The Random House College Dictionary, Revised Edition, 1975.
5) Webster's New International Dictionary, 1957.
6) Wildland Planning Glossary, 1976.
7) Webster's Third New International Dictionary, 1981.
8) Wildlife Habitats in Managed Forests, The Blue Mountains of Oregon and Washington, 1979.
9) A Glossary of Terms Used in Range Management.
10) Forest Service Manual or Forest Service Handbook.

- A -

Age class - An interval, usually 10 to 20 years, into which the age ranges of vegetation are divided for classification or use. (3)

Aggregate Recovery Percent (ARP) - Measure of the vegetative condition related to its ability to intercept rain, snow, and wind and its ability to modify snow accumulation and melting.

Airshed - A geographic area that, because of topography, meteorology, and climate, shares the same air. (2)

Alluvium, Alluvial - Sediments deposited by water.

Anadromous Fish - Those species of fish that mature in the sea and migrate into streams to spawn. Salmon, steelhead, and searun cutthroat trout are examples.

Andesite - A moderately hard light colored rock produced by volcanic eruption.

Appropriated Funds - Moneys authorized by an act of Congress which permit Federal agencies to incur obligations and to make payments out of the US Treasury for specified purposes.

Aquifer - Underground strata containing water.

Aquatic ecosystems - Stream channels, lakes, marshes or ponds, and the plant and animal communities they support.

Artifact - An object made or modified by humans. (4)

Available forest land - Land which has not been legislatively or administratively withdrawn by the Secretary of Agriculture or Forest Service Chief from timber production.

- B -

Background - In visual management terminology, refers to the visible terrain beyond the foreground and middleground where individual trees are not visible, but are blended into the total fabric of the stand. Also a portion of a view beyond three to five miles from the observer, and as far as the eye can detect objects. (6)

Bald Eagle Management Area (BEMA) - An area allocated by the Willamette National Forest Plan to be managed for the benefit of American Bald Eagles.

Basaltic - A hard generally dark and dense rock type produced by volcanic eruption.

Base Flow - The portion of a stream or river flow attributable to ground water interception, usually a very constant amount.

Bedload - The coarse sediment moved by a stream or river which moves along the bed of the stream.

Beneficial uses - In water use law the reasonable use of water for a purpose consistent with the laws and best interest of the people and the state.

Best Management Practices - A practice or combination of practices that is determined by a State (or designated areawide planning agency) after problem assessment, examination of alternative practices, and appropriate public participation, to be the most effective, practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals (Federal Register, Volume 40, No. 230 dated 11/28/75).

Big game - Large mammals hunted for sport. On the National Forest these include animals such as deer, elk, antelope, and bear. (8)

Big Game Emphasis Area (BGEA) - An area of land designated by the Willamette National Forest Plan with prescriptions for specific habitat qualities for deer and elk.

Big game summer range - A range, usually at higher elevation, used by deer and elk during the summer. Summer ranges are usually much more extensive than winter ranges. (8)

Big game winter range - A range, usually at lower elevation, used by migratory deer and elk during the winter months; usually more clearly defined and smaller than summer ranges. (8)

Biological diversity - Terms used in the Forest Plan to provide goals and direction for evaluating the significance of old growth stands, minimizing fragmentation of existing old growth forests, and maintaining many of the structural components of unmanaged stands in managed stands.

Board foot (BF) - The amount of wood equivalent to a piece of wood one foot by one foot by one inch thick. (3)

Broadcast Burn - Allowing a prescribed fire to burn over a designated area within well-defined boundaries for reduction of fuel hazard or as a silvicultural treatment, or both.

Browse - Twigs, leaves, and young shoots of trees and shrubs on which animals feed; in particular, those shrubs which are used by big game animals for food. (6)

Browse Enhancement - The act of cutting down brush or hardwood vegetation when it is too tall, decadent, or low in nutritional value to increase its future value to browsing animals, usually big game. This cutback allows the vegetation to resprout and become more available and or higher quality.

- C -

Canopy - The more-or-less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth. (3)

Cavity - The hollow excavated in trees by birds or other natural phenomena; used for roosting and reproduction by many birds and mammals. (2)

Char - A group of fish in the Salmonid family - in this watershed, brook trout and bull trout.

Clearcutting - The cutting method that describes the silviculture system in which the old crop is cleared over a considerable area at one time. Regeneration then occurs from (a) natural seeding from adjacent stands, (b) seed contained in the slash or logging debris, (c) advance growth, or (d) planting or direct seeding. An even-aged forest usually results. (3)

Climax - The culminating stage in plant succession for a given site where the vegetation has reached a highly stable condition. (6)

Collurturn - Material (soil and rock) that has been deposited through gravity (as opposed to water).

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; (2) land where existing technology and knowledge is available to ensure timber production without irreversible damage to soil productivity or watershed conditions; and (3) land where existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be obtained within 5 years after final harvesting. See also "Tentatively Suitable Forest Land."

Commercial thinning - Any type of tree thinning that produces merchantable material at least equal in value to the direct costs of harvesting. (3)

Compaction - The packing together of soil particles by forces exerted at the soil surface, resulting in increased soil density.

Conk - The woody fruiting body of fungal species, that usually grow on dead or live tree stems.

Connectivity - A measure of the extent to which conditions among late-successional and/or old growth (LS/OG) areas provide habitat for breeding, feeding, dispersal, and movement of LS/OG associated wildlife and fish species.

Corridor - A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries. (1)

Course sediment - Sands, gravels, cobbles, boulders.

Cultural resource - The remains of sites, structures, or objects used by humans in the past--historic or prehistoric. (2)

Cumulative effects or impacts - Cumulative effect or impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR 1508.7 - these regulations use effects and impacts synonymously.)

- D -

Debris Torrent - A large debris slide that is charged with water and confined to a steep stream channel. Debris torrents may travel several thousand feet, but are generally shallow as opposed to deep-seated mass movement.

Deep-seated Mass Movement - The downhill movement of deep soils and weathered bedrock, usually under saturated conditions. Such events usually do not move as far as a debris torrents do.

Designated Area (Air Quality) - Those areas delineated in the Oregon and Washington Smoke Management Plans as principal population centers of air quality concern.

Developed recreation - Recreation that requires facilities that, in turn, result in concentrated use of an area. Examples of developed recreation areas are campgrounds and ski areas; facilities in these areas might include roads, parking lots, picnic tables, toilets, drinking water, ski lifts, and buildings. (2)

Diameter at breast height (d.b.h.) - The diameter of a tree measured 4 feet 6 inches above the ground. (6)

Dispersed recreation - A general term referring to recreation use outside developed recreation sites; this includes activities such as scenic driving, hiking, backpacking, hunting, fishing, snowmobiling, horseback riding, cross-country skiing, and recreation in primitive environments. (2)

Diversity - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan. (2) (1)

Douglas-Fir Type - An association of tree species in which Douglas-fir is recognized as one of the principal seral species.

Duff - Organic matter in various stages of decomposition on the floor of the forest. (4)

- E -

Edge - An area where plant communities meet or where successional stages or vegetation conditions within the plant communities come together. (2)

Effects - Environmental changes resulting from a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place, and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects and impacts as used in this document are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic quality, historic, cultural, economic, social, or healthy effects, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial. (40 CFR 1508.8, 2)

Ejecta - Material expelled forcibly from an erupting volcano, as opposed to lava flows.

Endangered species - Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act.(6)

Environmental Analysis - A comprehensive evaluation 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. (2)

Environmental Assessment - The concise public document required by the regulations for implementing the procedural requirements of the National Environmental Policy Act. (40 CFR 1508.9, 2)

Environmental Impact Statement (EIS) - A statement of the environmental effects of a proposed action and alternatives to it. It is required for major federal actions under Section 102 of the National Environmental Policy Act (NEPA), and released to the public and other agencies for comment and review. It is a formal document that must follow the requirements of NEPA, the Council on Environmental Quality (CEQ) guidelines, and directives of the agency responsible for the project proposal. (6)

Ephemeral draw - A drainage way which conveys surface water for short periods of time in direct response to snowmelt or rainfall runoff.

Even-aged stands - Stands in which all trees are of about the same age. (A spread of 10 to 20 years is generally considered one age class.) Cutting methods producing even-aged stands are clearcut, shelterwood, or seed tree systems.

- F -

Fire management - All activities required for protection of resources from fire and for the use of fire to meet land management goals and objectives. (6)

Fire return interval - The length of time between major, landscape level, stand replacement fire occurrences within a watershed or other large landscape. This term does not apply to a given acre and does not indicate the maximum age that forests attain in the area. It is simply an indication of the periodicity of large fires in the watershed.

Fire rotation - The time period between stand-replacing fire events on a given acre, stand, or site. While this figure may be most accurately used as an average of the periods between stand replacing fires, it is most frequently used to refer to the time between the last two events since dates of all fires which have affected a given site are usually not known.

Fisheries habitats - Streams, lakes, and reservoirs that support fish populations.

Flood plain - The lowland and relatively flat area adjoining inland waters, including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year. (2)

Floristic - Relating to flowering plants.

Forage - All browse and nonwoody plants that are available to livestock or game animals and used for grazing or harvested for feeding. (6)

Foreground - A term used in visual management to describe the portions of a view between the observer and up to 1/4 to 1/2 mile distant. (6)

Forest system roads - Roads that are part of the Forest development transportation system, which includes all existing and planned roads as well as other special and terminal facilities designated as Forest development transportation facilities. (See arterial roads, collector roads, and local roads.)

Fuel management - The practice of planning and executing the treatment or control of living or dead vegetative material in accordance with fire management direction. (10)

Fuel treatment - The rearrangement or disposal of natural or activity fuels (generated by management activity, such as slash left from logging) to reduce fire hazard. Fuels are defined as both living and dead vegetative materials consumable by fire.

Fuels - Combustible wildland vegetative materials. While usually applied to above ground living and dead surface vegetation, this definition also includes roots and organic soils such as peat. (10)

- G -

Geomorphic - The formation of geologic and topographic features.

Glaciation - Erosion and deposition of soil and rocks by movement of glacial ice.

Guilds, Guilding - Classes of wildlife relating to their habits and environment.

Group selection cutting - See Uneven-aged silvicultural systems.

- H -

Habitat Effectiveness Indices - A numerical quantification of various big-game habitat qualities.

Headwaters - The upper tributaries of a river. (4)

Herpetile - Any amphibian or reptile.

Hiding cover - Vegetation that will hide 90 percent of an adult deer or elk from the view of a human at a distance of 200 feet or less. The distance at which the animal is essentially hidden is called a "sight distance."

Historic site - Site associated with the history, tradition, or cultural heritage of national, state, or local interest, and of enough significance to merit preservation or restoration. (6)

Hydrology - The scientific study of the properties distribution and effects of water in the atmosphere, on the earth's surface, and in soil and rocks.

- I -

ID Team - See Interdisciplinary team.

Impacts - See Effects.

Indicator species - See Management indicator species.

Infrastructure - The collection of facilities (roads, campgrounds, structures, transportation corridors, power transmission lines, antenna) constructed to facilitate administration of land.

Interior habitat - Forest habitat that is not affected by adjacent non-forest or young forest. Forest habitat with no edge effects.

Intermittent Stream - A stream that runs water in most months, but does not run water during the dry season during most years.

Issue - A point, matter, or question of public discussion or interest to be addressed or decided through the planning process. (See also Public issue.) (2)

- J,K -

Key Watershed - A Watershed containing populations of species at risk, containing potential habitat, or especially high quality water as designated by the Northwest Forest Plan.

- L -

Landing - Any place where round timber is assembled for further transport, commonly with a change of method. (3)

Lands Not Suited (Unsuitable) for Timber Production - Includes lands that: 1) are not forest land as defined in CFR 219.3; 2) are likely, given current technology, to suffer irreversible resource damage to soils productivity, or watershed conditions; 3) cannot be adequately restocked as provided in 36 CFR 219.27(c)(3); or, 4) have been withdrawn from timber production by an Act of Congress, the Secretary of Agriculture, or the Chief of the Forest Service. In addition, Forest lands other than those that have been identified as not suited for timber production shall be reviewed and assessed prior to formulation of alternatives to determine the costs and benefits of a range of management intensities for timber production. (1)

Landtype - A portion of the Forest mapped in the Soil Resource Inventory that has a defined arrangement of specific landforms that reacts to management activities in generally predictable ways. Landtypes range from 60 to 600 acres in size.

Large woody material (LWM) - Fallen large trees in streams or on the ground in terrestrial environments.

Late Successional - A vegetation type, usually forest, that is mature or old., Also old-growth.

Late Successional Reserve (LSR) - An area set aside from harvest and road building for species requiring late-succession habitat or interior habitat.

Lichens - Any of a large group of plants consisting of symbiotic fungi and algae.

Lithology, Lithologic - relating to rocks.

Low Flow - Minimum stream flows in summer or fall.

- M -

Management Area - An area with similar management objectives and a common management prescription. (1) (10)

Management direction - A statement of multiple use and other goals and objectives, and the associated management prescriptions, and standards and guidelines for attaining them. (1)

Management indicator species - A species selected because its welfare is presumed to be an indicator of the welfare of other species using the same habitat. A species whose condition can be used to assess the impacts of management actions on a particular area. (8)

Mass movement - A general term for any of the variety of processes by which large masses of earth material are moved downslope by gravitational forces - either slowly or quickly. (6)
See Debris torrent and Deep-seated mass movement.

Mass wasting - Mass movement.

Matrix - That land outside of various reserves which is to be managed for timber production, among other objectives; designated by the Northwest Forest Plan.

Mature timber - Trees that have attained full development, particularly height, and are in full seed production. (3)

Maximum modification - See Visual quality objective.

Mesic - Moist, referring to a soil or site.

Middleground - A term used in visual management to describe the portions of a view extending from the foreground zone out to 3 to 5 miles from the observer. (6)

Mineral soil - Weathered rock materials usually containing less than 20 percent organic matter. (6)

Mitigation - Mitigation includes: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or elimination the impact over time by preservation and maintenance operations during the life of the action; and, (e) compensating for the impact by replacing or providing substitute resources or environments. (40 CFR Part 1508.20)

Modification - See Visual quality objective.

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

Morphometry - Measurement of the morphology or form, as in lake bottom shapes.

Municipal Watershed - A watershed which provides water for human consumption, where Forest Service management could have a significant effect on the quality of water at the intake point, and that provides water utilized by a community or any other water system that regularly serves: 1) at least 25 people on at least 60 days in a year, or 2) at least 15 service connections. In addition to cities, this includes campgrounds, residential developments, and restaurants. (10)

- N -

National Environmental Policy Act (NEPA) of 1969 - An Act to declare a National policy which will encourage productive and enjoyable harmony between humankind and the environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, to enrich the understanding of the ecological systems and natural resources important to the Nation, and to establish a Council on Environmental Quality. (The Principal Laws Relating to Forest Service Activities, Agriculture Handbook No. 453, USDA, Forest Service, 359 pp.)

National Forest Management Act (NFMA) - A law passed in 1976 as an amendment to the Forest and Rangeland Renewable Resources Planning Act, requiring the preparation of Regional Guides and Forest Plans and the preparation of regulations to guide that development.

Natural regeneration - Reforestation of a site by natural seeding from the surrounding trees. Natural regeneration may or may not be preceded by site preparation.

Nephalometric Turbidity Unit - A relative quantification of water turbidity.

Nonpoint source pollution - Pollution whose source is general rather than specific in location. It is widely used in reference to agricultural and related pollutants-- for example, production of sediments by logging operations, agricultural pesticide applications, or automobile exhaust pollution. (6)

Noxious weeds - Undesirable, usually non-native, plant species that are unwholesome to the range or to animals or compete with native plants. (6)

- O -

Objective - A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals. (1)

Old-growth stand (old growth) - Any stand of trees 10 acres or greater generally containing the following characteristics:) contain mature and overmature trees in the overstory and are well into the mature growth stage; 2) will usually contain a multilayered canopy and trees of several age classes; 3) standing dead trees and down material are present; and 4) evidences of man's activities may be present, but do not significantly alter the other characteristics and would be a subordinate factor in a description of such a stand. (2)

Oligotrophic - Referring to bodies of water, a condition of very low levels of dissolved or suspended nutrients.

Optimal cover - Habitat for deer and elk which has tree overstory and understory, shrub and herbaceous layers; the overstory canopy generally exceeding 70% crown closure and dominant trees generally exceed 21 inches d.b.h.; provides snow intercept, thermal cover, and forage.

Overstory - That portion of the trees, in a Forest or in a stand of more than one story, forming the upper or uppermost canopy. (3)

- P -

PAOT - Persons at one time.

Partial retention - See Visual quality objective.

Particulates - Small particles suspended in the air and generally considered pollutants. (See Total Suspended Particulates.) (5)

Perennial stream - A stream that flows year round.

Peak flow - The highest amount of stream or river flow accruing in a year or from a single storm event.

Pests - Any animal or plant that, during some portion of its life cycle, inhibits the establishment or growth of some other species of plant or animal favored by man.

Phonology - The science dealing with the influence of climate on the recurrence of such annual phenomena of animal and plant life as bird migrations, budding, etc. (4)

Planning area - The area of the National Forest System covered by a Regional guide or forest plan. (1)

PMIO emissions - Air born particulates less than or equal to 10 microns in diameter.

Prehistoric site - An area which contains important evidence and remains of the life and activities of early societies which did not record their history.

Prescribed fire - A wildland fire burning under specified conditions which will accomplish certain planned objectives. The fire may result from either planned or unplanned ignitions. Proposals for use of unplanned ignitions for this purpose must be approved by the Regional Forester. (2)

Prescription - A written direction for harvest activities and regeneration methods.

Pre-commercial Thinning - See Young Stand Density Management.

Primary cavity excavators - Wildlife species that excavate cavities in snags.

Primary productivity - the portion of biological activity and production attributed to plant life.

Pruning - Removing of limbs from the lower portion of a tree.

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, plan, and decisions, and (2) encouraging public understanding about and participation in the planning processes which lead to final decision making. (10)

Pumice - A light, frothy volcanic rock formed by explosive eruptions.

Pyroclastic - Rock formed in volcanic eruptions that is composed of broken fragments.

- Q -

Quark - Smallest subatomic particle known to man.

- R -

Raptors - Predatory birds, such as falcons, hawks, eagles, or owls.

Reforestation - The natural or artificial restocking of an area with forest trees. (2)

Regeneration - The renewal of a tree crop, whether by natural or artificial means. Also, the young crop itself, which is commonly referred to as reproduction. (2)

Rehabilitation - Action taken to restore, protect, or enhance site productivity, water quality, or other resource values over a period of time .

Release - The cutting of competing and unwanted vegetation to free conifers for growth.

Residual stand - The trees remaining standing after some activity such as selection cutting or an occurrence such as fire or windthrow. (2)

Retention - See Visual quality objective.

Riparian - Pertaining to areas of land directly influenced by water or influencing water. Riparian areas usually have visible vegetative or physical characteristics reflecting this water influence. Stream sides, lake borders, or marshes are typical riparian areas. (3)

Riparian Reserve - A protected area along streams and wetlands.

Roadless Area - Areas studied during the Roadless Area Review and Evaluation process (RARE II) which are roadless and at least 5,000 acres in size.

Rotation - Planned number of years between the formation of a generation of trees and its final harvest at a specified stage of maturity. Appropriate for even-aged management only. (6)

Rotational failure - A general term for a mass movement landform and a process characterized by a slope in which shearing takes place on a well defined, curved shear surface, concave upward, producing a backward rotation in the displaced mass. The landform may be single, successive (repeated up- and down-slope), or multiple (as the number of slide components increases).

- S -

Salmonid - The family of fish species including salmon, trout, and char (whitefish).

Salvage cuttings - Intermediate cuttings made to remove trees that are dead or in imminent danger of being killed by injurious agents. (10)

Scarified - Land in which the topsoil has been broken up or loosened in preparation for regenerating by direct seeding or natural seedfall. Also refers to ripping or loosening road surfaces to a specified depth for obliteration or "putting a road to bed." (3)

Second growth - Forest growth that has become established following some interference, such as cutting, serious fire, or insect attack, with the previous Forest crop. (6)

Sediment - Earth material (rocks, gravels, sands, silts, clays) transported, suspended, or deposited by water. (6)

Seed tree cutting - Removal in one cut of the mature timber from an area, except for a small number of seed bearers left singly or in small groups. (3)

Selection cutting - The annual or periodic removal of trees (particularly mature trees), individually or in small groups, from an uneven-aged forest, to realize the yield and establish a new crop of irregular constitution. (3)

Sensitive species - Plant or animal species which are susceptible or vulnerable to activity impacts or habitat alterations. Those species that have appeared in the Federal Register as proposed for classification or are under consideration for official listing as endangered or threatened species, that are on an official State list, or that are recognized by the Regional Forester as needing special management to prevent placement on Federal or State lists. (2)

Sensitivity analysis - A determination of the effects of varying the level of one or more factors, while holding the other factors constant. (6) (10)

Seral - A stage in plant community development.

SHAB, Special Habitats - Areas set aside by the Willamette National Forest Plan to protect unique plant and animal habitats.

Shelterwood - The cutting method that describes the silvicultural system in which, in order to provide a source of seed and/or protection for regeneration, the old crop (the shelterwood) is removed in two or more successive shelterwood cuttings. The first cutting is ordinarily the seed cutting, though it may be preceded by a preparatory cutting, and the last is the final cutting. Any intervening cutting is termed removal cutting. An even-aged stand results. (3)

Silviculture - The art and science of controlling the establishment, composition, and growth of forests. (2)

Site preparation - 1)An activity (such as prescribed burning, disking, and tilling) performed on a reforestation area, before introduction of reforestation, to ensure adequate survival and growth of the future crop; or 2)manipulation of the vegetation or soil of an area prior to planting or seeding. The manipulation follows harvest, wildfire, or construction in order to encourage the growth of favored species. Site preparation may include the application of herbicides; burning, or cutting of living vegetation that competes with the favored species; tilling the soil; or burning of organic debris (usually logging slash) that makes planting or seeding difficult.

Skidding - A general term for hauling loads by sliding, not on wheels, as developed originally from stump to roadside, deck, skidway, or other landing. (3)

Skyline Logging - A system of cable logging in which all or part of the weight of the logs is supported during yarding by a suspended cable.

Slash - The residue left on the ground after tree felling and tending, and/or accumulating there as a result of storm, fire, girdling or poisoning. It includes unutilized logs, uprooted stumps, broken or uprooted stems, the heavier branchwood, etc. (3)

Snag - A standing dead tree.

Soil productivity - The capacity of a soil to produce a specific crop such as fiber or forage under defined levels of management. Productivity is generally dependent on available soil moisture and nutrients, and length of growing season.

Soil resource inventory - See Land Type.

Special Interest Areas - Areas managed to make recreation opportunities available for the understanding of the earth and its geological, historical, archeological, botanical, and memorial features. (6)

Special Forest Products (SFPs) - Forest resources that are not associated with timber sale contracts. May be for commercial or personal use. Some common SFPs include greenery, mushrooms, live plants, cones, berries, etc.

Special Wildlife Habitat - A habitat which is unique and has a special function not provided by plant communities or Successional stages; includes riparian zones, wetlands, cliffs, caves, talus, and meadows.

Stand (tree stand, timber stand) - An aggregation of trees or other vegetation occupying a specific area and sufficiently uniform in species composition, age arrangement, and condition as to be distinguishable from the forest or other vegetation or land cover on adjoining areas. (2)

Stand diversity - Any attribute that makes one timber stand biologically or physically different from other stands. This difference can be measured by, but not limited to: different age classes; species; densities; or non-tree floristic composition.

Stand replacement fire - Fire that kills most or all of a stand of trees, creating space for a new stand to begin.

Standards and Guidelines - Principles specifying conditions or levels of environmental quality to be achieved.

Stream Buffer - Vegetation left along a stream channel to protect the channel or water from the effects of logging, road building, or other management activity.

Stream Class - Classification of streams based on the present and foreseeable uses made of the water, and the potential effects of on-site changes on downstream uses. Four classes are defined:

Class I - Perennial or intermittent streams that: provide a source of water for domestic use; are used by large numbers of anadromous fish or significant sports fish for spawning, rearing or migration; and/or are major tributaries to other Class I streams.

Class II - Perennial or intermittent streams that: are used by fish for spawning, rearing or migration; and/or may be tributaries to Class I streams or other Class II streams.

Class III - All other perennial streams not meeting higher class criteria.

Class V - All other intermittent streams not meeting higher class criteria. (10)

Stream Structure - The arrangement of logs, boulders, and meanders which modify the flow of water, thereby causing the formation of pools and gravel bars in streams. Generally, there is a direct relationship between complexity of structure and fish habitat. Complex structure is also an indication of watershed stability.

Subdrainage - Areas used for planning and analysis. It is based on tributary drainage boundaries and averaging 2000 to 4000 acres.

Subwatershed - A subdivision of a watershed equivalent to the 6th field subwatersheds as presented in the PACFISH report. These are larger than subdrainages.

Suitability - The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices. (1) (2) (FSM 1905)

Succession - A series of changes by which one group of organisms succeeds another through stages leading to a potentially stable climax community.

Suppression - The process of extinguishing or confining fire. (2)

System Road - A road meant to be used in the future with an established maintenance schedule.

- T -

Territory - The area which an animal defends, usually during breeding season, against intruders of its own species.

T. E. and S. species - Threatened, endangered and sensitive species, both plant and animal.

Thermal cover - Cover used by animals to ameliorate effects of weather.

Thinning - A felling made in an immature stand primarily to maintain or accelerate diameter increment and also to improve the average form of the remaining trees without permanently breaking the canopy. An intermediate cutting. (3)

Threatened and Endangered (T&E) species - See Threatened; see Endangered.

Threatened species - Those plant or animal species likely to become endangered species throughout all or a significant portion of their range within the foreseeable future. (See also Endangered species.) (2)

Till - An unsorted mixture of clays, silts, sands, gravels and rocks deposited by glaciers.

Tractor logging - Any logging method which uses a tractor as the motive power for transporting logs from the stumps to a collecting point--whether by dragging or carrying the logs. (3)

Transient snow zone - That area where snowfall tends to melt soon after it falls, such that accumulation waxes and wanes through the winter .

Travel Corridor - A route followed by animals along a belt or band of suitable cover or habitat.

Tuff, Tuffaceous - Material made up of volcanic ash deposits.

Turbidity - The degree of opaqueness, or cloudiness, produced in water by suspended particulate matter, either organic or inorganic. Measured by light filtration or transmission and expressed in Jackson Turbidity Units (JTUs).

- U -

Ultra oligatrophic - Very, very clean, clear water.

Underburn - Fire, natural or prescribed, which burns only on the forest floor with an intensity such that dominant trees are typically not killed.

Understory - The trees and other woody species growing under a more-or-less continuous cover of branches and foliage formed collectively by the upper portion of adjacent trees and other woody growth. (6)

- V -

Viewshed - Portion of the Forest that is seen from a major travel route, or high use location.

Visual quality objective (VQO) - Categories of acceptable landscape alteration measured in degrees of deviation from the natural-appearing landscape.

Preservation (P) - Ecological changes only.
Retention (R) - Management activities should not be evident to the casual Forest visitor.
Partial Retention (PR) - Management activities remain visually subordinate to the characteristic landscape.
Modification (M) - Management activities may dominate the characteristic landscape but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.
Maximum Modification (MM) - Human activity may dominate the characteristic landscape, but should appear as a natural occurrence 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. (2)

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. (2)

- W -

Watershed - The entire land area that contributes water to a major drainage system or stream as designated by the FEMAT Report.

Wetlands - Areas that are inundated by surface or ground water often enough to support, and usually do support, primarily plants and animals that require saturated or seasonally saturated soil conditions for growth and reproduction. (E.O. 11990)

Wild and Scenic river - Those rivers or sections of rivers designated as such by Congressional action under the 1968 Wild and Scenic Rivers Act, as supplemented and amended, or those sections of rivers designated as wild, scenic, or recreational by an act of the legislature of the state or states through which they flow. Wild and scenic rivers may be classified and administered under one or more of the following categories:

1. Wild River Areas - Those rivers or sections of rivers that are free of impoundment's and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
2. Scenic River Areas - Those rivers or sections of rivers that are free of impoundment's, with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
3. Recreational River Areas - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. (2) (6)

WIN, Watershed Improvement needs - A systematic survey of watershed conditions.

Winter Range - An area used by deer and elk during the winter months; usually at lower elevation and/or on south and west exposures.

Woody Material - Organic materials necessary for stream channel stability and maintenance of watershed condition. It includes large logs and root wads.

- X,Y,Z -

Xeric - Dry, referring to soil or site.

Yarding - Hauling timber from the stump to a collection point. (2)

Young Stand Density Management (Pre-commercial Thinning) - Thinning of small trees when no income is derived from the trees and cut trees are generally not removed from the site.

APPENDIX J: ANALYSIS TEAM MEMBERS

All the team members listed below are employees of the Willamette National Forest on the Lowell, Rigdon, or Oakridge Ranger Districts.

Tim Bailey
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Nikki Swanson
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Mike Williams
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Carol Winkler
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APPENDIX K: PUBLIC AND AGENCY CONTACTS

The following individuals, groups, businesses, and/or government agencies provided information during this Watershed Analysis.

Open House Public Meeting:

Two public meetings were held; one at Lane Community Collage in Eugene on January 22, 1996 and the other at the Oakridge District Office on January 23, 1996.

State and Federal Agencies:

Oregon Department of Fish and Wildlife; Jeff Ziller, & Bill Castillo
U.S. Environmental Protection Agency; Bruce Cleland
U.S. Fish and Wildlife Service; Ray Bosch
U.S. Forest Service, Willamette and Siuslaw National Forests, Karen Austin, Zone Wildlife Ecologist
U.S. Forest Service, Willamette National Forest; people from the S.O. and other districts
U.S. Geological Survey Water Resources Division; Jo Miller

Interested Individuals, Local Businesses, and Groups:

Bert Davis, Chris Culver, Paul Kemp, Michael Hibbard, Jerold Williams, Wanda Cawein