PEOPLE'S GLOSSARY OF ECOSYSTEM MANAGEMENT TERMS

abiotic- Non-living. Climate is an abiotic component of ecosystems.

adaptive management- A type of natural resource management that implies making decisions as part of an on-going process. Monitoring the results of actions will provide a flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management to new information.

aerial logging- Removing logs from a timber harvest area by helicopter. Fewer roads are required, so the impact to an area is minimized.

affected environment- The natural environment that exists at the present time in an area being analyzed.

age class- An age grouping of trees according to an interval of years, usually 20 years. A single age class would have trees that are within 20 years of the same age, such as 1-20 years or 21-40 years.

airshed- A geographic area that shares the same air.

allotment (range allotment)- The area designated for use by a prescribed number of livestock for a prescribed period of time. Though an entire Ranger District may be divided into allotments, all land will not be grazed, because other uses, such as recreation or tree plantings, may be more important at a given time.

anadromous fish- Species of fish that mature in the sea and migrate into streams to spawn.

aspect- The direction a slope faces. A hillside facing east has an eastern aspect.

ASQ (allowable sale quantity)- The amount of timber that may be sold within a certain time period from an area of suitable land. The suitability of the land and the time period are specified in the Forest Plan.

aquifer- A body of rock that is saturated with water or transmits water. When people drill wells, they tap water contained within an aquifer.

AUM (animal unit month)- The quantity of forage required by one mature cow and her calf (or the equivalent, in sheep or horses, for instance) for one month.

bark beetle- An insect that bores through the bark of forest trees to eat the inner bark and lay its eggs. Bark beetles are important killers of forest trees.

basal area- The area of the cross section of a tree trunk near its base, usually 4 and 1/2 feet above the ground. Basal area is a way to measure how much of a site is occupied by trees. The term basal area is often used to describe the collective basal area of trees per acre.

big game- Large mammals, such as deer, elk, and antelope that are hunted for sport.

biological control- The use of natural means to control unwanted pests. Examples include introduced or naturally occurring predators such as wasps, or hormones that inhibit the reproduction of pests. Biological controls can sometimes be alternatives to mechanical or chemical means.

biological diversity- The number and abundance of species found within a common environment. This includes the variety of genes, species, ecosystems, and the ecological processes that connect everything in a common environment.

biomass- The total weight of all living organisms in a biological community.

biome- The complex of living communities maintained by the climate of a region and characterized by a distinctive type of vegetation. Example of biomes in North America include the tundra, desert, prairie, and the western coniferous forests.

biota- The plant and animal life of a particular region.

biotic- Living. Green plants and soil microorganisms are biotic components of ecosystems.

BMP (Best Management Practices)- Practices designed to prevent or reduce water pollution.

board foot- A measurement term for lumber or timber. It is the amount of wood contained in an unfinished board 1 inch thick, 12 inches long, and 12 inches wide.

broadcast burn- A prescribed fire that burns a designated area. These controlled fires can reduce wildfire hazards, improve forage for wildlife and livestock, or encourage successful regeneration of trees.

browse- Twigs, leaves, and young shoots of trees and shrubs that animals eat. Browse is often used to refer to the shrubs eaten by big game, such as elk and deer.

buffer- A land area that is designated to block or absorb unwanted impacts to the area beyond the buffer. Buffer strips along a trail could block views that may be undesirable. Buffers may be set aside next to wildlife habitat to reduce abrupt change to the habitat.

cable logging- Logging that involves the transport of logs from stump to collection points by means of suspended steel cables. Cable logging reduces the need for the construction of logging roads.

canopy- The part of any stand of trees represented by the tree crowns. It usually refers to the uppermost layer of foliage, but it can be use to describe lower layers in a multi-storied forest.

cavity- A hole in a tree often used by wildlife species, usually birds, for nesting, roosting, and reproduction.

chemical control- The use of pesticides and herbicides to control pests and undesirable plant species.

clear cut- A harvest in which all or almost all of the trees are removed in one cutting.

climax- The culminating stage in plant succession for a given site. Climax vegetation is stable, self-maintaining, and self-reproducing.

coarse filter management- Land management that addresses the needs of all associated species, communities, environments, and ecological processes in a land area. (See fine filter management.)

collector roads- These roads serve small land areas and are usually connected to a Forest System Road, a county road, or a state highway.

composition- What an ecosystem is composed of. Composition could include water, minerals, trees, snags, wildlife, soil, microorganisms, and certain plant species,

conifer- A tree that produces cones, such as a pine, spruce, or fir tree.

connectivity (of habitats)- The linkage of similar but separated vegetation stands by patches, corridors,or "stepping stones" of like vegetation. This term can also refer to the degree to which similar habitats are linked.

consumptive use- Use of resources that reduces the supply, such as logging and mining.

contour- A line drawn on a map connecting points of the same elevation.

corridor- Elements of the landscape that connect similar areas. Streamside vegetation may create a corridor of willows and hardwoods between meadows where wildlife feed.

cover- Any feature that conceals wildlife or fish. Cover may be dead or live vegetation, boulders, or undercut streambanks. Animals use cover to escape from predators, rest, or feed.

cover forage ratio- The ratio of hiding cover to foraging areas for wildlife species.

cover type (forest cover type)- Stands of a particular vegetation type that are composed of similar species. The aspen cover type contains plants distinct from the pinyon-juniper cover type.

created opening- An opening in the forest cover created by the application of even-aged silvicultural practices.

critical habitat- Areas designated for the survival and recovery of federally listed threatened or endangered species.

crown height- The distance from the ground to the base of the crown of a tree.

cultural resource- The remains of sites, structures, or objects used by people in the past; this can be historical or pre-historic.

cumulative effects - Effects on the environment that result from separate, individual actions that, collectively, become significant over time.

dbh (diameter at breast height)- The diameter of a tree 4 and 1/2 feet above the ground on the uphill side of the tree.

decision criteria- The rules and standards used to evaluate alternatives to a proposed action on National Forest land. Decision criteria are designed to help a decisionmaker identify a preferred choice from the array of alternatives.

decking area- A site where logs are collected after they are cut and before they are taken to the landing area where they are loaded for transport.

DEIS (Draft Environmental Impact Statement)- The draft version of the Environmental Impact Statement that is released to the public and other agencies for review and comment

desired future condition- Land or resource conditions that are expected to result if goals and objectives are fully achieved.

developed recreation- Recreation that requires facilities that, in turn, result in concentrated use of the area. For example, skiiing requires ski lifts, parking lots, buildings, and roads. Campgrounds require roads, picnic tables, and toilet facilities.

dispersed recreation- Recreation that does not occur in a developed recreation site, such as hunting, backpacking, and scenic driving.

disturbance- Any event, such as forest fire or insect infestations that alter the structure, composition, or functions of an ecosystem.

early forest succession- The biotic (or life) community that develops immediately following the removal or destruction of vegetation in an area. For instance, grasses may be the first plants to grow in an area that was burned.

ecological approach- An approach to natural resource management that considers the relationships among all organisms, including humans, and their environment.

ecology- The interrelationships of living things to one another and to their environment, or the study of these interrelationships.

ecoregion- An area over which the climate is sufficiently uniform to permit development of similar ecosystems on sites that have similar properties. Ecoregions contain many landscapes with different spatial patterns of ecosystems.

ecosystem- An arrangement of living and non-living things and the forces that move among them. Living things include plants and animals. Non-living parts of ecosystems may be rocks and minerals. Weather and wildfire are two of the forces that act within ecosystems.

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

ecotone- The transition zone between two biotic communities, such as between the Ponderosa pine forest type and the mixed conifer forest, which is found at higher elevations than the pine.

ecotype- A population of a species in a given ecosystem that is adapted to a particular set of environmental conditions.

edge- The margin where two or more vegetation patches meet, such as a meadow opening next to a mature forest stand, or a ponderosa pine stand next to an aspen stand.

element (of ecosystems)- An identifiable component, process, or condition of an ecosystem.

endangered species- A plant or animal that 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 Endangered Species Act of 1973.

endemic plant/organism- A plant or animal that occurs naturally in a certain region and whose distribution is relatively limited geographically.

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

environmental assessment- A brief version of an Environmental Impact Statement. (See Environmental Impact Statement.)

Environmental Impact Statement- A statement of environmental effects of a proposed action and alternatives to it. The EIS is released to other agencies and the public for comment and review.

ephemeral streams- Streams that flow only as the direct result of rainfall or snowmelt. They have no permanent flow.

erosion- The wearing away of the land surface by wind or water.

escape cover- Vegetation of sufficient size and density to hide an animal, or an area used by animals to escape from predators.

even aged management- Timber management actions that result in the creation of stands of trees in which the trees are essentially the same age.

fauna-The animal life of an area.

felling- Cutting down trees.

final cut- The removal of the last seed bearers or shelter trees after regeneration of new trees has been established in a stand being managed under the shelterwood system of silviculture.

fine filter management- Management that focuses on the welfare of a single or only a few species rather than the broader habitat or ecosystem. (See coarse filter management.)

fire cycle- The average time between fires in a given area.

fire regime- The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, and seasonality of fire.

fisheries habitat- Streams, lakes, and reservoirs that support fish, or have the potential to support fish.

flood plain- A lowland adjoining a watercourse. At a minimum, the area is subject to a 1% or greater chance of flooding in a given year.

flora- The plant life of an area.

forage- All browse and non-woody plants that are eaten by wildife and livestock.

forb- A broadleaf plant that has little or no woody material in it.

foreground- The part of a scene or landscape that is nearest to the viewer.

forest cover type- See cover type.

forest health- A measure of the robustness of forest ecosystems. Aspects of forest health include biological diversity; soil, air, and water productivity; natural disturbances; and the capacity of the forest to provide a sustaining flow of goods and services for people.

Forest Roads and Trails- Roads and trails under the jurisdiction of the Forest Service.

Forest Supervisor- The official responsible for administering National Forest lands on an administrative unit, usually one or more National Forests. The Forest Supervisor reports to the Regional Forester.

fragmentation- The splitting or isolating of patches of similar habitat, typically forest cover, but including other types of habitat. Habitat can be fragmented naturally or from forest management activities, such as clearcut logging.

frost heave- A land surface that is pushed up by the accumulation of ice in the underlying soil.

fuels- Plants and woody vegetation, both living and dead, that are capable of burning.

fuels management- The treatment of fuels that would otherwise interfere with effective fire management or control. For instance, prescribed fire can reduce the amount of fuels that accumulate on the forest floor before the fuels become so heavy that a natural wildfire in the area would be explosive and impossible to control.

fuelwood- Wood cut into short lengths for burning.

function- All the processes within an ecosystem through which the elements interact, such as succession, the food chain, fire, weather, and the hydrologic cycle.

game species- Any species of wildlife or fish that is harvested according to prescribed limits and seasons.

geomorphic processes- Processes that change the form of the earth, such as volcanic activity, running water, and glacial action.

geomorphology- The science that deals with the relief features of the earth's surface.

GIS (geographic information systems)- GIS is both a database designed to handle geographic data as well as a set of computer operations that can be used to analyze the data. In a sense, GIS can be thought of as a higher order map.

ground fire- A fire that burns along the forest floor and does nor affect trees with thick bark or high crowns.

ground water- The supply of fresh water under the earth's surface in an aquifer or in the soil.

group selection- A method of tree harvest in which trees are removed periodically in small groups. This silvicultural treatment results in small openings that form mosaics of age class groups in the forest.

habitat- The area where a plant or animal lives and grows under natural conditions.

habitat capability- The ability of a land area or plant community to support a given species of wildlife.

habitat diversity- A number of different types of wildlife habitat within a given area.

habitat diversity index- A measure of improvement in habitat diversity.

habitat type- A way to classify land area . A habitat type can support certain climax vegetation, both tree and undergrowth species. Habitat typing can indicate the biological potential of a site.

hiding area/cover- Vegetation capable of hiding 90% of an adult elk or deer from human's view at a distance of 200 feet or less.

horizontal diversity- The distribution and abundance of different plant and animal communities or different stages of plant succession across an area of land; the greater the numbers of communities in a given area, the higher the degree of horizontal diversity.

hydrologic cycle- Also called the water cycle, this is the process of water evaporating, condensing, falling to the ground as precipitation, and returning to the ocean as run-off.

hydrology- The science dealing with the study of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

igneous rock- Rocks formed when high temperature, molten mineral matter cooled and solidified.

indicator species- A plant or animal species related to a particular kind of environment. Its presence indicates that specific habitat conditions are also present.

indigenous (species)- Any species of wildlife native to a given land or water area by natural occurrence.

individual tree selection- The removal of individual trees from certain size and age classes over an entire stand area. Regeneration is mainly natural, and an uneven aged stand is maintained.

instream flow- The quantity of water necessary to meet seasonal stream flow requirements to accomplish the purposes of the National Forests, including, but not limited to fisheries, visual quality, and recreational opportunities.

integrated pest management- IPM evaluates alternatives for managing forest pest populations, based on consideration of pest-host relationships.

interdisciplinary team- A team of individuals with skills from different disciplines that focuses on the same task or project.

intermediate cut- The removal of trees from a stand sometime between the beginning or formation of the stand and the regeneration cut. Types of intermediate cuts include thinning, release, and improvement cuttings.

intermittent stream- A stream that flows only at certain times of the year when it receives water from streams or from some surface source, such as melting snow.

Intermountain Region- The portion of the USDA Forest Service, also referred to as Region Four, that includes National Forests in Utah, Nevada, southern Idaho, and southwestern Wyoming.

irretrievable- One of the categories of impacts mentioned in the National Environmental Policy Act to be included in statements of environmental impacts. An irretrievable effect applies to losses of production or commitment of renewable natural resources. For example, while an area is used as a ski area, some or all of the timber production there is irretrievably lost. If the ski area closes, timber production could resume; the loss of timber production during the time that the area was devoted to winter sports is irretrievable. However, the loss of timber production during that time is not irreversible, because it is possible for timber production to resume if the area is no longer used as a ski area.

irreversible- A category of impacts mentioned in statements of environmental impacts that applies to non-renewable resources, such as minerals and archaeological sites. Irreversible effects can also refer to effects of actions that can be renewed only after a very long period of time, such as the loss of soil productivity.

key summer range- The portion of a wildlife species' summer range that is essential for the animal's pre, post, and reproduction cycles. Deer require "fawning areas" where does give birth and hide their fawns for an essential period of time in the spring.

key winter range- That portion of big game's range where the animals find food and cover during severe winter weather.

ladder fuels- Vegetation located below the crown level of forest trees which can carry fire from the forest floor to tree crowns. Ladder fuels may be low-growing tree branches, shrubs. or smaller trees.

land class- The topographic relief of a unit of land. Land classes are separated by slope; this coincides with the timber inventory process. The three land classes used in the Forest Plan are defined by the following slope ranges: 0 to 35 percent; 36 to 55 percent; and greater than 55 percent.

landing- Any place where cut timber is assembled for further transport from the timber sale area.

landline- The boundary lines for National Forest land.

landscape- A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts. Landscapes are often used for coarse grain analysis.

land use planning- The process of organizing the use of lands and their resources to best meet people's needs over time, according to the land's capabilities.

late forest succession- The stage of forest succession in which most of the trees are mature or overmature.

life zone- Areas or "belts" of land that have distinct plant and animal characteristics determined by elevation, latitude, and climate. When ascending a high mountain, you will pass through these life zones. Examples of life zones include the Upper Sonoran, where Cedar City is located and gramma grasses, sagebrush, and scattered pinyon juniper predominate, and the Transition zone, where Ponderosa pine is predominant.

litter (forest litter)- The freshly fallen or only slightly decomposed plant material on the forest floor. This layer includes foliage, bark fragments, twigs, flowers, and fruit.

logging residue (slash)- The residue left on the ground after timber cutting. It includes unutilized logs, uprooted stumps, broken branches, bark, and leaves. Certain amounts of slash provide important ecosystem roles, such as soil protection, nutrient cycling, and wildlife habitat.

M- Thousand. Five thousand board feet of timber can be expressed as 5M board feet.

macro climate- The general, large scale climate of a large area, as distinguished from the smaller scale micro climates within it.

management action- Any activity undertaken as part of the administration of the National Forest.

mass movement/wasting- The down-slope movement of large masses of earth material by the force of gravity. Also called a landslide.

matrix- The least fragmented, most continuous pattern element of a landscape; the vegetation type that is most continuous over a landscape.

mature timber- Trees that have attained full development, especially height, and are in full seed production.

MBF- Thousand Board Feet (See board feet.)

mean annual increment of growth- The total increase in size or volume of individual trees. Or, it can refer to the increase in size and volume of a stand of trees at a particular age, divided by that age in years.

micro climate- The climate of a small site. It may differ from the climate at large of the area due to aspect, tree cover (or the absence of tree cover), or exposure to winds.

middleground- A term used the management of visual resources, or scenery. It refers to the visible terrain beyond the foreground where individual trees are still visible but do not stand out distinctly from the stand.

mineral soil- Soil that consists mainly of inorganic material, such as weathered rock, rather than organic matter.

MIS (management indicator species)- A wildlife species whose population will indicate the health of the ecosystem in which it lives and, consequently, the effects of forest management activities to that ecosystem. MIS species are selected by land management agencies. (See "indicator species".)

mission (of the USDA Forest Service)- "To Care for the Land and Serve the People". As set forth in law, the mission is to achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of people.

mitigation- Actions taken to avoid, minimize, or rectify the impact of a land management practice.

mixed stand- A stand consisting of two or more tree species.

MM- Million

MMBF- Million Board Feet (See board feet.)

monitoring and evaluation- The periodic evaluation of forest management activities to determine how well objectives were met and how management practices should be adjusted. See "adaptive management".

mortality- Trees that were merchantable and have died within a specified period of time. The term mortality can also refer to the rate of death of a species in a given population or community.

mosaic- Areas with a variety of plant communities over a landscape, such as areas with trees and areas without trees occurring over a landscape.

mountain pine beetle- A tiny black insect, ranging from 1/8 to 3/4 inch in size, that bores through a pine tree's bark. It stops the tree's intake and transport of the food and nutrients it must have to stay alive, thus killing the tree.

multiple use management- The management of all the various renewable surface resources of National Forest lands for a variety of purposes such as recreation, range, timber, wildlife and fish habitat, and watershed.

National Park Service- The agency of the US Department of the Interior responsible for the administration of National Parks, Monuments, and Historic Sites. It is distinct from the USDA Forest Service both administratively and by mission.

natural barrier- A natural feature, such as a dense stand of trees or downfall, that will restrict animal travel.

natural disturbance- See disturbance.

natural range of variability- See range of variability

natural resource- A feature of the natural environment that is of value in serving human needs.

NEPA (National Environmental Policy Act) - Congress passed NEPA in 1969 to encourage productive and enjoyable harmony between people and their environment. One of the major tenets of NEPA is its emphasis on public disclosure of possible environmental effects of any major action on public lands. Section 102 of NEPA requires a statement of possible environmental effects to be released to the public and other agencies for review and comment.

nest survey- A way to estimate the size of a bird population by counting the number of nests in a given area.

NFLRMP (National Forest Land and Resource Management Plan) - Also called the Forest Plan or just the Plan, this document guides the management of a particular National Forest and establishes management standards and guidelines for all lands of that National Forest.

NFMA (National Forest Management Act) - This law was passed in 1976 and requires the preparation of Regional Guides and Forest Plans.

NFRS- National Forest recreation sites that have been inventoried.

no action alternative- The most likely condition expected to exist in the future if management practices continue unchanged.

noncommercial vegetative treatment- The removal of trees for reasons other than timber production.

nonconsumptive use- The use of a resource that does not reduce the supply. For instance, bird watching is a non-consumptive use of wildlife. Boating and fishing are non-consumptive uses of water.

nongame- Wildlife species that are not hunted for sport.

nonpoint source pollution- Pollution whose source is not specific in location. The sources of the discharge are dispersed, not well defined, or constant. Rain storms and snowmelt often make this type of pollution worse. Examples include sediments from logging activities and runoff from agricultural chemicals.

non-renewable resource- A resource whose total quantity does not increase measurably over time, so that each use of the resource diminishes the supply.

notice of intent- A notice in the federal register of intent to prepare an environmental impact statement on a proposed action.

nutrient cycle- The ciculation of chemical elements and compounds, such as carbon and nitrogen, in specific pathways from the non-living parts of ecosystems into the organic substances of the living parts of ecosystems, and then back again to the non-living parts of the ecosystem. For instance, nitrogen in wood is returned to the soil as the dead tree decays; the nitrogen again becomes available to living organisms in the soil, and upon their death, the nitrogen is available to plants growing in that soil.

old growth- Old forests often containing several canopy layers, variety in tree sizes and species, decadent old trees, and standing and dead woody material.

0rganic soil- Soil at least partly derived from living matter, such as decayed plant material.

ORV- Off-road vehicles, such as motor cycles, 4-wheel drive vehicles, and 4-wheelers.

overmature timber- Trees that have attained full development, particularly in height, and are declining in vigor, health, and soundness.

overstory- The upper canopy layer; the plants below comprise the understory.

parent material- The mineral or organic matter from which the upper layers of soil are formed.

park-like structure- Stands with large scattered trees and open growing conditions, usually maintained by ground fires.

partial retention- A visual quality objective which, in general, means man's activities may be evident but must remain subordinate to the characteristic landscape.

patch- An area of homogeneous vegetation, in structure and composition.

patch cut- A clearcut that creates small openings in a stand of trees, usually between 15 and 40 acres in size. On the Dixie National Forest and elsewhere, patchcuts are used to provide the disturbance needed to regenerate aspen.

percolation- Downward flow or infiltration of water through the pores or spaces of rock or soil.

perennial stream- A stream that flows throughout the year and from source to mouth.

permitted grazing- Grazing on a National Forest range allotment under the terms of a grazing permit.

personal use- The use of a forest product, such as firewood, for home use and not for commercial use.

planning area- The area of National Forest land covered by a Regional Guide or Forest Plan.

planning period- The 50 year time frame for which goods, services, and effects were projected in the development of the Forest Plan.

pole/sapling- The stage of forest succession in which trees are between 3 and 7 inches in diameter and are the dominant vegetation.

pole timber- Trees at least 5 inches in diameter, but smaller than the minimum size for sawtimber.

PNV- See present net value.

precommercial thinning- Removing some of the trees from a stand that are too small to be sold for lumber or house logs, so the remaining trees will grow faster.

predator- An animal that lives by preying on other animals. Predators are at or near the tops of food chains.

pre-existing use- Land use that may not conform to a zoning ordinance but existed prior to the enactment of the ordinance.

preparatory cut- The removal of trees near the end of a rotation to open the canopy so the crowns of seed bearing trees can enlarge. This improves seed production and encourages natural regeneration. (See rotation.)

prescribed fire- Fire set intentionally in wildland fuels under prescribed conditions and circumstances. Prescribed fire can rejuvenate forage for livestock and wildlife or prepare sites for natural regeneration of trees.

prescription- Management practices selected to accomplish specific land and resource management objectives.

present net value (PNV), also called present net worth- The measure of the economic value of a project when costs and revenues occur in different time periods. Future revenues and costs are "discounted " to the present by an interest rate that reflects the changing value of a dollar over time. The assumption is that dollars today are more valuable than dollars in the future. PNV is used to compare project alternatives that have different cost and revenue flows.

presuppression- Activities carried out in advance of fire occurrence to ensure effective suppression when the need arises.

primitive ROS (Recreation Opportunity Spectrum)- A classification of wilderness and recreation opportunity. It is characterized by an essentially unmodified environment, where trails may be present but structures are rare, and where it is highly probable to be isolated from the sights and sounds of people. (See ROS.)

productive- The ability of an area to provide goods and services and to sustain ecological values.

prognosis- A computer model for timber growth and yield. It projects per-acre growth and volume yield for commercial timber stands.

public domain- The territory ceded to the Federal government by the original thirteen states, plus additions by treaty, cession, and purchase.

public land- Land for which title and control rests with a government---Federal, state, regional, county, or municipal.

public involvement- The use of appropriate procedures to inform the public, obtain early and continuing public participation, and consider the views of interested parties in planning and decision making.

range- Land on which the principle natural plant cover is composed of native grasses, forbs, and shrubs that are valuable as forage for livestock and big game.

range management- The art and science of planning and directing range use intended to yield the sustained maximum animal production and perpetuation of the natural resources.

range of variability (Also called the historic range of variability or natural range of variation.)- The components of healthy ecosystems fluctuate over time. The range of sustainable conditions in an ecosystem is determined by time, processes (such as fire), native species, and the land itself. For instance, ecosystems that have a 10 year fire cycle have a narrower range of variation than ecosystems with 200-300 year fire cycle. Past management has placed some ecosystems outside their range of variability. Future management should move such ecosystems back toward their natural, sustainable range of variation.

Ranger District- The administrative sub-unit of a National Forest that is supervised by a District Ranger who reports directly to the Forest Supervisor.

raptor- A bird of prey, such as a eagle or hawk.

RARE II- Roadless Area Review and Evaluation. The national inventory of roadless and undeveloped areas within the National Forests and Grasslands.

recharge- The addition of water to ground water by natural or artificial processes.

reforestation- The restocking of an area with forest trees, by either natural or artificial means, such as planting.

regeneration- The renewal of a tree crop by either natural or artificial means. The term is also used to refer to the young crop itself.

Regional Forester- The official of the USDA Forest Service responsible for administering an entire region of the Forest Service.

release cutting- Removal of competing vegetation to allow desired tree species to grow.

removal cut- The removal of the last seed bearers or shelter trees after regeneration is established.

residual stand- The trees remaining standing after an event such as selection cutting.

resilience- The ability of an ecosystem to maintain diversity, integrity, and ecological processes following a disturbance.

Responsible official- The Forest Service employee who has been delegated the authority to carry out a specific planning action.

restoration (of ecosystems)- Actions taken to modify an ecosystem to achieve a desired, healthy, and functioning condition.

revegetation- The re-establishment and development of a plant cover by either natural or artificial means, such as re-seeding.

riparian area- The area along a watercourse or around a lake or pond.

riparian ecosystem- The ecosystems around or next to water areas that support unique vegetation and animal communities as a result of the influence of water.

ROD- Record of Decision. A official document in which a deciding official states the alternative that will be implemented from a prepared EIS.

ROS- Recreation Opportunity Spectrum. The land classification system that categorizes land by its setting and the probable recreation experiences and activities it affords.

rotation- The number of years required to establish and grow timber crops to a specified condition of maturity.

roundwood- Timber and fuelwood prepared in the round state, such as house logs and telephone poles.

run-off- The portion of precipitation that flows over the land surface or in open channels.

sacrifice area/site- In range management, a site allowed to be overgrazed to obtain efficient overall use of the management area. In cultural resource management, it may refer to a site intentionally sacrificed to extensive public use in order to preserve the larger cultural area.

sanitation salvage- The removal of dead, damaged or susceptible trees primarily to prevent the spread of pests or disease and promote forest health.

sapling- A loose term for a young tree more than a few feet tall and an inch or so in diameter that is typically growing vigorously.

sawtimber- Trees that are 9 inches in diameter at breast height or larger that can be made into lumber.

scale- In ecosystem management, it refers to the degree of resolution at which ecosystems are observed and measured.

scoping- The ongoing process to determine public opinion, receive comments and suggestions, and determine issues during the environmental analysis process. It may involve public meetings, telephone conversations, or letters.

second growth- Forest growth that was established after some kind of interference with the previous forest crop, such as cutting, fire, or insect attack.

seed tree harvest- Removal of the mature timber crop from an area in one cut, except for a certain number of seed bearers.

sensitive species- Plant or animal species which are susceptible to habitat changes or impacts from activities. The official designation is made by the USDA Forest Service at the Regional level and is not part of the designation of Threatened or Endangered Species made by the US Fish and Wildlife Service.

seral- The stage of succession of a plant or animal community that is transitional. If left alone, the seral stage will give way to another plant or animal community that represents a further stage of succession.

shelterwood- A cutting method used in a more or less mature stand, designed to establish a new crop under the protection of the old.

silvicultural system- The cultivation of forests; the result is a forest of a distinct form. Silvicultural systems are classified according to harvest and regeneration methods and the type of forest that results.

silviculture- The art and science that promotes the growth of single trees and the forest as a biological unit.

single tree selection- See individual tree selection.

site preparation- The general term for removing unwanted vegetation, slash, roots, and stones from a site before reforestation. Naturally occurring wildfire, as well as prescribed fire can prepare a site for natural regeneration.

size class- One of the three intervals of tree stem diameters used to classify timber in the Forest Plan data base. The size classes are: Seedling/Sapling (less than 5 inches in diameter); Pole Timber (5 to 7 inches in diameter); Sawtimber (greater than 7 inches in diameter)

skidding- Hauling logs by sliding, not on wheels, from stump to a collection point.

skyline logging- A logging system used to remove timber from steep slopes. Logs are brought up-slope on a suspended cable, or skyline. Since the weight of the log is

completely or partially supported by the cable, there is little disturbance to soil or other vegetation.

slash- The residue left on the ground after timber cutting or left after a storm, fire, or other event. Slash includes unused logs, uprooted stumps, broken or uprooted stems, branches, bark, etc.

slump- A landslide where the underlying rock masses tilt back as they slide from a cliff or escarpment.

small game- Birds and small animals normally hunted or trapped.

snag- A standing dead tree. Snags are important as habitat for a variety of wildlife species and their prey.

soil compaction- The reduction of soil volume. For instance, the weight of heavy equipment on soils can compact the soil and thereby change it in some ways, such as in its ability to absorb water.

soil productivity- The capacity of a soil to produce a specific crop. Productivity depends on adequate moisture and soil nutrients, as well as favorable climate.

sound wood- Timber that is in solid, whole, good condition. Sound wood is free from damage, decay, or defects.

special use permit- A permit issued to an individual or group by the USDA Forest Service for use of National Forest land for a special purpose. Examples might be a Boy Scout Jamboree or a mountain bike race.

stand- A group of trees that occupies a specific area and is similar in species, age, and condition.

standards and guidelines- Requirements found in a Forest Plan which impose limits on natural resource management activities, generally for environmental protection.

stewardship- Caring for the land and its resources to pass healthy ecosystems to future generations.

stocking level- The number of tree in an area as compared to the desirable number of trees for best results, such as maximum wood production.

stringer- A strip of vegetation different from surrounding vegetation, such as a stringer of aspen in a area of spruce.

structure- How the parts of ecosystems are arranged, both horizontally and vertically. Structure might reveal a pattern, or mosaic, or total randomness of vegetation.

suitability- The appropriateness of certain resource management to an area of land. Suitability can be determined by environmental and economic analysis of management practices.

successional stage - A stage of development of a plant community as it moves from bare ground to climax. The grass-forb stage of succession precedes the woody shrub stage.

succession- The natural replacement, in time, of one plant community with another. Conditions of the prior plant community (or successional stage) create conditions that are favorable for the establishment of the next stage.

surface resources- Renewable resources that are on the surface of the earth, such as timber and forage, in contrast to ground water and minerals which are located beneath the surface.

sustainability- The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

sustainable- The yield of a natural resource that can be produced continually at a given intensity of management is said to be sustainable.

sustained yield- The yield that a renewable resource can produce continuously at a given intensity of management.

target- A National Forest's annual goals for accomplishment for natural resource programs. Targets represent the commitment the Forest Service has with Congress to accomplish the work Congress has funded, and are often used as a measure of the agency's performance.

thermal cover- Cover used by animals against weather. For elk, thermal cover can be found in a stand of coniferous trees at least 40 feet tall with a crown closure of at least 70%.

thinning- A cutting made in an immature stand of trees to accelerate growth of the remaining trees or to improve the form of the remaining trees.

threatened species- Those plant or animal species likely to become endangered throughout all or a specific portion of their range within the foreseeable future as designated by the U.S. Fish and Wildlife Service under the Endangered Species Act of 1973.

timber classification- The classification of forested lands into land management alternatives according to how the land relates to management of the timber resource there.

tractor logging- A logging method that uses tractors to carry or drag logs from the stump to a collection point.

treatment area- The site- specific location of a resource improvement activity.

tree opening- An opening in the forest created by even-aged silvicultural practices.

TSI (Timber Stand Improvement)- Actions to improve growing conditions for trees in a stand, such as thinning, pruning, prescribed fire, or release cutting.

type conversion- The conversion of the dominant vegetation in an area from forested to non-forested or from one species to another.

underburn- A burn by a surface fire that can consume ground vegetation and "ladder" fuels.

understory- The trees and woody shrubs growing beneath the overstory in a stand of trees.

uneven-aged management - Actions that maintain a forest or stand of trees composed of intermingling trees that differ markedly in age. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

unregulated harvest- Tree harvest that is not part of the allowable sale quantity (ASQ). It can include the removal of cull or dead material or non-commercial species. It also includes volume removed from non-suitable areas for research, to meet objectives other than timber production (such as wildlife habitat improvement), or to improve administrative sites (such as campgrounds.)

unsuitable lands- Forest land that is not managed for timber production. Reasons may be matters of policy, ecology, technology, silviculture, or economics

use, allowable- An estimate of proper range use. Forty to fifty percent of th annual growth is often used as a rule of thumb on ranges in good to excellent condition. It can also mean the amount of forage planned to be used to accelerate range rehabilitation.

variety class- A way to classify landscapes according to their visual features. This system is based on the premise that landscapes with the greatest variety or diversity have the greatest potential for scenic value.

vegetation management- Activities designed primarily to promote the health of forest vegetation for multiple-use purposes.

vegetation type- A plant community with distinguishable characteristics.

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

viable population- The number of individuals of a species sufficient to ensure the long-term existence of the species in natural, self-sustaining populations that are adequately distributed throughout their range.

virgin forest- A natural forest virtually uninfluenced by human activity.

visual quality objective- A set of measurable goals for the management of forest visual resources.

visual resource- A part of the landscape important for its scenic quality. It may include a composite of terrain, geologic features, or vegetation

watershed- The entire region drained by a waterway (or into a lake or reservoir. More specifically, a watershed is an area of land above a given point on a stream that contributes water to the streamflow at that point.

water table- The upper surface of groundwater. Below it, the soil is saturated with water.

water yield- The runoff from a watershed, including groundwater outflow.

wetlands- Areas that are permanently wet or are intermittently covered with water.

wilderness (Wilderness Area)- Undeveloped federal land retaining its primeval character, without permanent human habitation or improvements. It is protected and managed to preserve its natural condition. Wilderness Areas are designated by Congress.

wildfire- Any wildland fire that is not a prescribed fire.

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

windthrow- Trees uprooted by wind.

wood fiber production- The growing, tending, harvesting, and regeneration of harvestable trees.

woodland products- Harvestable items from pinyon-juniper woodlands. These include fuelwood, posts, pine nuts and Christmas trees.

yarding- Moving the cut trees from where they fell to a centralized place (landing) for hauling away from the stand.

ZOI (Zone of Influence)- The area influenced by Forest Service management activities.