

GLOSSARY

Abiotic – Not biotic; not pertaining to life.

Active Ingredient (ai) - In any pesticide product, the component (a chemical or biological substance) that kills or otherwise controls the target pests. Pesticides are regulated primarily on the basis of active ingredients. The remaining ingredients are called “inerts.”

Active Restoration - The deliberate activities related to restoration. As an example, this might include seeding native grasses and planting native scrubs and trees.

Acute Effect - An adverse effect on any living organism in which severe symptoms develop rapidly and often subside after the exposure stops.

Acute Exposure - A single exposure or multiple brief exposures occurring within a short time (e.g., 24 hours or less in humans). The classification of multiple brief exposures as “acute” is dependant on the life span of the organism. *(See also chronic exposure and cumulative exposure)*

Acute Toxicity - Any harmful effect produced in an organism through an acute exposure to one or more chemicals.

Adaptation - Changes in an organism's physiological structure or function or habits that allow it to survive in new surroundings.

Adapted - How well organisms are physiologically or structurally suited for survival, growth, and resistance to pests and diseases in a particular environment.

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.

Additive Effect - A situation in which the combined effects of exposure to two chemicals simultaneously is equal to the sum of the effect of exposure to each chemical given alone. The effect most commonly observed when an organism is exposed to two chemicals together is an additive effect.

Adfluvial – fish that live in a lake or reservoir for most of their adult life but move into a stream or river to spawn.

Adjuvant(s) - Chemicals that are added to pesticide products to enhance the toxicity of the active ingredient or to make the active ingredient easier to handle or mix.

Administratively Withdrawn Areas (AWA) - Areas removed from the suitable timber base through agency direction and land management plans.

Adsorption - The tendency of one chemical to adhere to another material such as soil.

Aerobic - Life or processes that require, or are not destroyed by, the presence of oxygen. *(See*

also anaerobic)

Affected Environment - Existing biological, physical, social, and economic conditions of an area subject to change, both directly and indirectly, as the result of a proposed human action.

Agent - Any substance, force, radiation, organism, or influence that affects the body. The effects may be beneficial or injurious.

Agency for Toxic Substances and Disease Registry (ATSDR) - Federal agency within the Public Health Service charged with carrying out the health-related analyses under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA).

Alien Species - "With respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem" (Executive Order 13122, 2/3/99). *(See also exotic species, invasive plant species, introduced species, and noxious weed)*

Allelopathy - The suppression of growth of one plant species due to the release of toxic substances by another plant.

Alluvial - Relating to clay, silt, sand, gravel, or similar detrital material deposited by flowing water. Alluvial deposits may occur after a heavy rain storm.

Ambient - Usual or surrounding conditions.

Amphibian - Any of a class of cold-blooded vertebrates (including frogs, toads, or salamanders) intermediate in many characteristics between fishes and reptiles and having gilled aquatic larvae and air-breathing adults.

Anadromous - Fish that spend their adult life in the sea but swim upriver to fresh water spawning grounds to reproduce.

Anaerobic - Life or process that occurs in, or is not destroyed by, the absence of oxygen. *(See also aerobic)*

Anions - Negatively charged ions in solution e.g., hydroxyl or OH⁻ ion. *(See also cations)*

Annual - A plant that endures for not more than a year. A plant which completes its entire life cycle from germinating seedling to seed production and death within a year.

Annuity - Payment or receipt of a series of equal amounts at stated intervals for a specified number of time periods. An "annuity due" is a series of equal value outputs or inputs occurring for N equal time periods with "payments" made at the beginning of each period.

Anoxia - Literally, "without oxygen." A deficiency of oxygen reaching the tissues of the body especially of such severity as to result in permanent damage.

Aquatic Influence Zone – Land adjacent to perennial and intermittent streams, rivers, ponds, lakes, springs, and wetlands that have a direct or potentially direct influence on the water body and its function where herbicides may enter surface waters. This zone has a default width of 100 feet, realizing that in some areas it may be wider or narrower pending a site-specific review.

Aqueous - Describes a water-based solution or suspension.

Aquifer - An underground geological formation or group of formations containing usable amounts of groundwater that can supply wells and springs.

Arid - A terrestrial region lacking moisture, or a climate in which the rainfall is not sufficient to support the growth of most vegetation.

Background Level - In pollution, the level of pollutants commonly present in ambient media (air, water, soil.)

Bacteria - Microscopic living organisms that metabolize organic matter in soil, water, or other environmental media. Some bacteria can also cause human, animal and plant health problems.

Basal Herbicide Application Method - In pesticides, the spreading of a chemical on stems or trunks of plants just above the soil line.

Base - Substances that (usually) liberate hydroxyl (OH⁻) anions when dissolved in water and weaken a strong acid.

Benchmark - A dose associated with a defined effect level or designated as a no effect level.

Benthic Region - The bottom layer of a body of water.

Benthos - The plants and animals that inhabit the bottom layer of a water body.

Best Management Practices (BMP) - A practice or combination of practices determined by a state or an agency to be the most effective and practical means (technological, economic, and institutional) of controlling point and non-point source pollutants at levels compatible with environmental quality.

Bioaccumulation - The increase in concentration of a substance in living organisms as they take in contaminated air, water, or food because the substance is very slowly metabolized or excreted (often concentrating in the body fat.)

Bioassay - (1) To measure the effect of a substance, factor, or condition using living organisms. (2) A test to determine the toxicity of an agent to an organism.

Bioconcentration - The accumulation of a chemical in tissues of a fish or other organism to levels greater than in the surrounding water or environment.

Bioconcentration Factor (BCF) - The concentration of a compound in an aquatic organism divided by the concentration in the ambient water of the organism.

Biodegradability - Susceptibility of a substance to decomposition by microorganisms; specifically, the rate at which compounds may be chemically broken down by bacteria and/or natural environmental factors.

Biodiversity or Biological Diversity - The diversity of living things (species) and of life patterns and processes (ecosystem structures and functions). Includes genetic diversity, ecosystem diversity, landscape and regional diversity, and biosphere diversity.

Biological Control - The use of natural enemies, including invertebrate parasites and predators (usually insects, mites, and nematodes,) and plant pathogens to reduce populations of nonnative, invasive plants.

Biological Magnification - The process whereby certain substances such as pesticides or heavy metals increase in concentration as they move up the food chain.

Biologically Relevant - An action or result of an action that significantly impairs or disrupts essential behavioral patterns such as breeding, feeding or sheltering.

Biomass - The amount of living matter.

Biota or Biome - All living organisms of a region or system.

Body Burden - The amount of a chemical stored in the body at a given time, especially a potential toxin in the body as the result of exposure.

Broadcast Herbicide Application Method - Herbicide treatment method generally used along roads; boom truck spray is directed at target species. Broadcast methods are used for larger infestations where spot treatments would not be effective.

Bryophytes - Plants of the phylum *Bryophyta*, including mosses, liverworts, and hornworts; characterized by the lack of true roots, stems, and leaves.

Buffer Zone - A strip of untreated land that separates a waterway or other environmentally sensitive area from an area being treated with pesticides.

Candidate Species - Those plant and animal species that, in the opinion of the Fish and Wildlife Service (FWS) or National Oceanic and Atmospheric Administration (NOAA) Fisheries, may qualify for listing as “endangered” or “threatened.” The FWS recognizes two categories of candidates. Category 1 candidates are taxa for which the FWS has on file sufficient information to support proposals for listing. Category 2 candidates are taxa for which information available to the FWS indicates that proposing to list is possibly appropriate, but for which sufficient data are not currently available to support proposed rules.

Canons of Treaty Construction - Tools the federal courts developed for interpreting Indian treaties.

Capillary Fringe - The zone above the water table within which the soil or rock is saturated by water under less than atmospheric pressure.

Carcinogen - A chemical capable of inducing cancer.

Carrier - A non-pesticidal substance added to a commercial pesticide formulation to make it easier to handle or apply.

Chemical Abstracts Service (CAS) Registry Number - An assigned number used to identify a chemical. Chemical Abstracts Service is an organization that indexes information published in Chemical Abstracts by the American Chemical Society and that provides index guides to help locate information about particular substances in the abstracts. Sequentially assigned CAS numbers identify specific chemicals. The numbers have no chemical significance. The CAS number is a concise, unique means of chemical identification.

Cations - Positively charged ions in a solution. *(See also anion)*

Characteristic Landscape - The naturally established landscape within a scene or scenes being viewed.

Chronic Exposure - Exposures that extend over the average lifetime or for a significant fraction of the lifetime of the species (for a rat, chronic exposure is typically about two years). Chronic exposure studies are used to evaluate the carcinogenic potential of chemicals and other long-term health effects. *(See also acute and cumulative exposure)*

Chronic Reference Dose (RfD) - An estimate of a lifetime daily exposure level (in mg/kg/day) for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of deleterious effects. Chronic RfDs are specifically developed to be protective for long-term exposure to a compound (seven years to lifetime.)

Chronic Toxicity - The ability of a substance or mixture of substances to cause harmful effects over an extended period, usually upon repeated or continuous exposure sometimes lasts for the entire life of the exposed organism.

Clipping - To cut or remove seed heads and/or fruiting bodies to prevent germination.

Clipping and Pulling - Cutting a portion of the invasive plant stem and pulling it from its substrate, generally the bole of a tree.

Code of Federal Regulations (CFR) - Document that codifies all rules of the executive departments and agencies of the federal government. It is divided into fifty volumes, known as titles. Title 40 of the CFR (referenced as 40 CFR) lists all environmental regulations, including regulations for EPA pesticide programs (40 CFR Parts 150-189).

Common Control Measures – A set of commonly used methods to effectively treat specific invasive plants.

Competitive Seeding - Treatment method; most effective after weed populations have been reduced by other control actions.

Congressionally Reserved Areas (CRA) - 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 - An order of the *Gymnospermae*, comprising a wide range of trees and a few shrubs, mostly evergreens that bear cones and have needle-shaped or scale-like leaves. Conifer timber is commercially identified as softwood.

Connected Actions - Exposure to other chemical and biological agents, in addition to exposure to a specific pesticide formulation in a field application to control pest organisms.

Contaminants - For chemicals, impurities present in a commercial grade chemical. For biological agents, other agents that may be present in a commercial product.

Contain - Prevent the spread of the invasive plants beyond the perimeter of the patches or infestation areas mapped from the inventories as of November 2004.

Control - Means, as appropriate, eradicating, suppressing, reducing, or managing invasive species populations, preventing spread of invasive species from areas where they are present, and taking steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further invasions (Executive Order 13122, 2/3/99).

Cultural Treatment Method / Control - The establishment or maintenance of competitive vegetation, use of fertilizing, mulching, prescribed burning, or grazing animals to control or eliminate invasive plants.

Cumulative Effect - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions—regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

Cumulative Exposure - Exposure resulting from one or more activities that are repeated over a period of time. (*See also acute and chronic exposure*)

Cut-Stump Herbicide Treatment Method - Used on woody species that normally re-sprout after being cut. Cut down the tree or shrub, and immediately spray or squirt herbicide on the exposed cambium (living inner bark) of the stump.

Detritus - Loose fragments, particles, or grains formed by the disintegration of organic matter or rocks.

Discount - In economics, discounting is the process of carrying an end value backward in time at compound interest.

Distance Zones - Landscape areas denoted by specified distances from the observer. Used as a frame of reference in which to discuss landscape attributes or the scenic effect of human activities in a landscape.

Disturbance - An effect of a planned human management activity, or unplanned native or exotic agent or event that changes the state of a landscape element, landscape pattern, or regional composition.

Dosage/Dose - (1) The actual quantity of a chemical administered to an organism or to which it is exposed. (2) The amount of a substance that reaches a specific tissue (e.g. the liver). (3) The amount of a substance available for interaction with metabolic processes after crossing the outer boundary of an organism.

Dose Rate - In exposure assessment, dose per time unit (e.g. mg/day); also called dosage.

Dose Response - Changes in toxicological responses of an individual (such as alterations in severity of symptoms) or populations (such as alterations in incidence) that are related to changes in the dose of any given substance.

Drift - The portion of a sprayed chemical that is moved by wind off of a target site.

Early Detection Rapid Response (EDRR) - A process by which new infestations are identified, characterized, evaluated, and by which an effective treatment is designated, all of which are clearly analyzed in this NEPA document.

Effect - Adverse and/or beneficial direct effects occur at the same time and in the same general location as the activity causing the effects. Adverse and beneficial indirect effects are those that occur at a different time or location from the activity causing the effects. Both types of effects are described in terms of increase or decreases, intensity, duration, and timing.

Emergent Vegetation - Plants growing out of or standing in water, in contrast to “submerged aquatic vegetation (SAV),” which grows entirely underneath the waters’ surface.

Endangered Species - Any species listed in the *Federal Register* as being 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 U.S. Fish and Wildlife Service or the NOAA Fisheries 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 Fish and Wildlife Service or NOAA Fisheries on federal actions that may affect these species or their designated critical habitat.

Endemic - A species or other taxonomic group that is restricted to a particular geographic region due to factors such as isolation or response to soil or climatic conditions. (Compare to “*Indigenous*” and “*Native*.”)

Environmental Justice - Executive Order 12898 of February 11, 1994 requires federal agencies, to the greatest extent practicable and permitted by law, to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and

possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the commonwealth of the Mariana Islands.

Eradicate – Attempt to totally eliminate an invasive plant species from the Forest and Scenic Area, recognizing that this may not actually be achieved in the short-term since re-establishment/re-invasion may take place initially.

Evolutionary Significant Unit (ESU) – a group of salmon or trout populations that is a distinct population segment. Scientists established two criteria for ESUs: 1) the population must show substantial reproductive isolation; and 2) there must be an important component of the evolutionary legacy of the species as a whole.

Essential Fish Habitat (EFH) - waters and substrate necessary to fish (specifically chinook and coho salmon) for spawning, breeding, feeding, or growth to maturity.

Exposure Assessment - The process of estimating the amount of contact with a chemical or biological agent that an individual or a population of organisms will receive from a pesticide application conducted under specific, stated circumstances.

Exposure of Concern - A level of exposure greater than the level determined to have “no observable adverse effect.” This level was made more conservative in the R6 2005 FEIS to add a margin of safety to the risk assessment process.

Exposure Scenario - The mechanism by which an organism (person, animal, fish) may be exposed to herbicides or additives. The application rate and method influences the amount of herbicide to which an organism may be exposed.

Exotic – Non-native species; introduced from elsewhere, but not completely naturalized. (*See also exotic species, invasive plant species, introduced species, and noxious weed*)

Extirpate - To destroy completely; wipe out.

Extrapolation - The use of a model to make estimates of values of a variable in an unobserved interval from values within an already observed interval.

Fauna - The animals of a specified region or time.

Federally Listed Species - Formally listed as a threatened or endangered species under the Endangered Species Act. Designations are made by the Fish and Wildlife Service or the National Marine Fisheries Service.

Federal Insecticide and Rodenticide Act (FIFRA) Pesticide Ingredient - An ingredient of a pesticide that must be registered with EPA under the Federal Insecticide, Fungicide, and Rodenticide Act. Products making pesticide claims must submit required information to EPA to register under FIFRA and may be subject to labeling and use requirements.

Fertilization - Treatment method involving adding of nutrients, which could improve the success of desirable species; may be limited, depending on species/soil characteristics.

Flora - Plant life, especially all the plants found in a particular country, region, or time regarded as a group. Also, a systematic set of descriptions of all the plants of a particular place or time.

Fluvial – Living in a stream or river.

Foaming - Hot foam is a mechanical method that is effective on seedlings and annuals and can be applied under certain weather conditions, including wind and light rain.

Foliar – Relating to, or applied to leaves.

Food Chain - A hierarchical sequence of organisms, each of which feeds on the next, lower member of the sequence.

Forage - Food for animals. In this document, term applies to both availability of plant material for wildlife and domestic livestock.

Formulation - A commercial preparation of a chemical including any inerts and/or contaminants.

Frill - Also called the “hack and squirt” treatment. Used to treat woody species with large, thick trunks. The tree is cut using a sharp knife, saw, or ax, or drilled with a power drill or other device. Herbicide is then immediately applied to the cut with a backpack sprayer, squirt bottle, syringe, or similar equipment.

Fry – Recently hatched fish.

Fungi - Molds, mildews, yeasts, mushrooms, and puffballs, a group of organisms that lack chlorophyll and therefore are not photosynthetic. They are usually non-mobile, filamentous, and multi-cellular.

Game Fish - Species like trout, salmon, or bass, caught for sport. Many of them show more sensitivity to environmental change than non-game fish.

Grazing Animals - Treatment method which requires matching the invasive species with the appropriate grazer for best success.

Groundwater Loading Effects of Agricultural Management Systems (GLEAMS) – A model which displays herbicide concentrations in streams under a variety of conditions.

Groundwater - The supply of fresh water found beneath the Earth's surface, usually in aquifers, which often supply wells and springs.

Habitat - The place where a population (e.g., human, animal, plant, microorganism) lives and its surroundings, both living and non-living.

Hack and Squirt Herbicide Treatment Method - Also called the “frill” method. Used to treat woody species with large, thick trunks. The tree is cut using a sharp knife, saw, or ax, or drilled with a power drill or other device. Herbicide is then immediately applied to the cut with a

backpack sprayer, squirt bottle, syringe, or similar equipment.

Halftime or Half-Life - The time required for the concentration of the chemical to decrease by one-half.

Hand/Selective Herbicide Application- Herbicide treatment of individual plants through wicking, wiping, injecting stems, etc., with low likelihood of drift or delivery of herbicides away from treatment sites. This method ensures no herbicide directly contacts soil.

Hand-pulling/Grubbing - Treatment method which is labor-intensive but effective on single plants or on small, low-density infestations.

Hazard Quotient (HQ) - The ratio of the estimated level of exposure to a substance from a specific pesticide application to the RfD for that substance, or to some other index of acceptable exposure or toxicity. A HQ less than or equal to one is presumed to indicate an acceptably low level of risk for that specific application.

Hazard Identification - The process of identifying the array of potential effects that an agent may induce in an exposed of humans or other organisms.

Herbaceous - A plant that does not develop persistent woody tissue above the ground (annual, biennial, or perennial.) Herbaceous vegetation includes grasses and grass-like vegetation, and broadleaved forbs.

Herbicide - A chemical preparation designed to kill plants, especially weeds, or to otherwise inhibit their growth.

Herbicide Treatment Method / Control - The use of naturally derived or synthetic chemicals called herbicides to eliminate or control the growth of invasive plants.

Humus - Organic portion of the soil remaining after prolonged microbial decomposition.

Indian Tribe - Any American Indian or Alaska Native tribe, band, nation, pueblo, community, rancheria, colony, or group meeting the provisions of the Code of Federal Regulations Title 25, Section 83.7 (25 FR 83.7), or those recognized in statutes or treaties with the United States.

Indigenous - An indigenous species is any which were or are native or inherent to an area. (See also, *native*.)

Inerts - Anything other than the active ingredient in a pesticide product; not having pesticide properties.

Infested Area - A contiguous area of land occupied by, in this case, invasive plant species. An infested area of land is defined by drawing a line around the actual perimeter of the infestation as defined by the canopy cover of the plants, excluding areas not infested. Generally, the smallest area of infestation mapped will be 1/10th (0.10) of an acre or 0.04 hectares.

Integrated Weed Management (IWM) - An interdisciplinary weed management approach for

selecting methods for preventing, containing, and controlling noxious weeds in coordination with other resource management activities to achieve optimum management goals and objectives.

Interdisciplinary Team (IDT) - 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 enough to adequately analyze the problem and propose action.

Introduced Species - An alien or exotic species that has been intentionally or unintentionally released into an area as a result of human activity. *(See also exotic species, invasive plant species, introduced species, and noxious weed)*

Introduction - “The intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity” (Executive Order 13122, 2/3/99).

Invasive Plant Species - An alien plant species whose introduction does or is likely to cause economic or environmental harm or harm to human health (Executive Order 13122, 2/3/99). *(See also exotic species, invasive plant species, introduced species, and noxious weed)*

Irreversible Effect - Effect characterized by the inability of the body to partially or fully repair injury caused by a toxic agent.

Irritant - Non-corrosive material that causes a reversible inflammatory effect on living tissue by chemical action at the site of contact as a function of concentration or duration of exposure.

Key Issue – Significant issues identified by the public that are used to formulate alternatives, affect the design of alternative components, prescribe PDC, or describe environmental effects.

LC₅₀ (Lethal Concentration₅₀) - A calculated concentration of a chemical in air or water to which exposure for a specific length of time is expected to cause death in 50 percent of a defined experimental animal population.

LD₅₀ (Lethal Dose₅₀) - The dose of a chemical calculated to cause death in 50 percent of a defined experimental animal population over a specified observation period. The observation period is typically 14 days.

Label - All printed material attached to, or part of, the pesticide container.

Land Allocation - Commitment of a given area of land or a resource to one or more specific uses (e.g. wilderness). In the Northwest Forest Plan, one of the seven allocations of Congressionally Withdrawn Areas, Late-Successional Reserves, Adaptive Management Areas, Managed Late-Successional Areas, Administratively Withdrawn Areas, Riparian Reserves, or Matrix.

Landscape - An area composed of interacting ecosystems that are repeated because of geology, land form, soils, climate, biota, and human influences throughout the area. Landscapes are generally of a size, shape, and pattern which are determined by interacting ecosystems.

Landscape Character - Particular attributes, qualities, and traits of a landscape that give it an image and make it identifiable or unique.

Landscape Setting - The context and environment in which a landscape is set; a landscape backdrop. It is the combination of land use, landform, and vegetation patterns that distinguish an area in appearance and character from other areas.

Leachate - Water that collects chemicals as it trickles through soil or other porous media containing the chemicals.

Leaching - The process by which chemicals on or in soil or other porous media are dissolved and carried away by water, or are moved into a lower layer of soil.

Level of Concern (LOC) - The concentration in media or some other estimate of exposure above which there may be effects.

Lichens - Complex thallophytic plants comprised of an alga and a fungus growing in symbiotic association on a solid surface (such as a rock.)

Littoral zone - (1) That portion of a body of fresh water extending from the shoreline lakeward to the limit of occupancy of rooted plants. (2) The strip of land along the shoreline between the high and low water levels.

Lowest-Observed-Adverse-Effect Level (LOAEL) - The lowest dose of a chemical in a study, or group of studies, that produces statistically or biologically significant increases in frequency or severity of adverse effects between the exposed and control populations.

Macroinvertebrate – Animals without backbones such as insects, clams, snails, etc.

Macrophyte – Terrestrial or aquatic plant that is large enough to be seen without the aid of a microscope.

Manual Treatment Method / Control - The use of any non-mechanized approach to control or eliminate invasive plants (i.e. hand-pulling, grubbing.)

Material Safety Data Sheet (MSDS) - A compilation of information required under the OSHA Communication Standard on the identity of hazardous chemicals, health and physical hazards, exposure limits, and precautions.

Mechanical Treatment Method / Control - The use of any mechanized approach to control or eliminate invasive plants (i.e. mowing, weed whipping, hot foam.)

Microorganisms - A generic term for all organisms consisting only of a single cell, such as bacteria, viruses, protozoa and some fungi.

Minimum Requirement - A determination about whether or not management action is necessary. In context, a determination about whether or not a management action is necessary in wilderness in order to preserve wilderness character.

Minimum Tool - Use of a weed treatment alternative that would accomplish management objectives and have the least impact on resources.

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.

Modification - A visual quality objective meaning human activities may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.

Mollusks - Invertebrate animals (such as slugs, snails, clams, or squids) that have a soft, unsegmented body, usually enclosed in a calcareous shell; representatives found on National Forest System land include snails, slugs, and clams.

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.

Morbidity - Rate of disease, injury or illness.

Mowing - Invasive plant treatment method which is limited to level/gently-sloping smooth-surface terrain. Treatment timing is critical, and must be conducted for several consecutive years.

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.

National Marine Fisheries Service (NMFS) - The federal agency that is the listing authority for

marine mammals and anadromous fish under the ESA.

National Pollutant Discharge Elimination System (NPDES) - As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

National Visitor Use Monitoring (NVUM) - A permanent, ongoing sampling system which measures national forest visitor demographics, experiences, preferences, and impressions. A stratified random sample is done for 25% of the National Forest system each year according to a national research protocol. NVUM responds to the need to better understand the use and importance of, and satisfaction with, national forest system recreation opportunities.

National Wilderness Preservation System (NWPS) - The Wilderness Act of 1964 established the national Wilderness Preservation System to ensure that certain federally owned areas in the United States would be preserved and protected in their natural condition. The Act defines a wilderness area, in part, as an area which generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable. Areas included in the system are administered for the use and enjoyment of the American people in such manner as to leave them unimpaired for future use and enjoyment as wilderness.

Native Species - With respect to a particular ecosystem, a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem (Executive Order 13122, 2/3/99).

Naturalized - Applied to a species that originally was imported from another country but that now behaves like a native in that it maintains itself without further human intervention and has invaded native populations.

Non-local Native - This term has two meanings: (1) a population of a native plant species which does not occur naturally in the local ecosystem and/or (2) plant material of a native species that does not originate from genetically local sources.

Non-target Species - Any plant or animal that is not the intended organism to be controlled by a pesticide treatment.

No-Observed-Adverse-Effect level (NOAEL) - Exposure level at which there are no statistically or biological significant differences in the frequency or severity of any adverse effect in the exposed or control populations.

No-Observed-Effect-Concentration (NOEC) - Synonymous with NOEL.

No-Observed-Effect-Level (NOEL) - Exposure level at which there are no statistically or biological significant differences in the frequency or severity of any effect in the exposed or control populations.

Not Likely to Adversely Affect (NLAA) - Determinations are applied to those species that had very little habitat on National Forests in Region Six, were not in habitats susceptible to invasive plants, or were known to tolerate herbicide treatments without effects.

Noxious Weed - “Any living stage (including but not limited to, seeds and reproductive parts) of any parasitic or other plant of a kind, or subdivision of a kind, which is of foreign origin, is new to or not widely prevalent in the United States, and can directly or indirectly injure crops, other useful plants, livestock, or poultry or other interests of agriculture, including irrigation, or navigation or the fish and wildlife resources of the United States or the public health” (Public Law 93-629, January 3, 1975, Federal Noxious Weed Act of 1974). (*See also exotic species, invasive plant species, introduced species, and noxious weed*)

Outstandingly Remarkable Value (ORV) - A characteristic of rivers or sections of rivers in the national Wild and Scenic River System. In order for a river to be included in the system, it must possess at least one “outstandingly remarkable” value, such as scenic, recreational, geologic, fish, wildlife, historic, cultural, or other similar features. ORV’s are values or opportunities in a river corridor which are directly related to the river and which are rare, unique, or exemplary from a regional or national perspective.

Partial Retention - A visual quality objective which in general means human activities may be evident but must remain subordinate to the characteristic landscape.

Passive Restoration – Allowing a site to self-restore through natural processes.

Pathogen - A living organism, typically a bacteria or virus that causes adverse effects in another organism.

Pendant, Pendulous - Referring to lichens that hang down from branches and/or stems of trees and shrubs (e.g., *Usnea longissima*).

Percolation - Downward flow or filtering of water through pores or spaces in rock or soil.

Perennial - A plant species having a life span of more than two years.

Periphyton - Microscopic plants and animals that are firmly attached to solid surfaces under water such as rocks, logs, pilings and other structures.

Persistence - Refers to the length of time a compound, once introduced into the environment, stays there.

Personal Protective Equipment (PPE) - Clothing and equipment worn by pesticide mixers, loaders and applicators and re-entry workers, hazmat emergency responders, workers cleaning up Superfund sites, et. al., which is worn to reduce their exposure to potentially hazardous chemicals and other pollutants.

Pest - An insect, rodent, nematode, fungus, weed or other form of terrestrial or aquatic plant or animal life that is classified as undesirable because it is injurious to health or the environment.

Pesticide - Any substance used for controlling, preventing, destroying, repelling, or mitigating any pest. Includes fungicides, herbicides, fumigants, insecticides, nematocides, rodenticides, desiccants, defoliants, plant growth regulators, etc.

Pesticide Tolerance - The amount of pesticide residue allowed by law to remain in or on a harvested crop.

pH - The negative log of the hydrogen ion concentration. A high pH (greater than seven) is alkaline or basic and a low pH (less than seven) is acidic.

Phytoplankton – Free floating algae.

Population - A group of individuals of the same species in an area.

Population at Risk - A population subgroup that is more likely to be exposed to a chemical, or is more sensitive to the chemical, than is the general population.

Porosity - Degree to which soil, gravel, sediment, or rock is permeated with pores or cavities through which water or air can move.

Potable Water - Water that is considered safe for drinking and cooking.

Prevention - To detect and ameliorate conditions that establishment, or spread of invasive plants.

Project Design Criteria (PDC) - A set of required, implementation design criteria applied to projects to ensure that the project is done according to environmental standards and adverse effects are within the scope of those predicted in this environmental impact statement.

Proposed Species - Any plant or animal species that is proposed by the Fish and Wildlife Service or NOAA Fisheries in a *Federal Register* notice to be listed as threatened or endangered.

Potential Vegetation Type (PVT) - The term Potential Vegetation Type is used to represent the combination of species that could occupy the site in the absence of disturbance.

Protozoa - Single-celled, microorganisms without cell walls containing visibly evident nuclei and organelles. Most protozoa are free-living although many are parasitic.

Recreational Rivers - A classification within the national Wild and Scenic River System. Recreational rivers are those rivers, or sections of rivers, that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Reference Dose (RfD) - The RfD is a numerical estimate of a daily exposure to the human population, including sensitive subgroups such as children, that is not likely to cause harmful effects during a lifetime. RfDs are generally used for health effects that are thought to have a threshold or minimum dose for producing effects.

Registered Pesticides - Pesticide products which have been approved for the uses listed on the label.

Registration - Formal licensing with EPA of a new pesticide before it can be sold or distributed. Under the Federal Insecticide, Fungicide, and Rodenticide Act, EPA is responsible for registration (pre-market licensing) of pesticides on the basis of data demonstrating no unreasonable adverse effects on human health or the environment when applied according to approved label directions.

Reserved Rights - Rights tribes kept, or reserved, during treaty-making out of a greater number of rights they already owned.

Resolved Issue - significant issues identified by the public that have been fully mitigated through the development of alternatives or project design criteria.

Restoration - Ecological restoration is the process of assisting the recovery and management of ecological integrity. Ecological integrity includes a critical range of variability in biodiversity, ecological processes and structures, regional and historical context, and sustainable cultural practices.

Retention - A visual quality objective which in general means human activities are not evident to the casual forest visitor.

Revegetation - The re-establishment of plants on a site. The term does not imply native or nonnative; does not imply that the site can ever support any other types of plants or species and is not at all concerned with how the site 'functions' as an ecosystem.

Riparian Area - A geographic area containing an aquatic ecosystem and adjacent upland areas that directly affect it.

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.

Risk - The chance of an adverse or undesirable effect, often measured as a percentage.

Risk Assessment - The qualitative and quantitative evaluation performed in an effort to estimate the risk posed to human health and/or the environment by the presence or potential presence and/or use of specific chemical or biological agents.

Salmonid – fish belonging to the family Salmonidae (salmon, trout, char).

Saturated zone - A subsurface area in which all pores and cracks are filled with water under pressure equal to or greater than that of the atmosphere.

Scenery Management - The art and science of arranging, planning, and designing landscape attributes relative to the appearance of places and expanses in outdoor settings.

Scenic - Of or relating to landscape scenery; pertaining to natural or natural-appearing scenery; constituting or affording pleasant views of natural landscape attributes or positive cultural elements.

Scenic Integrity - State of naturalness or, conversely, the state of disturbance created by human activities or alteration. Integrity is stated in degrees of deviation from the existing landscape character in a national forest.

Scenic Quality - The essential attributes of landscape that when viewed by people, elicit psychological and physiological benefits to individuals and to society in general.

Scenic Rivers - A classification within the national Wild and Scenic River System. Scenic rivers are those rivers, or sections of rivers, that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Seen Area - The total landscape area observed based upon landform screening. Seen-areas may be divided into zones of immediate foreground, foreground, middleground, and background. Some landscapes are seldom seen by the public.

Sensitive Species - Species identified by the Regional Forester for which population variability is a concern, as evidenced by significant current or predicted downward trend in population numbers or density; or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Sensitivity Level - A particular degree or measure of viewer interest in the scenic qualities of the landscape.

Smolt – young salmon or anadromous trout in the process of transforming to a saltwater dwelling fish

Soluble – capable of being loosened or dissolved.

Special Status Species – Federally listed and proposed threatened and endangered species; USDA Forest Service Pacific Northwest Region sensitive species and Survey and Manage species; Mt. Hood National Forest Land and Resource Management Plan management indicator species; and Sensitive Plan and Wildlife Species as defined in the Columbia River Gorge Management Plan.

Species - “A group of organisms, all of which have a high degree of physical and genetic similarity, generally interbreed only among themselves, and show persistent differences from members of allied groups of organisms.” (Executive Order 13122, 2/3/99).

Spot Herbicide Treatment Application - Herbicide treatment involving use of a backpack sprayer or other means. Application is aimed at specific target species, with methods of prevention (such as barriers,) to control damage to non-target species.

Spring – The point where ground water emerges onto the land surface.

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.

Stem Injection – Herbicide treatment method where herbicides are injected into herbaceous stems using a needle and syringe. Herbicide pellets can also be injected into the trunk of a tree using a specialized tool.

Sub-Chronic Exposure - An exposure duration that can last for different periods of time (5 to 90 days), with 90 days being the most common test duration for mammals. The sub-chronic study is usually performed in two species (rat and dog) by the route of intended use or exposure.

Sub-Chronic Toxicity - The ability of one or more substances to cause effects over periods from about 90 days but substantially less than the lifetime of the exposed organism. Sub-chronic toxicity only applies to relatively long-lived organisms such as mammals.

Submerged Aquatic Vegetation (SAV) - Vegetation that lives at or below the water surface; an important habitat for young fish and other aquatic organisms. In contrast to “emergent vegetation,” which is growing out of or standing in water.

Sub-lethal – A negative effect on an organism that does not cause death.

Substrate - With reference to enzymes, the chemical that the enzyme acts upon.

Suppress – Prevent seed production throughout the target patch and reduce the area coverage. Prevent the invasive species from dominating the vegetation of the area; low levels may be acceptable.

Surface Water - All water naturally open to the atmosphere (rivers, lakes, reservoirs, streams, impoundments, seas, estuaries, etc.) and all springs, wells, or other collectors which are directly influenced by surface water.

Surfactant - A surface active agent; usually an organic compound whose molecules contain a hydrophilic group at one end and a lipophilic group at the other. Promotes solubility of a chemical, or lathering, or reduces surface tension of a solution.

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.

Synergistic Effect - Situation in which the combined effects of exposure to two chemicals simultaneously is much greater than the sum of the effect of exposure to each chemical given

alone.

Take - "The term 'take' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." (Title 16, Chapter 35, Section 1532, Endangered Species Act of 1973)

Thallus – The vegetative body of a lichen.

Threatened Species - Plant or animal species likely to become endangered throughout all, or a significant portion of, its range within the foreseeable future. A plant or animal identified and defined in accordance with the 1973 Endangered Species Act and published in the Federal Register.

Threshold - The maximum dose or concentration level of a chemical or biological agent that will not cause an effect in the organism.

Tolerances - Permissible residue levels for pesticides in raw agricultural produce and processed foods. Whenever a pesticide is registered for use on a food or a feed crop, a tolerance (or exemption from the tolerance requirement) must be established. EPA establishes the tolerance levels, which are enforced by the Food and Drug Administration and the Department of Agriculture.

Toxicity - The inherent ability of an agent to affect living organisms adversely. Toxicity is the degree to which a substance or mixture of substances can harm humans or animals.

Toxicology - The study of the nature, effects, and detection of poisons in living organisms. Also, substances that are otherwise harmless but prove toxic under particular conditions. The basic assumption of toxicology is that there is a relationship among the dose (amount), the concentration at the affected site, and the resulting effects.

Tracking Issue – Issues determined to be relevant, but are not used to formulate alternatives. These issues often describe minor or consistent consequences among alternatives considered in detail.

Tribal and Treaty Rights - Native American treaty and other rights or interests recognized by treaties, statutes, laws, executive orders, or other government action, or federal court decisions.

Treatment Area - An infested area where weeds have been treated or retreated by an acceptable method for the specific objective of controlling their spread or reducing their density.

Treaty – A contract or compact between nations. It is an agreement that is binding upon the nations that sign the treaty.

U.S. Fish and Wildlife Service (US FWS) - The federal agency that is the listing authority for species other than marine mammals and anadromous fish under the ESA.

U.S. Forest Service (USDA FS or USFS) - The federal agency responsible for management of the nation's National Forest lands.

Variety Class - A particular level of visual variety or diversity of landscape character.

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.

Viewshed - Total visible area from a single observer position, or the total visible area from multiple observer position. Viewsheds are accumulated seen-areas from highways, trails, campgrounds, towns, cities, or other viewer locations. Examples are corridor, feature, or basin viewsheds.

Visual Absorption Capability - A classification system used to denote relative ability of a landscape to accept human alterations without loss of character of scenic quality.

Visual Quality Objective - A desired level of excellence based on physical and sociological characteristics of an area. Refers to degree of acceptable alteration of the characteristic landscape.

Water table – The upper surface of an unconfined or "phreatic" aquifer, typically represented by mapping the elevations of the water levels found in production wells.

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.

Wetland - An area that is regularly saturated by surface or ground water and subsequently is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes, and estuaries.

Wicking or Wiping - Using a sponge or wick on a long handle to wipe herbicide onto foliage and stems

Wild and Scenic River System - The Wild and Scenic Rivers Act of 1968 established a system of selected rivers in the United States, which possess outstandingly remarkable values, to be preserved in free-flowing condition. Within the national system of rivers, three classifications define the general character of designated rivers: Wild, Scenic, and Recreational. Classifications reflect levels of development and natural conditions along a stretch of river. Classifications are used to help develop management goals for the river.

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.

Wild Rivers - A classification within the national Wild and Scenic River System. Wild rivers are those rivers, or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.

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