CHAPTER 4. CONSULTATION AND COORDINATION

Preparers and Contributors

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes, and non-Forest Service persons during the development of this environmental assessment:

Interdisciplinary Team (IDT) Members:

Lori Bailey, Botanist – Bachelor of Science in Forest Biology, Utah State University, 1991. Fifteen years of Forest Service experience at the ranger district level in Utah and Oregon, specializing in silviculture, planning, and botany.

Shannon Brit, Range Conservationist --Bachelor of Science in Rangeland Management, Oregon State University, 1991. Bachelor of Science Agricultural Education Washington State University, 1986. Fifteen years of Forest Service and Natural Resource Conservation Service experience in Oregon and Washington specializing in rangeland management/soils at the ranger district and field office level.
Noelle Colby-Rotell, Writer/Editor—Bachelor of Arts in Communication, Eastern Washington University, 1990. Master of Arts in Communication, Washington State University, 1992. Doctoral student in Communication Psychology. Six years experience as a Public Relations Director in manufacturing.
Kim Conlee, Project Engineer – Associate of Art in Civil Engineering Technology, Blue Mountain Community College, 1974. Twenty-nine years of Forest Service experience at the district and forest level in Idaho and Oregon, specializing in management of forest transportation system through project planning, implementation, and monitoring.
Ryan Falk, Planner, Acting District Ranger – Bachelor of Science in Forest Management, Utah State University, 1985. Twenty-two years of Forest Service experience at the district level in Oregon, specializing in environmental planning.
Mike Feiger, Wildlife Biologist – Bachelor of Science in Wildlife Resources, University of Idaho, 1995. Ten years of Forest Service experience at the ranger district level in Oregon, specializing in fisheries and wildlife habitat inventory and management.
Susan Harries, Forestry Technician, Writer/Editor – Bachelor of Science in Forest Management, Colorado State University, 1980. Twenty-five years of Forest Service experience at the ranger district level in Colorado and Oregon, specializing in timber sale preparation.
Ken Kincaid, Supervisory Forester – Bachelor of Science in Forestry Resources Management, University of Idaho, 1979. Thirty years of Forest Service experience at the ranger district level in Oregon and Idaho, specializing in silviculture.
Rick Larson, Planner– Bachelor of Science in Forestry, Oklahoma State University, 1975. Twenty-seven years of Forest Service and Bureau of Land Management experience in Oregon, Washington, and Montana, specializing in forest management/ planning and administration of lands/minerals programs at the ranger district and forest level.

Alan Miller, Fish Biologist – Bachelor of Science in Fish Science, Oregon State University, 1989. Master of Science, Fish and Water Resources, Oregon State University, 1997. Five years of Forest Service experience at the district and forest level in Oregon, specializing in fisheries management and hydrology.

Glenn Miller, Sale Administrator, Logging Systems/Economics – Associate Degree in Forestry, Clatsop Community College, 1967. Thirty-six years of Forest Service experience at the ranger district level in Oregon, specializing in timber sale preparation and timber sale administration.

Mary Roberston, Archaeologist – Bachelor of Arts, University of Montana, 1981, Master of Arts/Anthropology, Idaho State University, 2000. Twelve years of Forest Service and National Park Service experience in eastern Oregon, Idaho, New Mexico, California, Wyoming, Arizona, Utah, and Nevada, specializing in cultural resource management.

Don Rotell, Archaeologist – Bachelor of Arts in Anthropology, Washington State University, 1992. Ten years of Forest Service and Bureau of Land Management experience in eastern Oregon, specializing in cultural resource management.

Kristine Shull, Wildlife Biologist - Bachelor of Science in Biological Science, South Dakota State University, 1989. Fifteen years of Forest Service experience at the ranger district level in Oregon, specializing in wildlife habitat inventory and management.

Jim Soupir, Hydrological/Soils Technician – Associate of Applied Science, University of Minnesota-Crookston, 1979. Twenty-four years of Forest Service experience at the district level in Oregon and Idaho, specializing in timber sale preparation, silviculture, and hydrology/soils/fisheries.

Anthony Starkovich, Fire/Fuels Specialist– Bachelor of Science in Forest Resource Management, University of Idaho, 1994. 15 years of Forest Service experience at the district level in Oregon and Washington, specializing in fire management and forest restoration.

Eric Werner, Forester – Bachelor of Science in Forest Resource Management, University of Idaho, 1996. Five years of Forest Service experience at the district level in Oregon, specializing in timber sale preparation and silviculture.

Shannon Winegar, Recreation Specialist– Bachelor of Science in Nursing, Eastern Oregon University, 2003 and Associate of Liberal Studies, Eastern Oregon University, 2001. Nineteen years of Forest Service experience at the ranger district level in Oregon specializing in forest recreation management/planning and administration programs.

Contributors

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes, and non-Forest Service persons during the development of this environmental impact statement:

MANAGEMENT AND REVIEW:

Larry Bright - Threatened and Endangered Species Coordinator
Greg Whipple - GIS
Dan Bennett - GIS

Terry Corning-Sevey - GIS
Steve Cossette - Forest NEPA Coordinator
Jennifer Harris - Public Affairs, Tribal Relations
William McArthur – Former Forest Silviculturist
Sarah Bush - Fish Biologist
Brooks Smith - Prairie City District Ranger
Roger Ogden - Regional Appeals Coordinator

FEDERAL, STATE, AND LOCAL AGENCIES:

National Oceanic and Atmospheric Administration-Fisheries (NOAA)
U.S. Fish and Wildlife Service
Oregon Department of Fish and Wildlife/Ken Rutherford
Oregon Department of Forestry/Russ Lane
Grant County/Judge Dennis Reynolds

TRIBES:

Confederated Tribes of the Warm Springs Reservation
Confederated Tribes of the Umatilla Indian Reservation
Burns Paiute Tribe

Public Involvement Summary

The analysis of the Monument Fire Recovery Project began in October 2002. A Notice of Intent to prepare an Environmental Impact Statement (NOI) was published in the Federal Register on March 24, 2003. The project was also listed quarterly in the Schedule of Proposed Activities (SOPA) starting in the Summer/Fall of 2002 and continuing through the Fall/Winter of 2003/2004. A fire recovery open house was held at the Federal Building in John Day on February 13, 2003, and on February 14, 2003, the agency mailed a scoping letter seeking public comment to approximately 130 groups, other agencies, and individuals who had previously shown interest in Malheur National Forest projects.

In response to these scoping efforts, written comments were received from 13 interested parties. In addition to comments supporting the project, the District received comments reflecting concerns related to potential adverse impacts on soils, wildlife and aquatic habitat, and economics. Public comments were used in the development of the reasonable range of alternatives and the identification of the significant issues.

In July 2003 the Monument Fire Recovery Project Draft Environmental Impact Statement was published by the Malheur National Forest, and a Notice of Availability (NOA) was published in the Federal Register by the Environmental Protection Agency on August 3, 2003. A news release announcing the availability of the DEIS was also published in the Blue Mountain Eagle on August 13, 2003. The DEIS was mailed to over 80 individuals, organizations, or agencies, as well as the Confederated Tribes of Warm Springs, the Confederated Tribes of the Umatilla Indian Reservation, and the Burns Paiute Tribe. The DEIS was made available to the public for a 45-day review and comment period which ended on September 23, 2003. Eleven timely comments were received in response to the DEIS (see Table 4-1). Information received from these sources of public involvement was used by the Interdisciplinary Team (IDT) to help refine and develop this final EIS.

The IDT reviewed the 11 letters with comments on the DEIS and addressed each substantive comment provided. The 11 letters are disclosed in Response to Comments section in Appendix F of the FEIS. Comments received on the DEIS were assigned a number to track them through the review and response process. Table 4-1 lists those who commented and the tracking number assigned to their letter.

Table 4-1: Individuals Who Commented on the Monument DEIS

Letter Number	Commentor
1	Walt Gentis-Malheur Lumber Company
2	Linda Driskill
3	Doug Heiken-Oregon Natural Resources Council
4	Ken Evans-KLE Enterprises/Malheur Timber Operators, Inc
5	Erin Uhlemann-Northwest Environmental Defense Center
6	Asante Riverwind-League of Wilderness Defenders/Blue Mtn. Biodiversity Project
7	Josh Laughlin-Cascadia Wildlands Project
8	.Dan Becker
9	Dan Bishop-Prairie Wood Products.
10	Preston Sleeger-USDI Office of Environmental Policy and Compliance
11	Judith Leckrone – US EPA, Region 10

Distribution of the Final Environmental Impact Statement

In addition to the public involvement described above, copies have been sent to the following Federal agencies, federally recognized tribes, State and local governments, and organizations representing a wide range of views regarding the project. This environmental impact statement has been distributed to individuals who commented on the DEIS or requested a copy of the document.

Individuals

Linda	Driskill
William	Butler
Conrad	Bateman
Dan	Joyce
Geraldine	Joyce
Tony	Joyce
Mark	Joyce

Organizations, Industry, and Local Agencies

Dan Bishop..... Prairie Wood Products
Karen Coulter..... League of Wilderness Defenders/Blue Mtn. Biodiversity Project
Ken Evans ..... KLE Enterprises/Malheur Timber Operators, Inc.
Walt Gentis ..... Malheur Lumber Company
D. R. Johnson..... D. R. Johnson Lumber Company
Doug Heiken ..... Oregon Natural Resources Council
Josh Laughlin..... Cascadia Wildlands Project
Asante Riverwind..... League of Wilderness Defenders/Blue Mtn. Biodiversity Project
Erin Uhlemann..... Northwest Environmental Defense Center
Thomas Partin ..... American Forest Resource Council
Bryan Bird..... Sierra Club National Forest Campaign

Oregon State Agencies

Department of Fish and Wildlife/Habitat Division/Dave McAllister
Planning and Development Section/Parks and Recreation Department
Water Resources Department/Rick Bastasch
Division of State Lands/John Lilly
Department of Geology and Mineral Industries/Dennis Olmstead
Department of Environmental Quality
Department of Land Conservation and Development/Jim Knight
Rural Development Section/Bill Campbell
Executive Department/State Economist/Paul Warner
Oregon Department of Forestry

Tribal Contacts

Burns Paiute Tribe/Tribal Chairman/Dean Adams
Burns Paiute Tribe/Cultural Res. Program/Charisse Snapp
Conf. Tribes of the Umatilla Indian Reservation/Chairman, Board of Trustees/Gary Burke
Conf. Tribes of the Umatilla Indian Reservation/Program Mgr., Env. Planning and Rights Protection/Rick George
Conf. Tribes of Warm Springs/Tribal Council Chairman/Olney Patt, Jr.
Conf. Tribes of the Umatilla Indian Reservation/Princ. Investigator/THPO, Cult. Res. Prog. Mgr./Manfred Jaehnig
Conf. Tribes of the Umatilla Indian Reservation/Natural Res. Policy Analyst/Harold Shepard
Conf. Tribes of the Umatilla Indian Reservation/Jim Webster
Conf. Tribes of the Umatilla Indian Reservation/Heritage/Shaun Steinmetz
Conf. Tribes of the Warm Springs Reservation/Cultural Res. Program Mgr./Sally Bird
Conf. Tribes of the Warm Springs Reservation /Fara Ann Currim
Conf. Tribes of the Warm Springs Reservation /Fish & Wildlife Mgr./Terry Luther
Conf. Tribes of the Warm Springs Reservation /Clay Penhollow
Conf. Tribes of the Warm Springs Reservation /Cultural Heritage Committee

Federal Agencies

U.S. Department of Agriculture

National Agricultural Library (3)
OPA Publication Stockroom
Director, Environmental Coordination (Chief 1950) (3)
USDA Forest Service, Region 6/Environmental Coordination
Policy and Planning Division
Natural Resource Conservation Service/ Environmental Coordinator of Ecological Sciences Division
USDA APHIS TDP/EAD

U.S. Department of Commerce

Northwest Regional Unit, (Portland, OR) of NOAA Fisheries

U.S. Department of the Interior

Director, Office of Environmental Policy and Compliance (9)

U.S. Environmental Protection Agency (EPA)

Office of Environmental Review (5)
Region 10 EIS Review Coordinator, Seattle (2)

U. S. Department of Defense

U. S. Army Engineer, North Pacific, CENPD
Naval Oceanography Division, U.S. Naval Observatory

U. S. Department of Energy

Office of Environmental Compliance/Director
Northwest Power Planning Council

U. S. Department of Transportation

Federal Aviation Administration, Northwest Region
Federal Highway Administration, Western Resource Center
Federal Energy Regulatory Commission/Advisor on Environmental Quality
Surface Transportation Board/Chief, Energy and Environment

Advisory Council on Historic Preservation

Western Office of Review

General Services Administration/Office of Planning & Analysis

Federal, State, and Local Officials

Senator Gordon Smith
Senator Ron Wyden
Representative Greg Walden
Governor Ted Kulongoski
Governor's Forest Advisor
State Representative Ted Ferrioli
Grant County Judge Dennis Reynolds

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GLOSSARY

A

Access — The mode by which activities are pursued and how well users can travel to or within the setting.
Advisory Council on Historic Preservation (ACHP) — An independent Federal agency that provides a forum for influencing Federal activities, programs, and policies as they affect historic resources.
Aquatic (and riparian) health — Aquatic and riparian habitats that support animal and plant communities that can adapt to environmental changes and follow natural evolutionary and biogeographic processes. Healthy aquatic and riparian systems are resilient and recover rapidly from natural and human disturbance. They are stable and sustainable; they maintain their organization and autonomy over time and are resilient to stress. In a healthy aquatic/riparian system, there is a high degree of connectivity from headwaters to downstream reaches, from streams to floodplains, and from subsurface to surface. Floods can spread into floodplains, and fish and wildlife populations can move freely throughout the watershed. Healthy aquatic and riparian ecosystems also maintain long-term soil productivity. Mineral and energy cycles continue without loss of efficiency.
Archaeological site — A place that has the potential to yield information important to scientific or scholarly studies of history or prehistory.
Area of Potential Effect (APE) — An Area of Potential Effect is the area that contains cultural resources that may reasonably be expected to be impacted by an undertaking. Effects may be physical, visual, auditory, or socio-cultural (King 1998).

B

Biophysical environment or Bioenvironment — The interaction of climatic factors (moisture and temperature) and soil conditions on the expression of vegetation types and associated habitats. Climatic and soil conditions that result in similar successional pathways, disturbance processes, and associated vegetative/habitat characteristics are referred to as a biophysical environment.

C

Canopy — In a forest, the branches from the upper-most layer of trees; on rangeland, the vertical projection downward of the aerial portion of vegetation.
Canopy closure — The amount of ground surface shaded by tree canopies as seen from above. Used to describe how open or dense a stand of trees is, often expressed in 10% increments.
Channel (stream) — The deepest part of a stream or riverbed through which the main current of water flows.
Closure — A road management term indicating the road cannot be used by motorized traffic. This limitation can be accomplished by regulation, barricade, or blockage devices. The road can be available for emergency use or permitted use, such as firewood cutting, during dry periods.
Code of Federal Regulations (CFR) — A codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government**.**
Competition — An interaction that occurs when two or more individuals make demands of the same resources that are in short supply.
Connectivity — The arrangement of habitats that allows organisms and ecological processes to move across the landscape; patches of similar habitats are either close together or linked by corridors of appropriate vegetation; the opposite of a fragmented condition.
Corridor (landscape) — Landscape elements that connect similar patches of habitat through an area with different characteristics. For example, streamside vegetation may create a corridor of willows and hardwoods between meadows or through a forest.
Cover — (1) Trees, shrubs, rocks, or other landscape features that allow an animal to partly or fully conceal itself. (2) The area of ground covered by plants of one or more species.
Cover type — A vegetation classification depicting a genus, species, group of species, or life form of tree, shrub, grass, or sedge; in effect, the present vegetation of an area.
Crown — The part of a tree containing live foliage; treetops.
Cryptocrystalline silicates (CCS, chert, flint) — Rock with texture consisting of crystals that is too small to be recognized and distinguished under an ordinary microscope.

D

Decommissioning — Activities to permanently remove a road from the transportation system. The management objective of the activities is to restore the hydrologic function. These activities include, as needed: the removal of drainage structures such as culverts, re-contouring cut and fill slopes, subsoiling, and re-vegetating the old road beds.

Density (stand) — The number of trees growing in a given area; usually expressed in terms of trees per acre.

Diameter at breast height (DBH) — Diameter of a tree in inches, measured at 4 ½ feet above the root collar on the uphill side of the tree.

Disturbance — Refers to events that alter the structure, composition, or function of terrestrial or aquatic habitats. Natural disturbances include, among others, drought, floods, wind, fires, wildlife grazing, and insects and diseases. Human-caused disturbances include, among others, actions such as timber harvest, livestock grazing, roads, and the introduction of exotic species.

Down wood — A tree or part of a tree that is dead and laying on the ground.

Duff — The partially decomposed organic material of the forest floor that lies beneath freshly fallen leaves, needles, twigs, stems, bark, and fruit.

Detrimental soil impacts: - A Forest Plan Standard limits the amount of detrimental soil impacts to 20% of a unit.

Detrimental Compaction – An increase in soil bulk density of 20 percent, or more, over the undisturbed level for volcanic ash soils. For all other soils it is an increase in soil bulk density of 15 percent, or more, over the undisturbed level. Assess changes in compaction by sampling bulk density, macro porosity, or penetration resistance in the zone in which change in relatively long term and that is the principal root development zone. This zone is commonly between 4 to 12 inches in depth.

Detrimental Displacement – The removal of more than 50 percent of the topsoil or humus enriched horizon from an area of 100 square feet, or more, which is at least 5 feet in width.

Detrimental Puddling – When the depth of ruts or imprints is 6 inches or more. Soil deformation and loss of structure are observable and usually bulk density is increased.

Detrimental Surface Erosion – Visual evidence of soil loss in areas greater than 100 square feet, rills or gullies and/or water quality degradation from sediment or nutrient enrichment.

Detrimental Burned Soil – Top layer of mineral soil has been significantly changed in color, oxidized to a reddish color, and the next one-half inch blackened from organic matter charring by heat conducted through the top layer. The detrimentally burned soil standard applies to an area greater than 100 square feet, which is at least 5 feet in width.

E

Ecosystem — A complete, interacting system of living organisms and the land and water that make up their environment; the home places of all living things, including humans.

Endangered species — Species listed under the Endangered Species Act, that are likely to become extinct within the foreseeable future throughout all or a significant portion of their range.

Environment — The combination of external physical, biological, social, and cultural conditions affecting the growth and development of organisms and the nature of an individual or community.

Erosion — The wearing away of the land surface by running water, wind, ice, gravity, or other geological activities; can be accelerated or intensified by human activities that reduce the stability of slopes or soils.

Ethnography — A descriptive, non-interpretive, non-comparable study of another culture.

Even-aged stand — Stand of trees in which all the trees are within one year of having been established, or have a narrow range of age classes.

F

Fire-dependent systems — Forests, grasslands, and other ecosystems historically composed of species of plants that evolved with and are maintained by fire regimes.

Fire-intolerant species — Species of plants that do not grow well with or die from the effects of too much fire. Generally these are shade-tolerant species.

Fire regime — The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, and seasonality of fire.
Fire return interval — The average time between fires in a given area.
Fire-tolerant species — Species of plants that can withstand certain frequency and intensity of fire. Generally these are shade-intolerant species.
Floodplain — The portion of river valley or level lowland next to streams, which is covered with water when the river or stream overflows its banks at flood stage.
Forage — Vegetation (both woody and non-woody) eaten by animals, especially grazing and browsing animals.
Forbs — Broad-leafed plants; includes plants that commonly are called weeds or wildflowers.
Forest health — The condition in which forest ecosystems sustain their complexity, diversity, resiliency, and productivity to provide for specified human needs and values. It is a useful way to communicate about the current condition of the forest, especially with regard to resiliency, a part of forest health that describes the ability of the ecosystem to respond to disturbances. Forest health and resiliency can be described, in part, by species composition, density, and structure.
Forest Plan (Forest Land and Resource Management Plan) — A document that guides natural resource management and establishes standards and guidelines for a national forest; required by the National Forest Management Act.
Fragmentation (habitat) — The break-up of a large land area (such as a forest) into smaller patches isolated by areas converted to a different land type; the opposite of connectivity.
Fuel (fire) — Dry, dead parts of trees, shrubs, and other vegetation that can burn readily.
Fuel ladder — Vegetative structures or conditions such as low-growing tree branches, shrubs, or smaller trees that allow fire to move vertically from a surface fire to a crown fire.
Fuel load — The dry weight of combustible materials per unit area; usually expressed as tons per acre.

G

Ground fire — A fire that burns the organic material in the soil layer, and the decayed material or peat below the ground surface.

H

Habitat — A place that provides seasonal or year-round food, water, shelter, and other environmental conditions for an organism, community, or population of plants or animals.
Habitat type — A group of plant communities having similar habitat relationships.
Harvest — (1) Felling and removal of trees from the forest. (2) Removal of game animals or fish from a population, typically by hunting or fishing.
Headwaters — Beginning of a watershed; un-branched tributaries of a stream.
Historical Range of Variability (HRV) — The natural fluctuation of ecological and physical processes and functions that would have occurred during a specified period of time. Refers to the range of conditions that are likely to have occurred prior to settlement of the project area by Euro-Americans (approximately the mid 1800s), which would have varied within certain limits over time. HRV is discussed in this document only as a reference point, to establish a baseline set of conditions for which sufficient scientific or historical information is available to enable comparison to current conditions.
Historic Property — As defined in the National Historic Preservation Act, any "district, site, building, structure, or object included in or eligible for inclusion to the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource."
Historic site — A type of cultural resource associated with the historic-era that may possess archaeological values; or may be valued in light of its ability to convey its association with important historic events, people, or architectural/engineering techniques. Historic sites usually must be 50 years of age or more.
Hydrologic Unit Code (HUC) – The 2- to 8-digit classification dividing the levels of hydrology in the United States. The largest HUC is a region, divided hierarchically into subregions, accounting units, cataloging units, watersheds, and subwatersheds. (Watersheds are fifth-field HUCs; subwatersheds are sixth-field HUCs.)
Hunter-gatherers — A term for members of small-scale mobile or semi-sedentary societies, whose subsistence is dependent upon hunting game and gathering wild plants.
Hydrophobic Soil - Soil that does not readily absorb water. Hydrophobic soil is highly erodible. It is sometimes formed during sever fire on coarse textured soils. Hydrophobic soil usually returns to a non-hydrophobic condition after one or two winters.

I

Indicator species — A species that is presumed to be sensitive to habitat changes. Population changes of indicator species are believed to best indicate the effects of land management activities.

Intermittent stream — A stream that flows only at certain times of the year, when it receives water from other streams or from surface sources such as melting snow.

L

Landscape — All the natural features such as grass-lands, hills, forest, and water, which distinguish one part of the earth's surface from another part; usually that portion of land which the eye can comprehend in a single view, including all its natural characteristics.

Large down wood — Logs on the forest floor with a large end diameter of at least 21 inches.

Large woody debris (LWD) — Pieces of wood that are of a large enough size to affect stream channel morphology.

Late and Old Structural (LOS) Forest — (a) S*ingle stratum with large tree (SSWL) forest* refers to mature forest characterized by a single canopy layer consisting of large or old trees. Understory trees are often absent, or present in randomly spaced patches. SSWL generally consists of widely spaced, shade-intolerant species, such as ponderosa pine and western larch, adapted to a low-severity, high-frequency fire regime. (b) M*ulti-stratum with large tree (MSWL) forest* refers to mature forest characterized by two or more canopy layers with generally large or old trees in the upper canopy. Understory trees are also usually present, as a result of a lack of frequent disturbance to the understory. MSWL can include both shade-tolerant and shade-intolerant species, and is generally adapted to a mixed fire regime of both high-severity and low-severity fires. Other characteristics of old forests include: variability in tree size; increasing numbers of snags and coarse woody debris; increasing appearance of decadence, such as broken tops, sparse crowns, and decay in roots and stems; canopy gaps and understory patchiness; and old trees relative to the site and species.

Lithic Scatter — A type of archaeological site that consists of surface or buried concentrations of stone waste flakes and tools (Keyser et. al. 1988).

Litter — The uppermost layer of organic debris on the soil surface, which is essentially the freshly fallen or slightly decomposed vegetation material such as stems, leaves, twigs, and fruits.

M

Management direction — A statement of goals and objectives, management prescriptions, and associated standards and guidelines for attaining them.

N

National Register of Historic Places (NRHP) — A list of significant cultural resources that is maintained by the National Park Service. A "significant" site is a site that has been evaluated as eligible for inclusion to the National Register of Historic Places, or its eligibility status is undetermined.

National Environmental Policy Act (NEPA) of 1969 — "An act to establish a national policy for the environment, to provide for the establishment of a Council on Environmental Quality, and for other purposes."

O

Obsidian Hydration — A process in which a volcanic glass absorbs moisture in ever-thickening bands over time. Measurements of hydration bands on archaeological obsidian can indicate how long a surface has been exposed. Obsidian hydration analysis is usually considered a relative dating technique.

Ongoing actions — Those actions that have been implemented, or have contracts awarded or permits issued.

On-site recreation development — The degree and appropriateness of recreation facilities provided within the setting.

P

Prescribed fire — Intentional use of fire under specified conditions to achieve specific management objectives.

Prescription — A management pathway to achieve a desired objective(s).

Productivity — (1) *Soil productivity*: the capacity of a soil to produce plant growth, due to the soil's chemical, physical, and biological properties (such as depth, temperature, water-holding capacity, and mineral, nutrient, and organic matter content). (2) *Vegetative productivity*: the rate of production of vegetation within a given period. (3) *General*: the innate capacity of an environment to support plant and animal life over time.

Proposed Action — A proposal by a federal agency to authorize, recommend, or implement an action.

R

Recreation Opportunity Spectrum (ROS) — The Forest Service developed the Recreation Opportunity Spectrum (ROS) system to help identify, quantify, and describe the variety of recreational settings available in National Forests. The ROS system provides a framework for planning and managing recreation resources. The ROS settings are classified on a scale ranging from primitive to urban. Seven elements are used to determine where the setting belongs on the scale:

Recreation Visitor Day (RVD) — One visitor day equals 12 hours (one person for 12 hours, or 12 people for 1 hour, or any combination thereof).

Reforestation — Treatments or activities that help to regenerate stands of trees after disturbances such as harvest or wildfire. Typically, reforestation activities include preparing soil, controlling pests, and planting seeds or seedlings.

Regeneration — The process of establishing new plant seedlings, whether by natural means or artificial measures (planting).

Rehabilitate — To repair and protect certain aspects of a system so that essential structures and functions are recovered, even though the overall system may not be exactly as it was before.

Remoteness — The extent to which individuals perceive themselves removed from the sights and sounds of human activity.

Resilient, resilience, resiliency — (1) The ability of a system to respond to disturbances. Resiliency is one of the properties that enable the system to persist in many different states or successional stages. (2) In human communities, refers to the ability of a community to respond to externally-induced changes such as larger economic or social forces.

Restoration — Holistic actions taken to modify an ecosystem to achieve desired, healthy, and functioning conditions and processes; generally refers to the process of enabling the system to resume acting or continue to act following disturbance, as if the disturbances were absent. Restoration management activities can be either active (such as control of noxious weeds, thinning of over-dense stands of trees, or redistributing roads) or more passive (more restrictive, hands-off management direction that is primarily conservation-oriented).

Riparian area — Area with distinctive soil and vegetation between a stream or other body of water and the adjacent upland; includes wetlands and those portions of floodplains and valley bottoms that support riparian vegetation.

Riparian Habitat Conservation Area (RHCA) — Portions of watersheds where riparian-dependent resources receive primary emphasis, and management activities are subject to specific standards and guidelines. Riparian Habitat Conservation Areas include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams; (2) providing root strength for channel stability; (3) providing shading for streams; and (4) protecting water quality.

Roaded Modified — A natural environment substantially modified, particularly by vegetation and landform alterations. There is strong evidence of roads and /or highways. Frequency of contact is low to moderate.

Roaded Natural — A natural-appearing environment with moderate evidence of the sights and sounds of humans. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Motorized use is allowed.

Rockshelter — A small cave or overhang of rock that affords some degree of protection from the elements, either as a permanent camp or temporary location of activity.

S

Scoping — The early stages of preparation of an environmental impact statement/ environmental assessment; used to solicit public opinion, receive comments and suggestions, and determine the issues to be considered in the development and analysis of a range of alternatives. Scoping may involve public meetings, telephone conversations, mailings, letters, or other contacts.

Sediment — Solid materials, both mineral and organic, in suspension or transported by water, gravity, ice, or air; may be moved and deposited away from their original position and eventually will settle to the bottom.

Semi-Primitive Motorized — A natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The opportunity exists to use motorized equipment.

Semi-Primitive Non-Motorized — A natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. Use of local roads for recreational purposes is not allowed.
Sensitive species — Species identified by a Forest Service regional forester or BLM state director for which population viability is a concern either (a) because of significant current or predicted downward trends in population numbers or density, or (b) because of significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.
Seral — Refers to the stages that plant communities go through during succession. Developmental stages have characteristic structure and plant species composition. *Early seral* refers to plants that are present soon after a disturbance or at the beginning of a new successional process (such as seedling or sapling growth stages in a forest); *mid-seral* in a forest would refer to pole or medium sawtimber growth stages; *late or old seral* refers to plants present during a later stage of plant community succession (such as mature and old forest stages).
Seral stage — The developmental phase of a forest stand or rangeland with characteristic structure and plant species composition.
Shade-intolerant species — Species of plants that do not grow well in or die from the effects of too much shade. Generally these are fire-tolerant species.
Shade-tolerant species — Species of plants that can develop and grow in the shade of other plants. Generally these are fire-intolerant species.
Silviculture — The practice of manipulating the establishment, composition, structure, growth, and rate of succession of forests to accomplish specific objectives.
Site — A specific location of an activity or project, such as a campground, a lake, or a stand of trees to be harvested.
Snag — A standing dead tree, usually larger than five feet tall and larger than six inches in diameter at breast height. Snags are important as habitat for a variety of wildlife species and their prey.
Social encounters — The degree of solitude or social opportunities provided.
Soil — The earth material that has been so modified and acted upon by physical, chemical, and biological agents that it will support rooted plants.
Soil disturbance — Describes effects of the alternatives on soil productivity.
Stand — A group of trees in a specific area, that is sufficiently alike in composition, age, arrangement, and condition so as to be distinguishable from the forest in adjoining areas.
Stand density — Refers to the number of trees growing in a given area; usually expressed in trees per acre.
Stand structure — The size and arrangement, both vertically and horizontally, of vegetation. Forested vegetation is classified into 7 different structural stages:

Stand Initiation – When land is occupied by trees following a stand-replacing disturbance.

Stem Exclusion Open Canopy – Forested areas where the occurrence of new trees is predominantly limited by moisture.

Stem Exclusion Closed Canopy – Forested areas where the occurrence of new trees is predominately limited by light.

Understory Reinitiation – When a second generation of trees is established under an older, typically seral, overstory.

Young-Forest Multistory – Stand development resulting from frequent harvest or lethal disturbance to the overstory.

Old-Forest Multistory – Forested areas lacking frequent disturbance to understory vegetation.

Old-Forest Single-Story – Forested areas resulting from frequent non-lethal prescribed or natural underburning, or other management.

The abundance and distribution of these forest structures provides the basis for evaluation of the historic range of variability (HRV) of structural conditions, providing insight to the interaction of disturbance processes and associated structural and compositional conditions of forested landscapes.

State Historic Preservation Office (SHPO) — The agency that represents the interests of the state in historic preservation and cultural resources. Federal land managers are required by the National Historic Preservation Act of 1966, to consult with the SHPO during land management planning.
Structure — The size and arrangement, both vertically and horizontally, of vegetation.
Structural stage — A stage of development of a vegetation community, that is classified on the dominant processes of growth, development, competition, and mortality.
Subwatershed — A drainage area of approximately 20,000 acres, equivalent to a 6th-field Hydrologic Unit Code (HUC). Hierarchically, subwatersheds (6th-field HUC) are contained within a watershed (5th-field HUC), which in turn is contained within a subbasin (4th-field HUC).

T

Terrestrial — Pertaining to the land.
Terrestrial communities — Groups of cover types with similar moisture and temperature regimes, elevational gradients, structures, and use by vertebrate wildlife species.
Thermal cover — Cover used by animals to protect them against weather.
Thinning — An operation to remove stems from a forest for the purpose of reducing fuel, maintaining stand vigor, regulating stand density/composition, or for other resource benefits. Although thinning can result in commercial products, thinning generally refers to non-commercial operations.
Threatened species — Species listed under the Endangered Species Act, that are likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

U

Underburn — To burn by a surface fire that can consume ground vegetation and ladder fuels.
Understory — Plants that grow beneath the canopy of other plants. Usually refers to grasses, forbs, and low shrubs under a tree or shrub canopy.
Uneven-aged stand — Stand of trees in which there are considerable differences in the ages of individual trees.
Upland — The portion of the landscape above the valley floor or stream.

V

Viability — In general, viability means the ability of a population of a plant or animal species to persist for some specified time into the future. For planning purposes, a *viable population* is one that has the estimated numbers and distribution of reproductive individuals, to ensure that its continued existence will be well-distributed in the planning area.
Visitor impacts — The degree of impact on both the attributes of the setting and other visitors within the setting.
Visitor management — The degree and appropriateness of how visitor actions are managed and serviced.
Visual quality — The degree of apparent modification of the natural landscape.

W

Watershed — (1) The region draining into a river, river system, or body of water. (2) A watershed also refers specifically to a drainage area of approximately 50,000 to 100,000 acres, which is equivalent to a 5th-field Hydrologic Unit Code (HUC). Hierarchically, subwatersheds (6th-field HUC) are contained within a watershed (5th-field HUC), which in turn is contained within a subbasin (4th-field HUC).
Wetland — In general, an area soaked by surface or groundwater frequently enough to support vegetation that requires saturated soil conditions for growth and reproduction; generally includes swamps, marshes, springs, seeps, bogs, wet meadows, mudflats, natural ponds, and other similar areas. Legally, federal agencies define wetlands as possessing three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. The three technical characteristics specified are mandatory and must all be met for an area to be identified as a wetland. *Hydrophytic vegetation* is defined as plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. *Hydric soils* are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic (without oxygen) conditions in the upper part of the soil profile. Generally, for soil to be considered hydric, it must be saturated at temperatures above freezing for at least seven days. *Wetland hydrology* is defined as permanent or periodic inundation, or soil saturation to the surface, at least seasonally.
Wildfire — A human-caused or naturally-caused fire that does not meet land management objectives.

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