

Chapter 5 — Preparers, References, Glossary, Distribution List, and Index

Changes Between Draft and Final

The following changes were made to Chapter 5 between the draft and final SEIS. Minor corrections, explanations, and edits are not included in this list.

Changes/edits were made to:

- Add additional words to the Glossary; and
- add a final SEIS distribution list.

Preparers

Port-Orford-Cedar-SEIS Core Team

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John Kliejunas: *Regional Forest Pathologist, Pacific Southwest Region.* M.S., Forestry, University of Minnesota; Ph.D., Plant Pathology, University of Wisconsin, Madison. John has 7 years of experience with *Phytophthora* in Hawaii forest ecosystems, authoring numerous publications on *P. cinnamomi* and native forest decline. He has been on the Forest Health Protection staff in Region 5 since 1979 and has served as acting Forest Health Protection Program Leader. He is one of the original members of the interregional Port-Orford-cedar coordinating group, and has worked with *Phytophthora lateralis* for the last 23 years. John is a member of the American Phytopathological Society and the USDA-FS Wood Import Pest Risk Assessment Team.

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Jon Raybourn: *Fisheries Biologist.* B.S., Wildlife Management, M.S., Environmental Systems, Humboldt State University. Jon is currently the Fisheries Program Lead for the Grants Pass Resource Area of the Medford BLM District. He has 9 years of fisheries and wetland experience with the BLM in Medford and county government in Washington. He currently works as the fisheries specialist on EAs and EISs for restoration and landscape management projects. Jon's experience with cedar root disease management includes the use of POC to rehabilitate anadromous fish habitat in a mining reclamation project.

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Glossary

Acre ~ A land area measurement based on horizontal plane; 43,560 square feet; 1/640th of a square mile; approximately 0.4 hectares; if square, nearly 209 feet on a side.

Adaptive management ~ A continuing process of action-based planning, monitoring, researching, evaluating, and adjusting with the objective of improving implementation and achieving the goals of the standards and guidelines.

Adaptive Management Areas ~ Land allocation under the Northwest Forest Plan; areas designated for development and testing of technical and social approaches to achieving desired ecological, economic, and other social objectives.

Administratively Withdrawn Areas ~ Areas removed from the suitable timber base through agency direction and land management plans.

Allele frequency ~ Frequency of alleles in a population. An allele is one of a pair (in diploid individual) or series (in a population) of genes located at the same locus in homologous chromosomes and controlling the same character.

Allozyme ~ Refers to segregating electrophoretic variants of enzymes.

Alluvium ~ Stream sediments and organic materials moved and deposited by the action of flowing water.

Alternative ~ One of several policies, plans, or projects proposed for making decisions.

Amphibians ~ Cold-blooded vertebrates, including frogs, toads, salamanders, and newts, having four limbs and glandular skin; tied to moist or aquatic habitats for all or at least part of their life cycle.

Angular canopy density ~ The quality of shade, determined by the position of the sun during the day and the influence of vegetation blocking the incoming radiation.

Arcuate ~ Having the form of a bow; curved.

Autecology ~ The branch of ecology that deals with the biological relationship between an individual organism or an individual species and its environment.

Biological evaluation ~ A documented FS review of activities in sufficient detail to determine how an action or proposed action may affect any threatened, endangered, proposed, or sensitive species.

Biological diversity ~ The variety of life and its processes.

Breeding ~ The science or art of changing the genetic constitution of a population of plants or animals.

Breeding block ~ A breeding block designates the geographic area which envelops a number of breeding zones.

Breeding zone ~ A breeding zone designates a unit of land in which an improved population of a species is being developed. Progeny testing and/or breeding activity is conducted to obtain an “improved” population (for one or more traits of interest) over time. The boundaries of a breeding zone may or may not coincide with seed zones. In many instances, a breeding zone covers multiple seed zones.

Buffer ~ In Alternatives 3 and 6, all lands within the currently uninfested 6th or 7th field watersheds (respectively) except stands containing POC (see Chapter 2).

Bureau assessment species ~ Plant and animal species on List 2 of the Oregon Natural Heritage Data Base, or those species on the Oregon List of Sensitive Wildlife Species (OAR 635100040), which are identified in BLM Instruction Memo No. OR9157, and are not included as Federal candidate, state listed, or Bureau sensitive species.

Bureau sensitive species ~ Plant or animal species eligible for Federal listed, Federal candidate, state listed, or state candidate (plant) status, or on List 1 in the Oregon Natural Heritage Data Base, or approved for this category by the State Director.

Candidate species ~ Those plant and animal species that, in the opinion of the USFWS or NOAA-NMFS, may qualify for listing as endangered or threatened. The USFWS recognizes two categories of candidates: Category 1 candidates are taxa for which the USFWS has on file sufficient information to support proposals for listing; Category 2 candidates are taxa for which information available to the USFWS indicates that proposing to list is possibly appropriate, but for which sufficient data are not currently available to support proposed rules.

Canopy cover ~ See *percent cover*.

Catchment ~ A delineated hydrologic unit depicting the location of a drainage area that is typically 1,000 to 10,000 acres in size; the 7th division level of the Nation’s drainages; represented by extending the hydrologic unit code to 14 digits (*Source:* http://www.reo.gov/gis/projects/watersheds/Data_Standards2.htm). Also called *7th field watershed*.

Chronic ~ Marked by long duration or frequent recurrence.

Channel morphology ~ The form and arrangement of stream channels in watersheds.

Checkerboard ~ The land ownership pattern derived from having granted railroad rights to every other section for many miles either side of proposed railroad lines.

Cline ~ A geographic gradient, which is often associated with adaptive genetic response to the gradients.

Clone ~ For POC, a group of identical genotypes propagated by traditional method of rooted cuttings. Rooted cuttings are used to establish a containerized seed orchard and for root dip resistance testing.

Coarse woody debris ~ Portion of a tree that has fallen or been cut and left in the woods. Usually refers to pieces at least 20 inches in diameter.

Common garden study ~ As the name implies, a common garden study is designed to compare variation patterns of a few to relatively large numbers of genetic identities (such as provenances, open-pollinated or controlled pollinated families, and clones), all grown in at least one, but frequently several, uniform test sites, or “gardens”.

Compaction ~ See *soil compaction*.

Complete resistance (for POC) ~ POC seedlings or trees show no significant sign or symptom of infection after exposure to PL. In greenhouse root dip testing there is no visible sign of measurable root infection upon examining roots; in field tests tree survival is near expected levels and inconsistencies may be due to undetermined causes of mortality that occur. The underlying resistance mechanism(s) for complete resistance are unknown at this time, but preliminary analysis indicates this type of resistance shows major gene inheritance. The durability of complete resistance in POC will depend upon the particular type of resistance and attributes of the pathogen. There is no evidence to date of a virulent strain that overcomes complete resistance in POC. Normal infection is through the root tips, and it is possible that wounded roots would provide a different entry point for the pathogen.

Confined channel ~ A stream that is vertically contained, by incisement or hillslopes, and does not spread appreciably with increasing streamflow.

Congressionally Reserved Areas ~ Areas that require congressional enactment for their establishment, such as national parks, wild and scenic rivers, national recreation areas, national monuments, and wilderness. Also referred to as Congressional Reserves. Includes similar areas established by Executive order such as national monuments.

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

Conservation genetics ~ The use of genetics to preserve species as dynamic entities that can evolve to cope with environmental change and thus minimize their risk of extinction.

Conservation agreement ~ A formal written document agreed to by USFWS and/or NOAA-NMFS and another Federal agency, Tribe, state agency, local government, or the private sector to achieve the conservation of candidate species through voluntary cooperation. It documents the specific actions and responsibilities for which each party agrees to be accountable. The objective of a conservation agreement is to reduce threats to a candidate species and/or its habitat. An effective conservation agreement may lower listing priority or eliminate the need to list a species.

Core ~ In Alternative 3 and 6, stands with POC within the currently uninfested 6th or 7th field watersheds (respectively) (see Chapter 2).

Cumulative effect ~ The impact which results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Deme ~ a local group of interbreeding individuals.

Dendrochronology ~ A method of dating trees and natural events by examining the ages and ring patterns of forest trees and snags.

Discretionary roads ~ Roads not covered by reciprocal right-of-way agreements or other binding reservations preventing the agencies from unilaterally closing or otherwise preventing others from full use. See Encumbered Forest Roads section in Chapter 3&4.

Disease ~ An abnormal, injurious physiological condition brought about by a continuous irritation. Plant disease usually involves a complex relationship between a susceptible host, a conducive environment, and a causal agent called a pathogen.

Disjunct stands or populations ~ Stands or populations of trees that are separated in location and are not contiguous.

Diurnal ~ Day to night change, as with temperature.

Drainage ~ see *watershed*.

Dry season ~ From the Pathology section, generally between June 1 and September 30, when conditions are dry and temperatures typically exceed 68 degrees F.

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

Ecological amplitude ~ The breadth of the biological and environmental requirements of a species such as temperature, moisture, soil types, hosts, and stand ages.

Ecosystem approach ~ A strategy or plan to manage ecosystems to provide for all associated organisms, as opposed to a strategy or plan for managing individual species.

Effective population size ~ The number of individuals that would give rise to the calculated sampling variance, or rate of inbreeding, if they bred in the manner of the idealized population; where idealized population is defined as one in which mating is random, migration is excluded, no mutation, generations are distinct, and no selection applied.

Effects ~ *Effects, impacts, and consequences* are synonymous. Effects may be either *direct*, which are caused by the action and occur at the same time and place; *indirect*, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable; or *cumulative*. Effects may fall in one of these categories: aesthetic, historic, cultural, economic, social, health, or ecological (such as effects on natural resources and on the components, structures, and functioning of affected ecosystems).

Effects ~ Analysis of environmental consequences of a proposed action.

Endangered species ~ Any plant or animal species in danger of extinction throughout all, or a significant portion of its range.

“Endangered Species Act” (ESA) ~ A law passed in 1973 to conserve species of wildlife and plants determined by the Director of the USFWS or the NOAA-NMFS to be endangered or threatened with extinction in all or a significant portion of its range. Among other measures, ESA requires all Federal agencies to conserve these species and consult with the USFWS or NOAA-Fisheries on Federal actions that may affect these species or their designated critical habitat.

Endemic or endemism ~ Unique to a specific locality or the condition of being unique to a specific locality.

Environment ~ The aggregate of physical, biological, economic, and social factors affecting organisms in an area.

Environmental analysis (EA) ~ An analysis of alternative actions and their predictable short-term and long-term environmental effects, incorporating physical, biological, economic, and social considerations.

Environmental impact statement (EIS) ~ A statement of the environmental effects of a proposed action and alternatives to it required for major Federal actions under Section 102 of the 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 guidelines, and directives of the agency responsible for the project proposal.

Ephemeral stream ~ A channel that only flows water during and shortly after storm events.

Epidemic ~ A disease outbreak.

Epidemiology ~ Factors affecting outbreak and spread of an infectious disease.

Eradication ~ Removal of live POC around a PL infestation to keep PL from spreading.

Evolution ~ Long-time changes in gene frequency and phenotypic characteristics of a population or group of populations.

Evolutionary force ~ Processes which change gene frequencies over time; usually referenced as mutation, migration, and selection.

Ex situ conservation ~ Saving genes and genotypes offsite such as in the form of seed and clonal propagation, in order to preserve the genetic material over time.

Federal candidate taxa ~ A classification category for those threatened, endangered, and sensitive plants or animals listed in the *Federal Register*, and other plants recommended for addition to the Federal candidate list.

Fen ~ A wetland of slow moving, often alkaline water with sedge (not sphagnum) peat underfoot.

Field water potential ~ An integration of the net effect of plant water relations' characteristics and their interaction with the environment. Often evaluated by inserting plant tissue into

an enclosed chamber and measuring the amount of pressure (expressed in milli-pascals, or MPa) required to just begin to force moisture from the severed stem. Commonly assessed at pre-dawn, when the plants are least stressed by the environment and again at mid-day when stresses are usually higher.

Fire management plan ~ A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land or resource management plan.

Floodplain ~ That area along stream channel margins that can be inundated during flows that are greater than the normal channel dimensions; sometimes called the *floodprone* area.

Flora ~ Plants.

Fluvial erosion ~ The action of stream bank or bed removal by the forces of flowing water.

Forb ~ A herbaceous plant that is not a graminoid.

Forest Ecosystem Management Assessment Team (FEMAT) ~ An interagency, interdisciplinary team of scientists, economists, and sociologists led by Dr. Jack Ward Thomas and chartered to review proposals for management of Federal forests within the range of the northern spotted owl. The team produced a report assessing ten options in detail, which were used as a basis for developing the Northwest Forest Plan.

Founder effects ~ When a species colonizes a new area, the founding members are referred to as the founders of the new population. If the founding number of individuals are few, a substantial amount of genetic drift can occur.

Full-sibs ~ Trees with both parents in common.

Gene flow ~ The spread of genes through crossing.

Genecology ~ A combination of ecology and genetics.

Genetic drift ~ Change in gene frequency and population structure due to chance rather than by selection, and usually more pronounced in small populations.

Genetic structure ~ The relative pattern of genetic variation and differentiation among populations or segments of the genome. Change in genetic structure can be summarized by the changes in allele frequencies, heterozygosity, and genetic variances and covariances. Genetic variation/structure is most often measured indirectly by the use of molecular markers and quantitative genetic assessments. Changes in structure can be measured indirectly over time by the above methods, or can be inferred by population and quantitative genetics theory.

Graminoid ~ All grasses and grass-like plants, including sedges and rushes.

Ground-based logging system ~ Tractor or cable partial suspension (as opposed to cable full suspension or helicopter).

Growth phenology ~ The timing of periodic phenomena such as growth initiation, growth cessation, especially as related to seasonal changes in temperature, moisture, and photoperiod.

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

Habitat type ~ An aggregation of all land areas potentially capable of producing similar plant communities at climax stage.

Half-sibs ~ Trees with one parent (usually the female) in common.

Headwaters ~ Uppermost contributing drainage area in a watershed; also refers to the start of visible streamflow in a channel.

Heavy equipment ~ Wheeled or tracked equipment other than highway vehicles, used for construction, road maintenance, logging, pipe-laying, and similar work; some examples are backhoes, Bobcats®, skidders, yarders, and graders.

Heterozygosity ~ A measure or reference to the amount of heterozygous condition of populations or species. The proportion of loci that are polymorphic (that is, more than one form) among the loci tested. The average heterozygosity refers to the frequency of heterozygotes averaged over the loci tested.

Hierarchical model ~ One or more sampling units are represented within the experiment. The units are ordered and variation among the sampling units is assessed. The general ordering or listing of units is referred to as the hierarchy in the model formulation and subsequent statistical analysis.

High-risk site ~ Low-lying wet areas (infected or not) that are located downslope from already infected areas or below likely sites for future introductions, especially roads; they include streams, drainage ditches, gullies, swamps, seeps, ponds, lakes, and concave low-lying areas where water collects during rainy weather.

Host ~ A living plant that affords subsistence to a parasite.

Hypha ~ One of the strands or filaments that make up the mycelium of a fungus or fungus-like organism.

Impact ~ A spatial or temporal change in the environment caused by human activity.

Inbreeding ~ Mating between close relatives; often associated with mating in a population consisting of a few individuals.

Infected ~ Refers to the attack of a living organism by a pathogen (the pathogen enters and establishes a pathogenic relationship with its host).

Infested ~ Refers to soil or other substratum that is occupied by a pathogen (used in the sense of “contaminated”).

Inoculate ~ To bring a pathogen into contact with a host plant or plant organ.

Inoculum ~ (1) The substance, generally a pathogen, used for inoculating; (2) to put a micro-organism or virus, or a substance containing one of the aforementioned, into an organism or substratum. Also, pathologists use these terms to apply both to inoculations conducted by humans and to inoculations that occur in nature.

In situ conservation ~ Management of populations onsite to conserve the gene pool in the context of the natural evolutionary processes that occur over time.

Interdisciplinary team (ID team) ~ A group of individuals with varying areas of specialty assembled to solve a problem or perform a task. The team is assembled out of recognition that no one scientific discipline is sufficiently broad to adequately analyze the problem and propose action.

Intermittent stream ~ A channel whose base level is above the water table and has a duration of streamflow greater than 30 days, but less than all year. Normally, this type of channel has enough streampower to cause scour or deposition of sediments.

Isohyet ~ A line drawn on a map connecting points that receive equal amounts of rainfall.

Issue ~ A point, matter, or question of public discussion or interest to be addressed or decided through the planning process.

Land management ~ Intentional process of planning, organizing, programming, coordinating, directing, and controlling land use actions.

Land Use Allocations (LUAs) or Land Allocations ~ Use in this SEIS is limited to the seven designations of management emphasis identified in land and resource management plans for each administrative unit as a result of the 1994 “Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl.” The seven land allocations are Congressionally Reserve, Late-Successional Reserve, Adaptive Management Area, Managed Late-Successional Areas, Administratively Withdrawn, Riparian Reserve, and Matrix.

Landscape ~ A heterogeneous land area with interacting ecosystems repeated in similar form throughout.

Large woody debris ~ Wood in a stream channel larger than 6 inches in diameter and 10 feet long.

Late-successional forests ~ Forest stands consisting of trees, structural attributes, supporting biological communities, and processes associated with old-growth and/or mature forests. Forest seral stages that include mature and old-growth age classes. Age is not necessarily a defining characteristic but has been used as a proxy or indicator in some usages. Minimum ages are typically 80 to 130 years, depending on the site quality, species, rate of stand development, and other factors.

Late-Successional Reserve ~ Land allocation under the Northwest Forest Plan with the objective to protect and enhance conditions of late-successional and old-growth forest ecosystems that serve as habitat for late-successional and old-growth forest-related species, including the northern spotted owl. Limited stand management is permitted, subject to review by the Regional Ecosystem Office.

Line officer ~ In the BLM and FS, the individual managers in the direct chain of command.

Locus ~ The fixed position of a gene on its chromosome.

Low-risk site ~ A site with characteristics unfavorable for spread and infection by a particular pathogen.

Maintenance ~ The retention of Port-Orford-cedar.

Managed Late-Successional Areas ~ Land allocation under the Northwest Forest Plan; similar to Late-Successional Reserves, but identified for certain owl territories in the drier provinces where regular and frequent fire is a natural part of the ecosystem. Certain silvicultural treatments and fire hazard reduction treatments are allowed to help prevent large-scale disturbance such as fires of high intensity or severity, disease, and insect epidemics.

Management indicator species ~ A species selected because its welfare is presumed to be an indicator of the welfare of other species sharing similar habitat requirements. A species of fish, wildlife, or plants, which reflect ecological changes caused by land management activities.

Mating systems ~ Refers to the crossing event or prevalent breeding method within a species. Mating systems can usually be defined as predominately selfing, predominately outcrossing, or mixed-selfing and outcrossing. Conifers are general outcrossing, but selfing also occurs to variable degrees within a respective species.

Matrix ~ Federal lands outside of reserves, withdrawn areas, managed Late-Successional Areas, and Adaptive Management Areas.

Mature forest ~ A subset of late-successional forests. Mature forests are characterized by the onset of slowed height growth, crown expansion, heavier limbs, gaps, some mortality in larger trees, and appearance of more shade-tolerant species or additional crown layers. In Douglas-fir west of the Cascades, this stage typically begins between 80 and 130 years, depending on site conditions and stand history.

Microclimate ~ The suite of climatic conditions measured in localized areas near the Earth's surface. Microclimate variables important to habitat may include temperature, light, wind speed, and moisture.

Migration ~ The movement of genes from one population to another population; usually referenced as the proportion of new immigrants which move to another population in any one generation.

Mitigation measures ~ Modifications of actions taken to: (1) avoid impacts by not taking a certain action or parts of an action; (2) minimize impacts by limiting the degree or magnitude of the action and its implementation; (3) rectify impacts by repairing, rehabilitating, or restoring the affected environment; (4) reduce or eliminate impacts over time by preservation and maintenance operations during the life of the action; or, (5) compensate for impacts by replacing or providing substitute resources or environments.

Mollusks ~ Invertebrate animals (such as slugs, snails, clams, or squids) that have a soft unsegmented body usually enclosed in a calcareous shell.

Monitoring ~ A process of collecting information to evaluate if objectives and anticipated or assumed results of a management plan are being realized or if implementation is proceeding as planned.

Monitoring and evaluation ~ The evaluation, on a sample basis, of management practices to determine how well objectives are being met, as well as the effects of those management practices on the land and environment.

Mutation ~ A sudden change in genotype; usually a gene mutation (change in single gene) is inferred.

Mycelium ~ The mass of hyphae that makes up the body of a fungus or fungus-like organism.

Mycorrhiza ~ Underground fungi that provide a close physical association between the fungus and the roots of a plant, from which both the fungus and plant appear to benefit. A mycorrhizal root takes up nutrients more efficiently than one not associated with mycorrhiza. Mycorrhizal fungi (also known as ectomycorrhizal) are essential for host plant nutrient uptake and play important roles in nutrient cycling in many forests. Studies from the Pacific Northwest indicate that forest management activities can reduce populations of mycorrhizal fungi and forest regeneration success.

“National Environmental Policy Act” (NEPA) ~ An Act passed in 1969 to declare a national policy that encourages productive and enjoyable harmony between humankind and the environment, promotes efforts that prevent or eliminate damage to the environment and biosphere, stimulates the health and welfare of humanity, enriches the understanding of the ecological systems and natural resources important to the nation, and establishes a Council on Environmental Quality.

“National Forest Management Act” (NFMA) ~ A law passed in 1976 as an amendment to the “Forest and Rangeland Renewable Resources Planning Act,” requiring preparation of forest plans and the preparation of regulations to guide that development.

Non-vertebrate species ~ A species that does not have a backbone.

Northwest Forest Plan ~ Coordinated ecosystem management direction incorporated into land and resource management plans for lands administered by the BLM and the FS within the range of the northern spotted owl. In April 1993, President Clinton directed his cabinet to craft a balanced, comprehensive, and long-term policy for management of over 24 million

acres of public land within the range of the northern spotted owl. A Forest Ecosystem Management Assessment Team (FEMAT) was chartered to develop a series of options. These options were modified in response to public comment and additional analysis and then analyzed in a final SEIS. A record of decision was signed on April 13, 1994, by the Secretaries of the Department of Agriculture and the Department of Interior to adopt “Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl.” The record of decision, including the “Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl” is referred to as the Northwest Forest Plan. The Northwest Forest Plan is not a plan in the agency planning regulations sense; the term instead refers collectively to the 1994 amendment to existing agency land and resource management plans or to the specific standards and guidelines for late-successional species incorporated into subsequent land and resource management plans.

Noxious weed ~ A plant species that is highly injurious or destructive and has a great potential for economic impact; a plant species that is listed as noxious by the State of Oregon.

Off-highway vehicle ~ Any motorized vehicle capable of, or designed for, travel on land, water, or natural terrain. The term will be used in place of *off-road vehicle* to comply with the purposes of Executive Orders 11644 and 11989 (although the definition for both terms is the same).

Old-growth forest ~ An ecosystem distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics which may include tree size, accumulations of large dead woody material, number of canopy layers, species, composition, and ecosystem function. More specific parameters applicable to various species are available in the 1993 “Interim Old Growth Definitions” (USDA-FS Region 6). The Northwest Forest Plan SEIS and FEMAT describe old-growth forest as a forest stand usually at least 180- to 220-years old with moderate-to-high canopy closure; a multi-layered, multi-species canopy dominated by large overstory trees; high incidence of large trees, some with broken tops and other indications of old and decaying wood (decadence); numerous large snags; and heavy accumulations of wood, including large logs on the ground.

Pathogen ~ A parasite able to cause disease in a particular host or range of hosts.

Percent cover ~ Usually the percent of the ground overtopped by the crowns of trees or other plants.

Perennial stream ~ A stream that flows all year.

Planning area ~ All of the lands within a Federal agency’s management boundary addressed in land management plans. In this case, the portions of the Coos Bay, Medford, and Roseburg BLM Districts and the Siskiyou NF that lie within the natural range of POC.

Plant association ~ A plant community type based on land management potential, successional patterns, and species composition.

Plant community ~ An association of plants of various species found growing together in different areas with similar site characteristics.

Pourpoint ~ Upper extent of streamflow in a drainage system. This point can vary depending upon antecedent soils moisture conditions and prevailing weather.

Prescribed fire ~ Any fire ignited by management actions to meet specific objectives.

Prevent ~ As in *prevent new infections*: An objective, not a requirement.

Propagules ~ Any of various usually vegetative portions of a plant, such as a bud or other offshoot, that aid in dispersal of the species and from which a new individual may develop.

Proposed species ~ Any plant or animal species that is proposed by the USFWS and or NOAA-NMFS in a *Federal Register* notice to be listed as threatened or endangered.

Putative ~ Generally regarded as such; supposed.

Range of the northern spotted owl ~ Area generally comprised of lands in western portions of Washington, Oregon, and northern California.

Rare ~ A rare taxon can be (1) broadly distributed, but never abundant were found; (2) narrowly distributed or clumped, and abundant were found; or (3) narrowly distributed or clumped, and not abundant were found.

Record of decision ~ A document separate from, but associated with, an environmental impact statement that: (1) states the management decision; (2) states the reason for that decision, (3) identifies all alternatives including the environmentally preferable and selected alternatives; and (4) states whether all practicable measures to avoid environmental harm from the selected alternative have been adopted, and if not, why not.

Reforestation ~ The natural or artificial restocking of an area with forest trees.

Reserves ~ Congressionally Reserved Areas (such as wilderness) and land allocations that were designated under the Northwest Forest Plan, including Late-Successional Reserves, Riparian Reserves, and Managed Late-Successional Areas. Reserves help to protect and enhance conditions of late-successional and old-growth forest ecosystems. Stand management actions are either prohibited or limited within these allocations. The likelihood of maintaining a connected viable late-successional ecosystem was found to be directly related to the amount of late-successional forest in reserve status.

Resistant ~ Possessing qualities that hinder the development of a given pathogen.

Restoration ~ Planting disease and nondisease-resistant Port-Orford-cedar.

Restricted road ~ A NF road or segment, which is restricted from a certain type of use or all uses during certain seasons of the year or yearlong. The use being restricted and the time period must be specified. The closure is legal when the Forest Supervisor has issued and posted an order in accordance with 36 CFR 261.

Riparian ~ Pertaining to areas of land directly influence by water. Riparian areas usually have visible vegetative or physical characteristics reflecting this water influence. Stream-sides, lake borders, or marshes are typical riparian areas. Vegetation bordering watercourses, lakes, or swamps; it requires a high water table. In this SEIS, sometimes used as substitute for “high-risk sites,” although the two are not synonymous (see text of respective sections).

Riparian area ~ The shoreline zone including floodplains, along a stream or lake, affected by varying levels of subsurface water storage conditions; favoring water tolerant plants and forest vegetation. This linear geographic area is oftentimes extended upslope to include the direct influence of forest trees or to a transitional area between aquatic and terrestrial communities.

Riparian Reserves ~ Areas along live and intermittent streams, wetlands, ponds, lakes, and unstable and potentially unstable areas where riparian-dependent resources receive primary emphasis. Riparian Reserves are important to the terrestrial ecosystem as well, serving as dispersal habitat for certain terrestrial species.

Sanitation ~ Removal of POC from infested areas along roads, trails, or around uninfested POC to prevent spores from being generated and reaching nearby uninfested stands, or roads where they could be picked-up by passing traffic. Also removal of POC from uninfested areas along roads, trails, or around infested areas to prevent spores falling off vehicles or originating from the nearby infested areas from reaching a host and thereby spreading the disease.

Seed zone ~ A seed zone is an area where seed can be moved from a source or seed collection location to a planting location. General adaptation over the long term is inferred within the movement or seed transfer within the respective zone. Most seed zones have a set geographic area where movement is restricted to specific elevation bands (300 meters).

Selection pressure ~ The strength of the tendency to eliminate undesirable genotypes or phenotypes, usually expressed in terms of a selection differential or as a total of the proportion of total trees which are selected.

Sensitive species ~ Those species that: (1) have appeared in the *Federal Register* as proposed for classification and are under consideration for official listing as endangered or threatened species; (2) are on an official state list; or, (3) are recognized by the implementing agencies as needing special management to prevent their being placed on Federal or state lists. Also see *special status species*.

Seral stages ~ The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage.

7th field watershed ~ A delineated hydrologic unit depicting the location of a drainage area that is typically 1,000 to 10,000 acres in size; the 7th division level of the Nation’s drainages; represented by extending the hydrologic unit code to 14 digits (*Source:* http://www.reo.gov/gis/projects/watersheds/Data_Standards2.htm). Also called *catchment*.

6th field watershed ~ A delineated hydrologic unit depicting the location of a drainage area that is typically 10,000 to 40,000 acres in size (it can be as small as 3,000 acres); the 6th division level of the Nation’s drainages; represented by extending the 10-digit hydrologic unit

code to 12 digits (*Source:* <http://www.ga.usgs.gov/gis/iag.html> and http://www.reo.gov/gis/projects/watersheds/Data_Standards2.htm). Also called *subwatershed*.

Soil compaction ~ An increase in bulk density (weight per unit volume) and a decrease in soil porosity resulting from applied loads, vibration, or pressure.

Serpentine ~ A group of common rock-forming minerals such as olivine and pyroxens which are rich in iron, magnesium, and silicate oxides. Serpentine is always a secondary mineral and is found in both igneous and metamorphic rocks.

Snag ~ A standing dead tree.

Species ~ A class of individuals having some common characteristics or qualities. In these Standards and Guidelines, synonymous with taxon, which may include subspecies, groups, or guilds.

Special status species ~ As used in this SEIS, refers only to the following species categories that are included under agency species conservation policies: Oregon/Washington BLM—Bureau tracking, Bureau assessment, and Bureau sensitive (BLM Manual 6840; Instruction Memorandum No. OR-2003-054; Instruction Memorandum No. OR-91-57); California BLM—Bureau sensitive (BLM Manual 6840; Manual Supplement 6840.06, Plant Management); Forest Service Region 5—sensitive (Forest Service Manual 2670); Forest Service Region 6—sensitive (Forest Service Manual 2670).

Spore ~ A general term for a reproductive structure in fungi, bacteria, oomycetes, and cryptogams (analogous to the seed of a green plant).

Stand (tree stand) ~ An aggregation of trees occupying a specific area and sufficiently uniform in composition, age, arrangement, and condition to be distinguishable from the forest in adjoining areas.

Standards and guidelines ~ The rules and limits governing actions, as well as the principles specifying the environmental conditions or levels to be achieved and maintained; synonymous with *measures* and *management direction*.

Stochastic ~ The presence of a random variable (for example, the probability of large storms occurring in weather patterns).

Stream order ~ A system of numbering stream channels, where the highest channels in a watershed are labeled order +1, the joining of two like +1 is a +2 Order, the joining of two like +2 is a +3 Order and so forth. The main stream is always the highest order.

Substrate ~ Any object or material on which an organism grows or is attached.

Subwatershed ~ A delineated hydrologic unit depicting the location of a drainage area that is typically 10,000 to 40,000 acres in size (it can be as small as 3,000 acres); the 6th division level of the Nation's drainages; represented by extending the 10-digit hydrologic unit code to 12 digits (*Source:* <http://www.ga.usgs.gov/gis/iag.html> and http://www.reo.gov/gis/projects/watersheds/Data_Standards2.htm).

Succession ~ A series of dynamic changes by which one group of organisms succeeds another through stages leading to a potential natural community or climax. An example is development of a series of plant communities (called seral stages) following a major disturbance.

Supplemental environmental impact statement (SEIS) ~ As defined by NEPA, a supplement to an existing EIS is prepared when: (1) the agency makes substantial changes to the proposed action that are relevant to environmental concerns; (2) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; or, (3) the agency determines that the purposes of NEPA would be furthered by doing so.

Surfaced roads ~ Rocked or paved roads.

Survey and manage ~ Mitigation measure adopted as a set of standards and guidelines within the Northwest Forest Plan record of decision and replaced with standards and guidelines in 2001 (record of decision) intended to mitigate impacts of land management efforts on those species that are closely associated with late-successional or old-growth forests whose long-term persistence is a concern. This mitigation measure applies to all land allocations and requires land managers to take certain actions relative to species of plants and animals, particularly some amphibians, bryophytes, lichens, mollusks, vascular plants, fungi, and arthropods, which are rare or about which little is known. These actions include: (1) manage known sites; (2) survey prior to habitat-disturbing activities; and (3) conduct extensive and general regional (strategic) surveys.

Susceptible ~ Lacking the inherent ability to resist disease or attack by a given pathogen (not immune).

Talus ~ The loose accumulation of fragmented rock material on slopes, such as at the base of a cliff.

Threatened species ~ Any species defined through the “Endangered Species Act” as likely to become endangered within the foreseeable future throughout all or a significant portion of its range and published in the *Federal Register*.

Tracking species ~ A special status species category established by Oregon/Washington BLM. The purpose of tracking species is to enable an early warning for species which may become threatened or endangered in the future. BLM districts in Oregon and Washington are encouraged to collect occurrence data on species for which more information is needed to determine status within the state or which no longer need active management. Until status of such species changes to Federal or state listed, candidate of assessment species, tracking species will not be considered as special status species for management purposes.

Ultramafic ~ Igneous rocks composed chiefly of mafic minerals such as augite or olivine. A general name for plutonic rocks with color index M greater than or equal to 90, including, among others, dunite, peridotite, and pyroxenite.

Unconfined channel ~ A stream that can access the floodplain when flows are greater than the normal channel dimensions.

Understory ~ The trees and other woody species growing under the canopies of larger adjacent trees and other woody growth.

Upland ~ Out of (above) the riparian zone.

Viability ~ Ability of a wildlife or plant population to maintain sufficient size to persist over time in spite of normal fluctuations in numbers, usually expressed as a probability of maintaining a specific population for a specified period.

Viable population ~ A wildlife or plant population that contains an adequate number of reproductive individuals appropriately distributed on the planning area to ensure the long-term existence of the species.

Watershed ~ That land area that is separated from other land areas by a divide, contributing water or snowmelt, organic material, sediments and nutrients to a stream; synonymous with catchment.

Well-distributed ~ Distribution sufficient to permit normal biological function and species interactions, considering life history characteristics of the species and the habitats for which it is specifically adapted.

Wet season ~ From Pathology section, typically from October 1 until May 31, when soils are usually wet and temperatures are 50 to 68 degrees F or below.

Wetlands ~ Areas that are inundated by surface or ground water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, wet meadows, river overflows, mud flats, and natural ponds.

Width/depth ratio ~ The width of a stream, divided by its mean depth.

Wilderness ~ Areas designated by congressional action under the 1964 "Wilderness Act." Wilderness is defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation. Wilderness areas are protected and managed to preserve their natural conditions, which generally appear to have been affected primarily by the forces of nature with the imprint of human activity substantially unnoticeable; have outstanding opportunities for solitude or for a primitive and confined type of recreation; include at least 5,000 acres, or are of sufficient size to make practical their preservation, enjoyment, and use in an unimpaired condition; and may contain features of scientific, educational, scenic, or historical value as well as ecological and geologic interest.

Wildland fire ~ Any non-structure fire, other than prescribed fire, that occurs in the wildland.

Wildland fire suppression ~ An appropriate management response to wildland fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire.

Wildland fire use ~ The management of naturally-ignited wildland fires to accomplish specific pre-stated resource management objectives in pre-defined geographic areas outlined in fire management plans.

Distribution List

County and State Entities

Association of Oregon Counties
Association of O&C Counties
California Conservation Corps
California State Parks, Redwood Coast
Coos County Commissioners
Curry County Commissioners
Douglas County Board of Commissioners
Humboldt State University, Department of Biological Sciences
Humboldt State University, Department of Forestry
Josephine County Board of Commissioners
Montana State University
Oregon Department of Fish and Wildlife
Oregon Department of Forestry
Oregon State University, Botany and Plant Pathology
Redwood National & State Parks
Roseburg City Council
University of California, Department of Environmental Studies

Elected Officials

U.S. Representative Peter DeFazio (Oregon)
U.S. Senator Gordon Smith (Oregon)
U.S. Senator Ron Wyden (Oregon)
Oregon State Representative Wayne Krieger
Oregon State Representative Susan Morgan
Oregon State Representative Joanne Verger
Oregon State Senator Jason Atkinson
Oregon State Senator Ken Messerle

Federal Agencies

U.S. Department of the Interior
 Bureau of Indian Affairs
 Bureau of Land Management
 Roseburg District, Oregon
 Arcata Field Office, California
 Coos Bay District, Oregon
 Eugene District, Oregon
 Medford District, Oregon
National Park Service
 Redwood National Park
Office of the Solicitor (Pacific Northwest Region)
U.S. Fish & Wildlife Service
 Roseburg Field Office
U.S. Attorney's Office, District of Oregon
U.S. Environmental Protection Agency, Region 10

U.S. Department of Agriculture

Forest Service

Chico Genetic Resource Center
Dorena Genetic Resource Center
J. Herbert Stone Nursery
Klamath National Forest
Natural Resource Information System-Terra
Pacific Northwest Regional Office
Pacific Southwest Redwood Sciences Lab
Pacific Southwest Regional Office
Shasta-Trinity National Forest
Siskiyou and Rogue River National Forests
 Chetco Ranger District
 Gold Beach Ranger District
 Powers Ranger District
Siuslaw National Forest
 Oregon Dunes National Recreation Area
Six Rivers National Forest
 Smith River National Recreation Area
Umpqua National Forest
Office of General Counsel
National Oceanic and Atmospheric Administration-Fisheries

Libraries

Ashland Public Library
Bandon Public Library
Chetco Public Library
Coos Bay Public Library
Coquille Public Library
Curry County Public Library
Del Norte County Library
Douglas County Library
Flora M. Laird Memorial Library
Humboldt State University Library
Jackson County Library System
Jacksonville Public Library
North Bend Public Library
Southwestern Oregon Community College Library
Southern Oregon University Library

Organizations and Businesses

American Forest Resources Council
Barnes & Associates, Inc.
C&D Lumber Company
California Native Plant Society
Californians for Alternatives to Toxins
Douglas Timber Operators
Environmental Protection Information Center

Juniper Ridge Western Wild Goods
Kalmiopsis Audubon Society
Klamath Forest Alliance
Klamath Siskiyou Wildlands Center
Lost Coast 4X4s
Menasha Forest Products
Northcoast Environmental Center
Northwest Environmental Defense Center
Northwest Trail Riders
Oregon Natural Heritage Program
Oregon Natural Resources Council
Plum Creek Timber Company
Public Lands Foundation
Rose City Archery
Siskiyou Project
Southern Oregon Timber Industry Association
The Nature Conservancy of Oregon
The Wilderness Society
Umpqua Valley Audubon Society
Umpqua Watersheds
Wildwood Consulting

Tribes

Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians
Coquille Indian Tribe
Hoopa Tribe
Round Valley Indian Tribes
Yurok Tribe

Others

Thomas Amaroli
Candy Anderson
J. Bogrett
Ronald A. Brown
Mary L. Cammann
Bruce Campbell
Sylvia Cardella
David Carter
Eloise Casavan
Stephanie Christopher
Lori Cooper
Jerry Dawson
Betty Denton
Dane Durham
Francis Eatherington
Doug Fischer
Ken Fitch
Narada Golden

Mariam B. Graham
Bob Gunther
Everett Hansen
Melody Henderson
Dan E. Hill
Bud Hockstra
Libby Ingalls
Shirley Jantz
Thomas Jimerson
Erik Jules
Matt Kauffman
Larry Kellogg
Ted Kennel
Hugh Kern
John Kohler
Frank Lang
Tim LaVerne
Philip Lewin
Tryphena Lewis
Leigh Ann Lipscomb-Kern
Gretchen Lohry-Smith
Paul Lufkin
Caroline MacDougall
Peter Matteson
Kim Mattson
Jim Maurer
Stephanie McKnight
Richard McNamara
David Mildrexler
Robert Miller
Sam Milo
Rich Nawa
James E. Nielsen
Sue Pappalardo
Tim Scullen
Lisa Shelton
Karen J. Sjogren
Martin Steitz
Eric Stone
Meera Subramanian
Curt Townsend
Joan Tyler
Barbara Ullian
Ann Vileisis
Kristin Vogel
Kurt Volckmar
Roland Weidenkeller
Jan Wroncy
Zakkary Zoah-Henderson
Donald B. Zobel
Carrie Zoll

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