
PROJECT GLOSSARY

Active ingredient (a.i.) - 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".

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.

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 plants are physiologically suited for high survival, good growth, and resistance to pests and diseases in a particular environment" (Northern Region Native Plant Handbook, 1995).

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.

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 (USDA, USDI 1994a).

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Administratively Withdrawn Areas - Areas removed from the suitable timber base through agency direction and land management plans.

Absorption - The assimilation of gas, vapor, or dissolved matter by the volume of a gas, liquid, or solid material.

Adsorption²¹ - The tendency of one chemical to adhere to another material such as soil. The assimilation of gas, vapor, or dissolved mater by the surface of a soil colloid or organic matter through an ionic bond.

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.

²¹ The following describes a general distinction between adsorption and absorption for herbicides: Adsorption refers to the tendency for the herbicide to be bound to soil colloids and held in place (affecting mobility and degradation rates), while absorption refers to the ability for plant roots to take up the herbicide on site.

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 13112, 2/3/99).

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.

Anions - Negatively charged ions in solution e.g., hydroxyl or OH⁻ ion.

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. (Dayton, 1950)

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

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.

ATSDR - Agency for Toxic Substances and Disease Registry; federal agency within the Public Health Service charged with carrying out the health-related analyses under CERCLA and SARA.

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

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

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

Base - Substances that (usually) liberate 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 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.

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 aquatic organism to levels greater than in the surrounding water.

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” (USDA Forest Service. “An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins”, Vol. II, 1997).

Biological Control - The use of nonnative agents 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 sensitive - A term used to identify a group of individuals who, because of their developmental stage or some other biological condition, are more susceptible than the general population to a chemical or biological agent in the environment.

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 application - In pesticides, to spread a chemical over a broad area.

Bryophytes - Plants of the phylum *Bryophyta*, including mosses, liverworts, and hornworts; characterized by the lack of true roots, stems, and leaves (USDA, USDI 1994a).

Candidate Species - Those plant and animal species that, in the opinion of the Fish and Wildlife Service (FWS) or 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.

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.

CAS Registration number - An assigned number used to identify a chemical. CAS stands for Chemical Abstracts Service, 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.

Cation - Positively charged ions in a solution.

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

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 2 years). Chronic exposure studies are used to evaluate the carcinogenic potential of chemicals and other long-term health effects.

Chronic RfD - An estimate of a lifetime daily exposure level for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of deleterious effects. Chronic RfDs (reference doses) are specifically developed to be protective for long-term exposure to a compound (7 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 lasting for the entire life of the exposed organism.

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).

Colluvium - soil material or rock fragments moved downslope by gravitational forces.

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 (USDA, USDI 1994). 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 scalelike 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.

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 13112, 2/3/99).

Cultural 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 exposures - Exposures resulting from one or more activities that are repeated over a period of time.

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

Dicot – A plant with two seed leaves.

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” (USDA Forest Service. “An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins”, Vol. II, 1997).

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), sometimes 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 - That portion of a sprayed chemical that is moved by wind off a target site.

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 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” (Allaby 1996). Compare to “Indigenous” and “Native”.

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.

Exotic - “Not native; introduced from elsewhere, but not completely naturalized” (Harris, 1994). See “Alien Species”.

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 wildlife or animals of a specified region or time.

Federally Listed Species - Formally listed as a threatened or endangered species under the ESA. Designations are made by the FWS or NMFS.

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.

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.

Foaming - Hot foam as a tool for controlling invasive plants has been tested by the Nature Conservancy and used by the BLM effectively on puncture vine and slender false brome. Hot foam is a mechanical method. It is effective on seedlings and annuals and can be applied under weather conditions including wind and light rain.

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.

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. (Source: Carbon Dioxide Information Analysis Center, 1990)

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

Granitic - Coarse-grained, acidic, intrusive rock

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

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

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

Hazard quotient (HQ) - The ratio of the estimated level of exposure to a substance from a specific pesticide application to the RfD (reference dose) 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.

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

Indian Rights and Interest - Indian treaty and other rights or interests recognized by treaties, statutes, laws, executive orders, or other government action, or federal court decisions.

(McConnell, 2003)

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.

(McConnell, 2003)

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

Infested Area - A contiguous area of land occupied by a single 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. (NRIS Standards).

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 (FSM 2080.5).

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 an action.

Introduced Species - An alien or exotic species that has been intentionally or unintentionally released into an area as a result of human activity. "Introduced (agricultural crops may fit the definition as well as 'native' or 'introduced' wildland species) or exotic species whose genetic material originally evolved and developed under different environmental conditions than those of the area in which it was introduced, often in geographically and ecologically distant locations" (Brown, 1997). See also "Noxious Weed" and "Exotic."

Introduction - "The intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity" (Executive Order 13112, 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 13112, 2/3/99).

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.

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.

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, bark, or soil).

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.

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

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

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

Miocene – Geological epoch of warmer climate from 24 to 5 million years ago.

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 (USDA, USDI 1994a).

Morbidity - Rate of disease, injury or illness.

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 (USDA, USDI 1994a).

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 (USDA, USDI 1994a).

National Marine Fisheries Service (NMFS) - The federal agency that is the listing authority for marine mammals and anadromous fish under the ESA.

Native Species - With respect to a particular ecosystem, a species which, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem (Executive Order 13112, 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” (Allaby 1996).

NLAA - See **Not Likely to Adversely Affect**

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. (Northern Region Native Plant Handbook, 1995).

Non-target - 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-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).

NPDES - See **National Pollutant Discharge Elimination System**

Paleosols – Soils that formed on a landscape of the past, usually buried by more recent parent materials.

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

Percolation – A 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 2 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, etc., 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, nematicides, rodenticides, desiccants, defoliants, plant growth regulators, and so forth. (W, modified).

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 (>7) is alkaline or basic and a low pH (<7) is acidic.

Pleistocene: Geologic epoch of glacial advance and retreat from 1.8 million to 11,000 BC.

Population - “A group of individuals of the same species in an area” (Wilson and Hipkins, 1999).

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.

Pre-disturbance surveys - See “Surveys Prior to Habitat-Disturbing Activities.”

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 – The term potential vegetation type (PVT) 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.

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 (W).

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.

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” (Society of Ecological Restoration, 2000).

Revegetation - “The re-establishment of plants on a site (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)”. (Northern Region Native Plant Handbook, 1995).

RfD - A daily dose which is not anticipated to cause any adverse effects in a human population over a lifetime of exposure. These values are derived by the U.S. Environmental Protection Agency.

Rhyolitic – Light colored, fine-grained, acidic, extrusive volcanic rock.

Riparian Area - A geographic area containing an aquatic ecosystem and adjacent upland areas that directly affect it (Northwest Forest Plan).

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 (USDA, USDI 1994a).

Risk Assessment - An analytic process that is firmly based on scientific considerations, but also requires judgments to be made when the available information is incomplete. These judgments inevitably draw on both scientific and policy considerations.

Risk - the chance of an adverse or undesirable effect.

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.

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.

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 (FSM 2670).

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 13112, 2/3/99).

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 (USDA, USDI 1994a).

Subchronic 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 subchronic study is usually performed in two species (rat and dog) by the route of intended use or exposure.

Subchronic 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. Subchronic toxicity only applies to relatively long-lived organisms such as mammals.

Submerged Aquatic Vegetation - Vegetation that lives at or below the water surface; an important habitat for young fish and other aquatic organisms.

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

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 - To kill or capture a species covered by the ESA.

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 (USDA, USDI 1994a).

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. As defined by U.S. EPA, 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.

Treated 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. (NRIS Standards).

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

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 (USDA, USDI 1994a).

Viable Population - 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 (USDA, USDI 1994a).

Weed - “A plant growing where man does not want it to grow” (Daubenmire 1978).

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.

Wetlands - 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.

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.

References

- Adams, M.J., D.E. Schindler, B.R. Bury. 2001.** Association of amphibians with attenuation of ultraviolet-b radiation in montane ponds. *Oecologia* 128 (4): 519-525.
- Ahlenslager, Kathy. 2006.** *Personal communication.* Forest Botanist, Colville National Forest, Colville, Washington.
- Alexanian, Kev. 2006.** *Personal communication.* Weed Management Specialist, Crook County, Prineville, Oregon.
- Allaby, M., ed., 1996.** The Concise Oxford Dictionary of Botany, Oxford University Press, Oxford, Great Britain.
- Altman, B. 2000a.** Conservation strategy for landbirds of the east-slope of the Cascade Mountains in Oregon and Washington. Version 1.0. June. Oregon-Washington Partners in Flight. 128pp.
- Altman, B. 2000b.** Conservation strategy for landbirds in the northern Rocky Mountains of eastern Oregon and Washington. Version 1.0. May. Oregon-Washington Partners in Flight. 121pp.
- Altman, B. and A. Holmes. 2000.** Conservation strategy for landbirds in the Columbia Plateau of eastern Oregon and Washington. Version 1.0. March. Oregon-Washington Partners in Flight. 131pp.
- Archer, A.J. 2001.** *Taeniatherum caput-medusae* [Web Page]. Located at: <http://www.fs.fed.us/database/feis>. Accessed 2003 Aug 11.
- Asher, J. 2000.** War on weeds: wining it for wildlife. Paper presented at North American Wildlife and Natural Resources conference. Rosemont, Illinois. March 27. 17 pp.
- Baker, M.B., 1988.** Hydrologic and Water Quality Effects of Fire. Proceedings: Effects of Fire in Management of Southwestern Natural Resources (Tucson, AZ, November 14-17, 1988). p 31-42.
- Bakke, D. 2002.** Analysis of issues surrounding the use of spray adjuvants with herbicides. Unpublished report by the Forest Service Pacific Southwest Regional Pesticide Use Specialist.
- Bakke, D. 2003.** Human and ecological risk assessments of nonylphenol polyethoxylate-based (NPE) surfactants in the Forest Service herbicide applications. Unpublished report by the Forest Service Pacific Southwest Regional Pesticide Use Specialist.
- Barrows, C.W. 1996.** Tamarisk control and common sense. Proceedings: California Exotic Pest Plant Council San Diego, CA.
- Bautista, Shawna. 2005.** *Personal communication.* Invasive Plant Biologist, Pacific Northwest Regional Office, Portland, Oregon.
- Bedunah, D., and Carpenter, J. 1989.** Plant community response following spotted knapweed (*Centaurea maculosa*) control on three elk winter ranges in western Montana Plant & Soil Department and Extension Service/ Montana State University. 1998 - Knapweed Symposium Bozeman, Montana.
- Belnap, Jayne, Roger Rosentreter, Steve Leonard, Julie H. Kaltenecker, John Williams, and David Eldridge. 2001a.** Biological Soil Crusts: Ecology and Management. USDI Bureau of Land Management, Denver Colorado, Technical Reference 1730-2.

- Belnap, J., and S. L. Phillips. 2001b.** Soil biota in an ungrazed grassland: response to annual grass (*Bromus tectorum*) invasion. *Ecol. Appl.* 11:1261–1275.
- Berg, N. 2004.** Assessment of herbicide best management practices: Status of our knowledge of BMP effectiveness. Pacific Southwest Research Station. USDA Forest Service. Albany, CA.
- Berger, L., R. Speare, and A.D. Hyatt. 1999.** Chytrid fungi and amphibian declines: overview, implications and future directions. Pp. 23-33 In A. Campbell, ed. *Declines and disappearances of Australian frogs*. Environment Australia. Canberra.
- Berger, L., R. Speare, P. Daszak, D.E. Green, A.A. Cunningham, C.L. Goggin, R. Slocombe, M.A. Ragan, A.D. Hyatt, K.R. McDonald, H.B. Hines, K.R. Lips, G. Marantelli, H. Parks. 1998.** Chytridiomycosis causes amphibian mortality associated with population declines in the rain forests of Australia and Central America. *Proceedings of the National Academy of Science USA* 95: 9031-9036.
- Blaustein, A.R., L.K. Belden, D.H. Olson, D.M. Green, T.L. Root, J. M. Kiesecker. 2001.** Amphibian breeding and climate change. *Conservation Biology* 15 (6): 1804-1809.
- Blossey, B. 1999.** Before, during, and after: the need for long-term monitoring in invasive plant species management. *Biological Invasions* 1:301-311.
- Blus, L.J., C.S. Staley, C.J. Henny, G.W. Pendleton, T.H. Craig, E.H. Craig, and K.K. Halford. 1989.** Effects of organophosphorus insecticides on sage grouse in southeastern Idaho. *Journal of Wildlife Management* 53: 1139-1146.
- Brady, N.C., and R.R. Weil. 1999.** *The nature and properties of soils*. 12th Edition. 881 pp. Upper Saddle River, NJ: Prentice Hall.
- Branum, Wayne. 2005.** Personal Communication. Wildlife Biologist Technician, Crescent Ranger District, Deschutes National Forest.
- Braun, C.E. 1987.** Current issues in sage grouse management. *Proceedings of the Western Association of Fish and Wildlife Agencies* 67: 134-144.
- Braun, C.E. 1998.** Sage grouse declines in western North America: what are the problems? *Proceedings of the Western Association of Fish and Wildlife Agencies* 78: 139-156.
- Bridges, C.M. and R.D. Semlitsch. 2000.** Variation in pesticide tolerance of tadpoles among and within species of Ranidae and patterns of amphibian decline. *Conservation Biology* 14 (5): 1490-1499.
- Brotherson, J. D., and Field, D. 1987.** *Tamarix*: impacts of a successful weed. *Rangelands* 9:110-2.
- Brown, Melissa L., Celestine A. Duncan, and Mary B. Halstvedt. 2001.** Cost and Efficacy of Spotted Knapweed Management with Integrated Methods. TechLine, Weed Management Resource Library, Granby, Colorado, May 2001.
- Buchanan, D.V., M.L. Hanson, and R.M. Hooton. 1997.** Status of Oregon's Bull Trout. Oregon Department of Fish and Wildlife, Portland, Oregon.
- Bulkin, Steve. 2006.** Personal Communication. Pacific Northwest Region Invasive Plant Implementation Team Member.
- Burtelow, Amy and Heidi Suna. 2004.** B&B Complex Fire: Year Two BAER Weed Monitoring Report. Sisters District, Deschutes National Forest, Sisters, Oregon.
- Busse, M., et al. 2001.** Glyphosate toxicity and the effects of long-term vegetation control on microbial communities. *Soil Biology and Biochemistry* 33 (2001) 1777-1789.

- Busse, Matt, Gary Fiddler, and Nancy Gillette. 2003.** Are Herbicides Detrimental to Ectomycorrhizae? In: Proceedings of the Twenty-Fourth Annual Forest Vegetation Management Conference, January 14-16, 2003, Redding, California.
- Busse, M. 2005.** *Personal Communication.* Research Scientist, USDA Pacific Southwest Research Lab, Redding/Davis, California.
- Chapman, D., A. Giorgi, T. Hilman, D. Deppert, M. Erho, S. Hays, C. Peven, B. Suzumoto, and R. Klinge. 1994.** Status of summer/fall chinook salmon in the Mid-Columbia region. Don Chapman Consultants Inc., Boise, Idaho.
- Cheney, Byron. 2006.** *Personal Communication.* Invasive Plant Program Manager, Deschutes & Ochoco NFs and Crooked River NG. 6/13/2006.
- Chew, F.S. 1981.** Coexistence and local extinction in two Pieris butterflies. *American Naturalist* 118: p.655-72.
- Chitwood, L. 1998.** *Personal Communication.* Forest Geologist, Deschutes National Forest. Bend, Oregon.
- Clerck-Floate, RD. 1997.** *Cattle as dispersers of hound's-tongue on rangelands in southeastern British Columbia, May 1997.* *Journal of Range Management* 50:239-243.
- Connelly, J. W., M. A. Schroeder, A. R. Sands, C. E. Braun. 2000.** Guidelines to manage sage grouse populations and their habitats. *Wildlife Society Bulletin* 28(4): 967-985.
- Council for Agricultural Science and Technology (CAST). 2002.** Environmental impacts of livestock on U. S. grazing lands. Task force report, No. 22:1-16.
- Courtney, S.P., J.A. Blakesley, M.L. Bigley (et al). 2004.** Scientific evaluation of the status of the northern spotted owl. Portland OR: Sustainable Ecosystems Institute. 508 pp.
- Cox, G.W. 1999.** Alien Invasion in North America and Hawaii: Impacts on Natural Ecosystems. Island Press.
- Croft, Lisa, Wayne R. Owen, and J. Stephen Shelly. 1997.** Interior Columbia Basin Ecosystem Management Project Analysis of Vascular Plants. USDA Forest Service and USDI Bureau of Land Management, <http://www.icbemp.gov/>
- Crump, M.L. 2005.** Why are some species in decline but others not? Pp. 7-9 In M. Lannoo, ed. *Amphibian Declines: the conservation status of United States species.* Univ. of California Press. Berkely. 1094p.
- Csuti, B.; T.A. O'Neil; M.M. shaughnessy; E.P. Gaines; J.C. Hak. 2001.** Atlas of Oregon Wildlife: Distribution, Habitat, and Natural History. Oregon State University Press. Corvallis, OR 524 pp.
- Cude, C.G.. 1996.** *Oregon Water Quality Index Report for the Deschutes and Hood Basins: Water Years 1986-1995.* Oregon Department of Environmental Quality Laboratory. Portland, Or.
- D' Antonio, C.M., and Vitousek, P. 1992.** Biological invasions by exotic grasses, the grass/fire cycle, and global change. *Annual Review of Ecological Systems* 23:63-87.
- Dachtler, N. 1997.** Big Marsh Creek level II stream inventory. Crescent Ranger District. Deschutes National Forest. Crescent, OR.
- Dachtler, N. 2000.** Metolius River Level II Stream Inventory. Sisters Ranger District. Deschutes National Forest. Sisters, OR.

References

- Dachtler, N. 2003.** Summary of 2003 bull trout presence absence surveys in the Odell/Davis Lakes basin. Deschutes National Forest. Bend, OR.
- Dachtler, N. 2004.** Fish surveys on the Crescent Ranger District. Summer, 2004. Deschutes National Forest. Bend, OR.
- Dewey, Rick. 2005.** Draft Conservation Strategy for *Calochortus longebarbatus* var. *peckii*. Ochoco National Forest, Prineville, Oregon.
- Dewey, Rick. 2006a.** *Personal Communication*. Bryophyte expert, Deschutes National Forest, Bend, Oregon.
- Dewey, Rick. 2006b.** Survey Recommendations for Survey and Manage Vascular Plants, Bryophytes, Lichens and Fungi on the Deschutes National Forest (for Category A and C species). Deschutes National Forest, Bend, Oregon.
- DiTomaso, J.M. 2000.** Invasive weeds in rangelands: Species, impacts and management. *Weed Science* 48:255-265.
- Drost, C.A. and G.M. Fellers. 1996.** Collapse of a regional frog fauna in the Yosemite area of the California Sierra Nevada, USA. *Conservation Biology* 10 (2): 414-425.
- Dudley, T.L. 2000.** Noxious wildland weeds of California: *Arundo Donax*. in: Bossard, C.C., Randall, J.M., and Hoshousky, M.C., eds. *Invasive plants of California wildlands*. Berkeley, CA: Univ. of California Press. p.53-8.
- Duncan, Nancy, Tom Burke, Steve Dowlan, and Paul Hohenlohe. 2003.** Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan. Version 3.0. IM OR 2003-44. www.or.blm.gov/surveyandmanage/sp.htm
- Ehrenfeld, J. G., P. Kourtev, et al. 2001.** Changes in soil functions following invasions of exotic understory plants in deciduous forests. *Ecological Applications* 11(5): 1287-1300.
- Erickson, Vickie J., et al. 2003.** Guidelines for Revegetation of Invasive Weed Sites and Other Disturbed Areas on National Forests and Grasslands in the Pacific Northwest.
- Estok, D., B. Freedman, and D. Boyle. 1989.** Effects of the Herbicides 2,4-D, Glyphosate, Hexazinone, and Triclopyr on the Growth of Three Species of Ectomycorrhizal Fungi. *Bulletin of Environmental Contamination and Toxicology* 42: 835-839.
- Evans, D. G. and Miller, M. H. 1988.** Vesicular-arbuscular mycorrhizas and the soil — disturbance induced reduction of nutrients absorption in maize. I. Casual relations. *New Phytol.* 110: 67–74.
- Evans, D. G. and Miller, M. H. 1990.** The role of external mycelial network in the effect of soil disturbance upon vesiculararbuscular colonization of maize. *New Phytol.* 114: 65–71.
- Evens, JO and Dusej, DR. 1973.** Herbicide Contamination of Surface Runoff Waters. Environmental Protection Agency, Technology Series Report, EPA-R2-73-266. pgs 99.
- Executive Order 13112 Invasive Species. 1999.** Federal Register: Feb 8, 1999 (Volume 64, Number 25; 6183 - 6186).
- Ferguson, L. M., L. Wilson, and K. Launchbaugh. 2001.** Phenological Effects of Simulated Grazing on *Centaurea Sostitalis* in Northern Idaho, University of Idaho. Society of Range management 56th Annual meeting Abstracts, February 2 – 6, 2003.
- Forsman, E.D., E.C. Meslow, and H.M. Wight. 1984.** Distribution and biology of the spotted owl in Oregon. *Wildlife Monographs* 87:1-64.

- Fryrear, D. W. 2000.** Wind Erosion. Handbook of Soil Science, Editor Malcom E Sumner, G-195 to G-216. Boca Raton: CRC Press.
- Garbaye, J. and G.D. Bowen, 1989.** Stimulation of ectomycorrhizal infection of *Pinus radiata* by some microorganisms associated with the mantle of ectomycorrhizas. *New Phytol.* (1989), 112, 383-388.
- Geiser, Linda. 2006.** Personal communication. Lichen Expert/Ecologist, Pacific Northwest Region Air Program, Corvallis, Oregon.
- Germaine, S.S., Rosenstock, S.S., Schweinsburg, R.E, and Richardson, W.S. 1998.** Relationships among breeding birds, habitat, and residential development in greater Tucson, Arizona. *Ecological Applications*.
- Gibson, Steve. 2006.** Personal communication. Range Vegetation Specialist, Crooked River National Grassland, Madras, Oregon.
- Goetz, F.A. 1989.** Biology of the bull trout, *Salvelinus confluentus*: a literature review. Willamette National Forest, Eugene, Oregon.
- Gregory, S.V., F.J. Swanson, W.A. McKee, K.W. Cummins. 1991.** An ecosystem perspective of riparian zones. *BioScience*. 41(8):540-550.
- Grenier, Katie. 2002.** Deschutes National Forest Noxious Weed Monitoring Report. Deschutes National Forest, Bend, Oregon.
- Hall, Frederick C. 1998.** Pacific Northwest Ecoclass Codes for Seral and Potential Natural Communities. U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-418, April 1998.
- Halliday, T. 2005.** Diverse phenomena influencing amphibian population declines. Pp. 3-6 In M. Lannoo, ed. *Amphibian Declines: the conservation status of United States species*. Univ. of California Press. Berkely. 1094p.
- Hampson, P.S., Treece Jr., M.W., Johnson, G.C., Ahlstedt, S.A., and Connell, J.F. 2000.** Water Quality in the Upper Tennessee River Basin, Tennessee, North Carolina, Virginia, and Georgia 1994-98. U.S. Geological Survey Circular 1205, 32p.
- Harvey, S.J. and R.M. Nowierski. 1989.** Spotted knapweed: allelopathy or nutrient depletion? In *Proceedings of the 1989 Knapweed Symposium*, Montana State University. Bozeman, MT 59717.
- Helliwell, Richard. 1993.** Memorandum to Ochoco National Forest Botanists to share Peck's mariposa lily (*Calochortus longebarbatus* var. *peckii*) information. On file at Lookout Mt. District, Ochoco National Forest, Prineville, Oregon.
- Hobbie SE. 1992.** Effects of plant species on nutrient cycling. *T.R.E.E.* 7:336-339.
- Holes, Ray. 2005.** Presentation: turning vegetation into dollars. 34th PNW Range management Short Course, February 23 – 25, 2005.
- Horner, N.J. 1978.** Survival, densities and behavior of salmonid fry in streams in relation to fish predation. M.S. Thesis, University of Idaho. Moscow, Idaho.
- Horton, J.S. 1977.** The development and perpetuation of the permanent tamarisk type in the phreatophyte zone of the Southwest. U.S. Department of Agriculture, Forest Service, Gen. Tech. Rep., Rocky Mountain Forestry and Range Experiment Station 43: p.124-127.

References

- Howell, P.K., D.S. Jones, L. Lavoy, W. Kendra, and D. Ortmann. 1985.** Stock assessment of anadromous salmonids, Volume II. Final report to Bonneville Power Administration, U.S. Department of Energy. Portland, Oregon.
- Houslet, B. and J. Lovtang. 1996.** Candle Creek Level II Stream Inventory. Sisters Ranger District. Deschutes National Forest. Sisters, OR.
- Houslet, B.S. and M.D. Riehle. 1998.** Inland redband trout spawning survey of the upper Metolius River subbasin. USDA Forest Service, Sisters Ranger District, Sisters, Oregon.
- Hurd, Signe. 2005.** Noxious Weed Site Revegetation Project Executive Summary. Deschutes National Forest, Bend, Oregon.
- Interior Columbia Basin Ecosystem Management Project. 2000.** USDA Forest Service and USDI Bureau of Land Management, <http://www.icbemp.gov/>
- Jacobs, J. Sharlene Sing, Monica Pokorny and Roger Sheley. 2006.** Presentation: The interaction of competitive grass and biological control to manage spotted knapweed. 59th Society for Range Management Annual Meeting, Vancouver B.C., February 12 – 17, 2006.
- Jakle, M.D., and Gatz, T.A. 1985.** Herpetofaunal use of four habitats of the Middle Gila River drainage, Arizona. Paper presented at the North American Riparian Conference, April 16-18, 1985, Tucson, AZ.
- Jakober, M. 1992.** Influence of stream size and morphology on the seasonal distribution and habitat use of resident bull trout and west slope cutthroat trout in Western Montana. Progress Report, USDA Forest Service, Intermountain Research Station, Fort Collins, Colorado.
- Jeffries, Shane and Dave Zalunardo. 2003.** Forest Wildlife Biologists for the Deschutes and Ochoco National Forests and Crooked River National Grasslands. White paper on historical lynx occurrence in Central Oregon and defining lynx habitat based on current definitions. Bend, Oregon.
- Johnsen, TN and Warskow, WL. 1980.** Picloram Dissipation in a Small Southwest Stream. Weed Science, vol. 28, no 5, September 1980. p 612-615.
- Kaltenecker, Julianne H., Marcia C. Wicklow-Howard, and Mike Pellant. 1999.** Biological soil crusts: natural barriers to *Bromus tectorum* L. establishment in the northern Great Basin, USA. *In*: Eldridge, David and David Freudenberger, editors, Proceedings of the VI International Rangeland Congress, Townsville, Queensland, Australia, July 19-23, 1999.
- Kats, L.B. and R.P. Ferrer. 2003.** Alien predators and amphibian declines: review of two decades of science and the transition to conservation. Diversity and Distributions (9): 99-110
- Kenaga, E.E. 1973.** Factors to be considered in the evaluation of the toxicity of pesticides to birds in their environment. Pp. 166-181 In Environmental quality and safety: Global aspects of chemistry, toxicology, and technology as applied to the environment, Vol. II. Academic Press, Inc. New York, NY.
- Kiviat, E. 1996.** Short Communications: American Goldfinch nests in purple loosestrife. Wilson Bulletin 108(1): p.182-6.
- Knapp, R.A., and K.R. Matthews. 2000.** Non-native fish introductions and the decline of the mountain yellow-legged frog from within protected areas. Conservation Biology 14 (2): 428-438.
- Knight, A.P., and R.G. Walter. 2003.** A Guide to Plant Poisoning of Animals in North America, 2001. Teton NewMedia.

- KY Water Watch. 2005.** Water Quality Parameters.
www.state.ky.us/nrepc/water/wcparint.htm
- Lacey, J.R., C.B. Marlow and J.R. Lane. 1989.** Influence of spotted knapweed (*Centaurea maculosa*) on surface water runoff and sediment yield. *Weed Technology* 3: 627-631.
- Lacey, J. R., Olson, B. E. 1991.** Environmental and economic impacts of noxious range weeds. *Noxious Range Weeds* James, L. F., Evans, J. O., Ralphs, M. H., & Child, R. D., editors (Westview Press).
- Langland, Dave. 2005a.** Deschutes National Forest Herbicide Treatment Monitoring Report. Oregon Department of Agriculture, Redmond, Oregon.
- Langland, Dave. 2005b.** *Personal Communication.* Weed Specialist, Oregon Department of Agriculture, Redmond, Oregon.
- Langland, Dave. 2006.** *Personal Communication.* Weed Specialist, Oregon Department of Agriculture, Redmond, Oregon.
- Larsen, D.M. 1976.** Deschutes National Forest Soil Resource Inventory. USDA Forest Service Pacific Northwest Region.
- Lauenroth, W.K., D.G. Milchunas, J.L. Dodd, R.H. Hart, R.K. Heitschmidt, and L.R. Rittenhouse . 1994 .** Effects of grazing on ecosystems of the Great Plains . Pages 69 - 100 in Vavra, M., W.A. Laycock, and R.D. Pieper Editor(s). *Ecological implications of livestock herbivory in the West.* Society for Range Management, Denver, CO.
- Lesko, Mark. 2006.** History of Yellow Starthistle Infestation at Northside Timber Sale Area. Monitoring notes, Lookout Mountain District, Ochoco National Forest.
- Lindsay, R.B., B.C. Johansson, R.K. Schroeder and B.C. Cates. 1989.** Spring Chinook salmon in the Deschutes River, Oregon. Oregon Department of Fish and Wildlife Information Report (Fish) 89-4, Portland, Oregon.
- Lippert, Jenny. 2006.** Personal communication. Botanist, Willamette national Forest, Eugene, Oregon.
- Lips, K. 1999.** Mass mortality and population declines of Anurans at an upland site in western Panama. *Conservation Biology* 13 (1): 117-125
- Lor, S.K. 1999.** Habitat use and population status of marsh birds in western New York. M.S. thesis. Department of Natural Resources, Cornell University, Ithica New York. 135.
- Lorz, Harold W. and others. 1979.** Effects of selected herbicides on smolting of coho salmon. EPA-600/3-79-071. Corvallis, OR: U.S. Environmental Protection Agency, Office of Research and Development, Environmental Research Laboratory. 103 pg.
- Mack, R.N. 1981.** Invasion of *Bromus tectorum* L. into Western North America: an ecological chronicle. *Agro-Ecosystems*: 7: p.145-65.
- Mack R.N. and J.N. Thompson. 1982.** Evolution in steppe with few large, hooved mammals. *American Midland Naturalist* 119: 757-773.
- Mafera, D. 2006.** *Personal Communication.* Botanist, Paulina Ranger District, Ochoco National Forest.
- Mann, R.M. and J.R. Bidwell. 1999.** The toxicity of glyphosate and several glyphosate formulations to four species of southwestern Australian frogs. *Archives of Environmental Contamination and Toxicology* 26: 193-199.

- Marrs, R.H., C.T. Williams, A.J. Frost, and R.A. Plant. 1989.** Assessment of the Effects of Herbicide Spray Drift on a Range of Plant Species of Conservation Interest. *Environmental Pollution* 59:71-86.
- Marshall, D.B., M.G. Hunter, and A.L. Contreras, Eds. 2003.** *Birds of Oregon: A General Reference*. Oregon State University Press, Corvallis, OR.
- Mazzu, Linda. 2004.** A compilation of documents giving extra detail on the discussions provided in the Draft Preventing and Managing Invasive Plants EIS. Specialist report on file at U.S. Forest Service Pacific Northwest Region (Region 6) office, Portland, Oregon.
- Mazzu, Linda. 2005.** Common Control Measures for Pacific Northwest Invasive Plants. Available on the Forest Service Region Six Invasive Plants website: www.fs.fed.us/r6/invasiveplant-eis
- McAdoo, J.K.; S.R. Swanson; B.W. Schultz; and P.F. Brussard. 2004.** Vegetation management for sagebrush-associated wildlife species. P. 189-193 in USDA Forest Service Proceedings RMRS-P-31.
- McPhail, J.D. and C.B. Murray. 1979.** The early life-history and ecology of Dolly Varden, *Salvelinus malma*, in the Upper Arrow Lakes. Department of Zoology and Institute of Animal Resources, Vancouver.
- Mills, G.S., Dunning, J. B. Jr., and Bates, J. M. 1989.** Effects of urbanization on breeding bird community structure in southwestern desert habitats. *Condor* (91): p.416-28.
- Minnesota Department of Natural Resources. 2006.** White and yellow sweet clover (*Melilotus alba*; *M. officinalis*). Available on: <http://www.dnr.state.mn.us/invasives/terrestrialplants/herbaceous/whitesweetclover.html>
- Molina, Randy, David Pilz, Jane Smith, Susie Dunham, Tina Dreisbach, Thomas O'Dell, and Michael Castellano. 2001.** Conservation and Management of Forest Fungi in the Pacific Northwestern United States: an Integrated Ecosystem Approach. In Moore, D., M.M. Nauta, S.E. Evans and M. Rotheroe, editors. *Fungal Conservation – Issues and Solutions*. Cambridge University Press, Cambridge, UK. Pages 19-63.
- Moser, L. and D. Crisp. 2000.** Mediterranean sage, *Salvia aethiopsis*. San Francisco Peaks Weed Management Area fact sheet on *Salvia aethiopsis*. Coconino National Forest. Available online at http://www.usgs.nau.edu/swepic/factsheets/saaesf_info.pdf.
- Mullan, J.W., K. Williams, G. Rhodus, T. Hillman, and J. McIntyre. 1992.** Production and habitat of salmonids in mid-Columbia River tributary streams. U. S. Fish and Wildlife Service. Monograph 1.
- Muths, E., P.S. Corn, A.P. Pessier, and D.E. Green. 2003.** Evidence for disease-related amphibian decline in Colorado. *Biological Conservation* 110: 357-365.
- National Research Center. 1996.** *Risk Assessment in the Federal Government: Managing the Process*. 13th (1996) ed. Washington DC: National Academy Press.
- NatureServe. 2003.** Nature Serve Explorer: An online encyclopedia of life [web application]. Version 1.8. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: December 19, 2003).
- Neary, DG and others. 1985.** Picloram Movement in an Appalachian Hardwood Forest Watershed. *Journal of Environmental Quality*, vol. 14, no. 4, October-December 1985. p 585-592.

- Nehlsen, W. 1995.** Historical salmon and steelhead runs of the upper Deschutes River and their environments. Portland General Electric Company, Hydro Licensing Department. Portland, Oregon.
- Nelson, T.K. 2000.** Trout Creek 2000 Summer Steelhead Outmigrant Trapping Results. Oregon Department of Fish and Wildlife, Madras, Oregon.
- Newmaster, Steven G., F. Wayne Bell, and Dale H. Vitt. 1999.** The effects of glyphosate and triclopyr on common bryophytes and lichens in northwestern Ontario. *Canadian Journal of Forest Research* 29: 1101-1111.
- Norris, L.A., H.W. Lorz, and S.V. Gregory. 1983.** Influence of Forest and Rangeland Management on Anadromous Fish Habitat in Western North America. USDA Forest Service General Technical Report PNW-149. 95 pg.
- Norris, Logan A. 1983.** Monitoring streams for herbicide residues from brush control operations on BPA powerline rights-of-way: a rationale and protocol. Corvallis, Oregon: Oregon State University, School of Forestry. 60 pg.
- Olson, B. E., 1999.** Impacts of noxious weeds on ecologic and economic systems. Pages 4-18 in *Biology and Management of Noxious rangeland weeds*. R. L. Sheley and J. K. Petroff (Eds.). Oregon State University Press, Corvallis.
- Norris, L.A., Lorz, H.W., and Gregory, S.V. 1991.** Forest Chemicals. *American Fisheries Society Special Publication* 19:207-296.
- North American Pollinator Protection Campaign. 2006.** Fact Sheet available on-line at www.NAPPC.org or www.coevolution.org.
- Olsen E.A., P.M.P. Beamesderfer, M.L. McLean, and E.S. Tinus. 1992.** Salmon and steelhead stock summaries for the Deschutes River Basin: an interim report. Columbia River Coordination Program, Oregon Department of Fish and Wildlife, Portland, Oregon. Contract DE-FC79-89BP94402, Project 88-108. Prepared for Bonneville Power Administration, Portland, Oregon.
- Olson, B.E. and R.G. Kelsey. 1997.** Effect of *Centaurea maculosa* on Sheep Rumen Microbial Activity and Mass in Vitro. *Journal of Chemical Ecology*, Vol 23, Number 4.
- Olson, Bret E. 1999.** Impacts of Noxious Weeds on Ecologic and Economic Systems. *In:* Sheley, Roger L. and Janet K. Petroff, editors. *Biology and Management of Noxious Rangeland Weeds*. Oregon State University Press, Corvallis, Oregon.
- O'Neil, Cynthia. 1992.** Species Conservation Strategy for Peck's Penstemon (*Penstemon peckii*). Deschutes National Forest, Bend, Oregon.
- Oregon Department of Agriculture. 2005.** Summary report on herbicide acres and usage on the Deschutes National Forest, 2000-2005. On file at Deschutes National Forest Supervisor's Office, Bend, Oregon.
- Oregon Department of Environmental Quality (ODEQ). 1999.** Upper Deschutes River Basin R-EMAP: 1997-1998 Water Chemistry Summary. Oregon Department of Environmental Quality, Laboratory Division, Biomonitoring Section. Tech. Rpt. BIO99-04.
- Oregon Department of Fish and Wildlife. 1996.** Deschutes River Subbasin Fish Management Plan. High Desert Region, Bend District, Bend, Oregon.
- Oregon Dept. of Fish and Wildlife. 2000a.** Oregon guidelines for timing of in-water work to protect fish and wildlife resources. http://www.dfw.state.or.us/lands/0600_inwtrguide.pdf

References

- Oregon Dept. of Fish and Wildlife. 2000b.** Redd Count Data in the Trout Creek Watershed. Unpublished data, Madras, Oregon.
- Oregon Dept. of Fish and Wildlife. 2003.** Deep Creek redband trout migration study: 2003 Progress report. Oregon Department of Fish and Wildlife. Prineville, OR.
- Oregon Natural Heritage Information Center. 2004.** Updated list of Rare, Threatened or Endangered Species. Available on: <http://oregonstate.edu/ornhic/>
- Pagel, J. Unpublished data.** Peregrine falcon nest site data, 1983-2006, 1983-2004 US Forest Service, Regional Peregrine Falcon Specialist; data collected for PNW Interagency Peregrine Falcon Program, Ashland OR; 2004-2006, US Fish and Wildlife Service, Carlsbad, CA.
- Pajutee, Maret. 2006a.** Draft Species Conservation Strategy Update for Peck's Penstemon (*Penstemon peckii*). Deschutes National Forest, Sisters, Oregon.
- Pajutee, M. 2006b.** Personal Communication. Sisters Ranger District Botanist.
- Paulsen, D.J. 1977.** Ochoco National Forest Soil Resource Inventory. USDA Forest Service Pacific Northwest Region.
- Pearl, C. A. and M. P. Hayes. 2002.** Predation by Oregon spotted frogs (*Rana pretiosa*) on western toads (*Bufo boreas*) in Oregon. *American Midland Naturalist* 147: 145-152.
- Pechmann, J.H.K., D.E. Scott, R.D. Semlitsch, J.P. Caldwell, L.J. Vitt, J.W. Gibbons. 1991.** Declining amphibian populations: the problem of separating human impacts from natural fluctuations. *Science* 253: 892- 895.
- Pellant, M. 1990.** The cheatgrass-wildfire cycle – are there any solutions? *In*. McArthur, E. Durant, E.M. Romney, S.D. Smith, P.T. Tueller. Proceedings of the Symposium on cheatgrass invasion, shrub die-off, and other aspects of shrub biology and management: 1989 april 5-7. Las Vegas, NV. USDA Forest Service Gen. Tech. Rep. INT-276. Ogden, UT.
- Perkins, P.J., J.H. Boermans, G.R. Stephenson. 2000.** Toxicity of glyphosate and triclopyr using the frog embryo teratogenesis assay-*Xenopus*. *Environmental Toxicology and Chemistry* 19: 940-945.
- Pilz, David and Randy Molina. 2001.** Commercial harvests of edible mushrooms from the forests of the Pacific Northwest United States: issues, management, and monitoring for sustainability. *Forest Ecology and Management* 5593 (2001) 1-14.
- Pilz, David. 2006.** *Personal communication.* Forest mycologist, Oregon State University, Corvallis, Oregon.
- Powers, Charmane. 2006a.** *Personal communication.* Botanist/Ecologist, Bend/Ft. Rock District, Deschutes National Forest, Bend, Oregon.
- Powers, Charmane. 2006b.** Draft pumice grape-fern (*Botrychium pumicola*) Conservation Strategy. Deschutes National Forest, Bend, Oregon.
- Pratt, K.L. 1984.** Habitat selection and species interactions of juvenile west slope cutthroat trout, *Salmo clarki Lewisii*, and bull trout, *Salvelinus confluentus*, in the upper Flathead River Basin. M.S. Thesis, University of Idaho, Moscow.
- Pratt, K.L. 1991.** Bull Trout scale analysis for the Metolius River Basin. Final Report, USDA Forest Service, Deschutes National Forest. Bend, Oregon.
- Pratt, K.L. 1992.** A review of bull trout life history. Pages 5-9 in P.J. Howell and D.V. Buchanan, eds., Proceedings of the Gearhart Mountain Bull trout workshop. Oregon Chapter of the American Fisheries Society, Corvallis, Oregon.

- Quigley, T.M., and Arbelbide, S.J., (eds.). 1997.** An assessment of ecosystem components in the interior Columbia Basin and portions of the Klamath and Great Basins. Gen. Tech. Rep. PNW-GTR-405. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station 3:1057-713 (656).
- Ragotzkie, K. E., R. L. Westman. 2000.** Leafy Spurge Control in a Seasonally Flooded Riparian Environment. Society of Range management 56th Annual meeting Abstracts, February 2 – 6, 2003.
- Raloff, J. 1998.** Botanical 'velcro' entraps hummingbirds- burrs cause bird fatalities- brief article [Web Page]. Located at: http://www.findarticles.com/p/articles/mi_m1200/is_n16_v154/ai_21250276. Accessed 2004 Jul.
- Ramwell, C.T., A.I.J. Heather, and A.J. Shepherd. 2002.** Herbicide loss following application to a roadside. *Pest Management Science* 58: 695-701.
- Randall, J.M. 1996.** Weed control for the preservation of biological diversity. *Weed Technology* 10: p.370-83.
- Ratliff, D.E. and P.J. Howell. 1992.** The status of bull trout population in Oregon. Pages 10-17 in P.J. Howell and D.V. Buchanan, eds., *Proceedings of the Gearhart Mountain Bull trout workshop*. Oregon Chapter of the American Fisheries Society, Corvallis, Oregon.
- Ratliff, D.E. 1992.** Bull trout investigations in the Metolius River-Lake Billy Chinook system. Pages 37-44 in P.J. Howell and D.V. Buchanan (eds), *Proceedings of the Gearhart Mountain Bull trout workshop*. Oregon Chapter of the American Fisheries Society, Corvallis, Oregon.
- Ratliff, D.E., S.L. Thiesfeld, W.G. Weber, A.M. Stuart, M.D. Riehle, and D.V. Buchanan. 1996.** Distribution, life history, abundance, harvest, habitat and limiting factors of bull trout in the Metolius River and Lake Billy Chinook, Oregon, 1934-1994. Information Report, Oregon Department of Fish and Wildlife, Portland, Oregon.
- Rawinski, T.J., and Malecki, R.A. 1984.** Ecological relationships among purple loosestrife, cattail and wildlife at the Montezuma National Wildlife Refuge. *New York Fish and Game Journal* 31(1): p.81-7.
- Reed, J.M. and A.R. Blaustein. 1995.** Assessment of “nondeclining” amphibian populations using power analysis. *Conservation Biology* 9 (5): 1299-1300.
- Reichard, S.H, and P. White. 2001.** Horticulture as a pathway of invasive plant introductions in the United States. *Bioscience* 51(2): 103-13.
- Reisenbichler, R.R., J.D. McIntyre, M.F. Solazzi, and S.W. Landino. 1992.** Genetic variation in steelhead of Oregon and Northern California. *Trans. American Fish. Soc.* 121:158-69.
- Relyea, R.A. 2005.** The lethal impacts of Roundup and predatory stress on six species of North American tadpoles. *Archives of Environmental Contamination and Toxicology* 48: 351-357.
- Relyea, R.A. 2005b.** The impact of insecticides and herbicides on the biodiversity and productivity of aquatic communities. *Ecological Applications* 15(2): 618-627.
- Rice, Peter M., J. Christopher Toney, Donald J. Beduna, and Clinton E. Carlson. 1993.** Plant Biodiversity after Herbicide Applications. Paper presented at the Proceedings of the Idaho Weed Control Association meeting, February 17-18, 1993, Boise, Idaho, and published in “Knapweed”, Washington State University Extension Service, August 1993, Vol. 7, No. 2.

- Rice, Peter M., J. Christopher Toney, Donald J. Beduna, and Clinton E. Carlson. 1997.** Plant community diversity and growth form responses to herbicide applications for control of *Centaurea maculosa*. *Journal of Applied Ecology* 34: 1397-1412.
- Rice, P.M., Toney, J. C., Bedunah, D.J., and Carlson, C.E. 1997.** Elk winter forage enhancement by herbicide control of spotted knapweed. *Wildlife Society Bulletin* 25(3): p.627-33.
- Riehle, M., W. Weber, A.M. Stuart, S.L. Thiesfeld, and D.E. Ratliff. 1997.** Progress report of the multi-agency study of bull trout in the Metolius River System, Oregon. Pages 137-144 in W.D. Makay, M.K. Brewin, and M. Monita, eds., *Friends of the bull trout conference proceedings*, Bull Trout Task Force (Alberta), c/o Trout Unlimited Canada. Calgary, Alberta.
- Rieman, B.E. and J.D. McIntyre. 1993.** Demographic and habitat requirements for conservation of bull trout. General Technical Report INT-302, USDA Forest Service, Intermountain Research Station, Boise, Idaho.
- Roberts, Anne E.** Personal communication – email. Wildlife Biologist, USDA Forest Service, Crooked River National Grassland, Prineville, OR.
- Rosgen, D. 1996.** Applied river morphology. *Wildland Hydrology*. Pagosa Springs, CO.
- Roslycky, E. B. 1986.** Microbial response to sethoxydim and its degradation in soil. *Can. J. Soil Sci.* 66:411-419. (referenced in Sethoxydim paper in reference research folder)
- Schmidt, K.A., and Whelan, C.J. 1999.** Effects of exotic *Lonicera* and *Rhamnus* on songbird nest predation. Volume 13. 6. p 1502-6.
- Schreck, C.B., H.L. Li, R.C. Hjort, and C.S. Sharpe. 1986.** Identification of Columbia River chinook and steelhead trout. Bonneville Power Administration Project 83-451, Portland, Oregon.
- SERA (Syracuse Environmental Research Associates, Inc.). 1997.** Effects of Surfactants on the Toxicity of Glyphosate, with Specific Reference to RODEO. SERA TR 97-206-1b February 6, 1997.
- SERA (Syracuse Environmental Research Associates, Inc.). 1997.** Use and Assessment of Marker Dyes Used With Herbicides. SERA TR 96-21-07-03b December 21, 1997.
- SERA (Syracuse Environmental Research Associates, Inc.). 1998.** 2,4-Dichlorophenoxyacetic acid formulations - Human Health and Ecological Risk Assessment - Final Report. SERA TR 9595-21-09-01d. September 20, 1998.
- SERA (Syracuse Environmental Research Associates, Inc.). 2001a.** Preparation of Environmental Documentation of Risk Assessments. SERA MD 2001-01a. July 18, 2001.
- SERA (Syracuse Environmental Research Associates, Inc.). 2001b.** Sethoxydim [Poast] - Human Health and Ecological Risk Assessment Final Report. SERA TR 01-43-01-01c. October 31, 2001
- SERA (Syracuse Environmental Research Associates, Inc.). 2002.** Neurotoxicity, Immunotoxicity, and Endocrine Disruption with Specific Commentary on Glyphosate, Triclopyr, and Hexazinone: Final Report. SERA TR 01-43-08-04a February 14, 2002.
- SERA (Syracuse Environmental Research Associates Inc. 2003a.** Glyphosate- Human Health and Ecological Risk Assessment Final Report.
- SERA (Syracuse Environmental Research Associates, Inc.). 2003b.** Picloram - Revised Human Health and Ecological Risk Assessment Final Report. SERA TR 03-43-26-01b. June 30, 2003.

- SERA (Syracuse Environmental Research Associates, Inc.). 2003c.** Sulfometuron methyl - Human Health and Ecological Risk Assessment Preliminary Draft - Introduction a Program Description. SERA TR 02-43-17-02a. October 16, 2003. References-24
- SERA (Syracuse Environmental Research Associates, Inc.). 2003d.** Triclopyr - Revised Human Health and Ecological Risk Assessments Final Report. SERA TR 02-43-13-03b. March 15, 2003.
- SERA (Syracuse Environmental Research Associates, Inc.). 2003e.** Documentation for Worksheets Version 2.04 - Human Health and Ecological Risk Assessments. SERA WSD 01-2.04. February 25, 2003.
- SERA (Syracuse Environmental Research Associates, Inc.). 2004a.** Chlorsulfuron - Human Health and Ecological Risk Assessment – Final Report. SERA TR 04-43-18-01c. November 21, 2004.
- SERA (Syracuse Environmental Research Associates, Inc.). 2004b.** Clopyralid - Human Health and Ecological Risk Assessment - Final Report. SERA TR 04-43-17-03c. December 5, 2004.
- SERA (Syracuse Environmental Research Associates, Inc.). 2004c.** Imazapic - Human Health and Ecological Risk Assessment - Final Report. SERA TR 04-43-17-04b. December 23, 2004.
- SERA (Syracuse Environmental Research Associates, Inc.). 2004d.** Imazapyr - Human Health and Ecological Risk Assessment – Final Report. SERA TR 04-43-17-05b. December 18, 2004.
- SERA (Syracuse Environmental Research Associates, Inc.). 2004e.** Metsulfuron methyl - Human Health and Ecological Risk Assessment Final Report. SERA TR 02-43-17-01b. December 9, 2004.
- SERA (Syracuse Environmental Research Associates/Inc.). 2004f.** Dicamba - Final Report. SERA TR 04-43-17-06d November 24, 2004.
- SERA (Syracuse Environmental Research Associates, Inc.). 2004g.** Documentation for the Use of GLEAMS (Version 3) and Auxiliary Programs in Forest Service Risk Assessments (Version 2.04). SERA TD 2004-02.04b February 10, 2004.
- Sheley RL Petroff JK (editors.) 1999.** Biology and Management of Noxious Rangeland Weeds. Oregon State University Press, Corvallis, Oregon.
- Sheley, Roger. 2005.** *Personal communication.* Research Weed Scientist, Eastern Oregon Agricultural Research Center, Burns, Oregon. Field trip to review medusahead sites on Crooked River National Grassland, August 31, 2005.
- Shepard, B., K.L. Pratt, and P. Graham. 1984.** Life history of west slope cutthroat and bull trout in the upper Flathead River Basin, Montana. Department of Fish, Wildlife, and Parks, Montana.
- Sheley, Roger. 2004.** Weed presentation given by Roger Sheley on January 7, 2004 in Redmond, Oregon. Eastern Oregon Agricultural Experiment Station in Burns Oregon.
- Sheley, Roger. 2005.** *Personal communication.* Research Weed Scientist, Eastern Oregon Agricultural Research Center, Burns, Oregon. Field trip to review medusahead sites on Crooked River National Grassland, August 31, 2005.

References

- Shepard, B., K.L. Pratt, and P. Graham. 1984.** Life history of west slope cutthroat and bull trout in the upper Flathead River Basin, Montana. Department of Fish, Wildlife, and Parks, Montana.
- Simmons, J. 2003.** Northern flicker. Pp. 370-372 *In* D.B. Marshall, M.G. Hunter, and A.L. Contreras, (eds.). *Birds of Oregon*. Oregon State University Press. Corvallis, Oregon. 752pp.
- Simpson, Mike. 2005.** *Personal communication*. Ecologist, Deschutes and Ochoco National Forests, Bend, Oregon.
- Spencer, K. 2003.** Red-necked grebe. Pp. 31-32 *In* D.B. Marshall, M.G. Hunter, and A.L. Contreras, (eds.). *Birds of Oregon*. Oregon State University Press. Corvallis, Oregon. 752pp.
- Stalmaster, M.B. 1987.** *The Bald Eagle*. Universe Books. New York, New York.
- Stalmaster, M.V. and J.R. Newman. 1978.** Behavioral responses of wintering bald eagles to human activity. *J. Wildl. Manage.* 43:506-513.
- S.M. Starnes, C.A. Kennedy, J.W. Petranksa. 2000.** Sensitivity of embryos of southern Appalachian amphibians to ambient solar UV-B radiation. *Conservation Biology* 14 (1): 277-282.
- Stevens County Noxious Weed Control Board. 2006.** Common teasel (*Dipsacus fullonum*). Colville, Washington. Available at: <http://www.co.stevens.wa.us/weedboard/>
- Stuart, A., Grover D. and S. Thiesfeld. 1996.** Redband trout investigations in the Crooked River Basin. Oregon Department of Fish and Wildlife. Prineville, OR.
- Stuart, A.M., D. Grover, T.K. Nelson, S.L. Thiesfeld. 2002.** Draft report: Redband Trout investigations in the Crooked River Basin. Oregon Department of Fish and Wildlife. High Dessert Region, Prineville, Oregon.
- Stuart, A.M., S.L. Thiesfeld, D.E. Ratliff, T. Fies, and B.M. Hooton. 1997.** Changes in management of bull trout in the Metolius River from trash fish to trophy. *Proceedings of the Friends of the Bull Trout Conference*, Calgary, Alberta.
- Surber, L., Rodney Knott, James Moore, Brent Roeder and Gary Hewitt. 2006.** Presentation: Noxious weed utilization by sheep grazing Montana native range. 59th Society for Range Management Annual Meeting, Vancouver B.C., February 12 – 17, 2006.
- Sylvia D.M. and A.G. Jarstfer. 1997.** Distribution of mycorrhiza on competing pines and weeds in a southern pine plantation. *Soil Sci. Soc. Am. J.* 61: 139-144.
- Taylor, D.M. and C.D. Littlefield. 1986.** Willow flycatcher and yellow warbler response to cattle grazing. *American Birds* 40(5): 1169-1173.
- The Nature Conservancy. 1987.** Element Stewardship Abstract for *Melilotus officinalis* (sweetclover). Available on The Nature Conservancy's Global Invasive Species Initiative website: <http://tncweeds/ucdavis.edu>
- The Nature Conservancy. 1988.** Element Stewardship Abstract for *Taeniatherum caput-medusae*. Available on The Nature Conservancy's Global Invasive Species Initiative website: <http://tncweeds.ucdavis.edu/esadocs/taencapu.html>
- The Nature Conservancy. 1998a.** Element Stewardship Abstract for *Acroptilon repens* (Russian knapweed). Available on The Nature Conservancy's Global Invasive Species Initiative website: <http://tncweeds.ucdavis.edu/>

- The Nature Conservancy. 1998b.** Element Stewardship Abstract for *Convolvulus arvensis* L. (Field Bindweed). Available on The Nature Conservancy's Global Invasive Species Initiative website: <http://tncweeds.ucdavis.edu>
- The Nature Conservancy. 1999.** Weed Notes: *Salsola kali*. Compiled by TunjyLee Morisawa. Available on The Nature Conservancy's Global Invasive Species Initiative website: <http://tncweeds.ucdavis.edu>
- The Nature Conservancy. 2004.** Element Stewardship Abstract for *Potentilla recta* L. (Sulfur cinquefoil). Available on The Nature Conservancy's Global Invasive Species Initiative website: <http://tncweeds.ucdavis.edu>
- The Research Group. 2000.** Economic Analysis of containment Programs, Damages, and Production Losses from Noxious Weeds in Oregon. In Radtke, Hans D. and Shannon W. Davis. Oregon Department of Agriculture Plant Division, Noxious Weed Control Program. http://www.oregon.gov/ODA/PLANT/weed_economicassess.shtml
- Thompson, D., et al. 2000.** Comparative fate of glyphosate and triclopyr herbicides in the forest floor and mineral soil of an Acadian forest regeneration site. Canadian Journal of Forest Research. Vol. 30. p.1808-1816, 2000.
- Thompson, D.Q., Stuckey, R.L., and Thompson, E.B. 1987.** Spread, impact, and control of purple loosestrife (*Lythrum salicaria*) in North American wetlands. Fish and Wildlife Research 2. USDI Fish and Wildlife Service, Washinton DC. 55p.
- Tiedeman, A.R., Helvey, J.D., and Anderson, T.D. 1978.** Stream chemistry and watershed economy following wildfire and fertilization. Journal Environ. Quality, Vol. 7, no. 4. p 580-589.
- Tisdall, J.M. and Oades, J.M. 1982.** Organic matter and water-stable aggregates in soils. Journal of Soil Science 33: 141-163.
- Torri, D., and L. Borselli. 2000.** Water erosion. p. G171–G194. In M. Sumner (ed.). Handbook of soil science. CRC Press, Boca Raton, FL.
- Trammell, M.A., and Butler, J.L. 1995.** Effects of exotic plants on native ungulate use of habitat. Journal of Wildlife Management 59((4)): p.808-16.
- Tu, M., Callie Hurd, and John M. Randall. 2001.** Weed Control Methods Handbook, The Nature Conservancy, <http://tncweeds.ucdavis.edu>, Version: April 2001.
- Tu, Mandy. 2004.** Reed Canarygrass (*Phalaris arundinacea* L.) Control and Management in the Pacific Northwest. The Nature Conservancy, Oregon Field Office, Portland, Oregon.
- Tu, Mandy. 2005.** *Personal communication.* Invasive Species Ecologist, The Nature Conservancy, Oregon Field Office, Portland, Oregon. Field trip to review Ribbongrass along Metolius River, Camp Sherman, Oregon, July 27, 2005.
- Tyser, R.W. 1992.** Vegetation associated with two alien plant species in a fescue grassland in Glacier National Park, Montana. *Great Basin Naturalist* 52, 189-93.
- Schuster, M., T. Prather. 2005.** Scotch Thistle. College of Agricultural and Life Sciences, University of Idaho. <http://extension.ag.uidaho.edu/minidoka/ScotchThistle.htm>
- University of California. 2006.** Ecology and Management of Medusahead. University of California at Davis, Davis, California, http://californiarangeland.ucdavis.edu/water_quality/MEDUSA.HTM
- University of Idaho. 2005.** Scotch thistle. <http://extension.ag.uidaho.edu/minidoka/ScotchThistle.htm>

- USDA Forest Service; USDI Bureau of Land Management. 1994a.** Record of Decision and Final Environmental Impact Statement for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Washington, D.C.: U.S. Government Printing Office. (*also referred to as the Northwest Forest Plan*).
- USDA Forest Service, USDI Bureau of Land Management. 1994b.** Environmental Assessment, Decision Notice, and Finding of No Significant Impact for the Implementation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH).
- USDA Forest Service, USDI Bureau of Land Management. 1995.** Environmental Assessment, Decision Notice and Finding of No Significant Impact for the Inland Native Fish Strategy (INFISH).
- USDA Forest Service, USDI Bureau of Land Management. 2001a.** Record of Decision, Standards and Guidelines and FSEIS for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines. Portland, Oregon.
- USDA Forest Service and USDI Bureau of Land Management. 2006a.** Memo re: Equivalent Effort Surveys for Survey and Manage Category B Species. Pacific Northwest Regional Office, Portland, Oregon. Dated April 3, 2006.
- USDA Forest Service and USDI Bureau of Land Management. 2006b.** Joint aquatic and terrestrial programmatic biological assessment for lands within the Deschutes Basin administered by the Bureau of Land Management Prineville Office and the Deschutes and Ochoco National Forests: August 2006 – August 2009.
- USDA Natural Resource Conservation Service. 1999.** Soil Taxonomy: A Basic System of Soil Classification for Making and Interpreting Soil Surveys, Second Edition.
- USDI Bureau of Land Management. 1996.** Lower John Day River Integrated Weed Management. EA Number: OR-053-3-063. p 41-43.
- U.S. Fish and Wildlife Service. 1992.** Final Draft Recovery Plan for the Northern Spotted Owl. Unpublished Report. U.S. Department of Interior, Washington, D.C.
- U.S. Fish and Wildlife Service. 2003.** Endangered and threatened wildlife and plants; 90-day finding on a petition to list the western sage grouse. February 7, 2003. Federal Register 68(26): 6500-6504.
- U.S. Fish and Wildlife Service. 2004a.** Endangered and threatened wildlife and plants; 12-month finding for a petition to list the West Coast Distinct Population Segment of the fisher (*Martes pennanti*); Proposed Rule. April 8, 2004. Federal Register 69(68): 18770-18792.
- U.S. Fish and Wildlife Service. 2004b.** Recovery outline for the Columbia Basin Distinct Population Segment of the pygmy rabbit (*Brachylagus idahoensis*). U.S. Fish and Wildlife Service, Upper Columbia Fish and Wildlife Office, Spokane, Washington. 25pp.
- U.S. Fish and Wildlife Service. 2005.** Biological Opinion, Concurrence, and Conference Report on the Effects to 23 Species and 4 Critical Habitats from the U.S. Forest Service Pacific Northwest Region Invasive Plant Program (USFWS Reference Number 1-7-05-7-0653). Portland, OR.
- U.S. Fish and Wildlife Service. 2006.** Post-delisting monitoring results for the American peregrine falcon (*Falco peregrinus anatum*), 2003. Federal Register 71(198): 60563.

- USFS (USDA Forest Service). 1974.** Standards established by the Visual Quality Objectives in the Visual Management System Handbook AH-462, Volume 2, Chapter 1.
- USFS (USDA Forest Service). 1980.** Region 6, Water Quality Guides for Pesticide Detection. R6-WS-040-1980
- USFS (USDA Forest Service). 1988a.** Final Environmental Impact Statement for Managing Competing and Unwanted Vegetation in the Pacific Northwest Region, Portland, Oregon.
- USFS (USDA Forest Service). 1988b.** Managing Competing and Unwanted Vegetation: Treatment Methods. Pacific Northwest Region, Portland, Oregon.
- USFS (USDA Forest Service). 1989.** Land and Resource Management Plan, Part 1 – Ochoco National Forest and Part 2 - Crooked River National Grassland. Prineville, Oregon.
- USFS (USDA Forest Service). 1990a.** Forest Service Manual (FSM) 2600, Wildlife, Fish and Sensitive Plant Habitat Management. Washington Office Amendment 2600-90-1, effective 6/1/90.
- USFS (USDA Forest Service). 1990b.** The Pacific Northwest Region Recreational Opportunity Spectrum, R6-REC-021-90)
- USFS (USDA Forest Service). 1990c.** Land and Resource Management Plan, Deschutes National Forest. Bend, Oregon.
- USFS (USDA Forest Service). 1992.** “Mediated Agreement”- Final Environmental Impact Statement for Managing Competing and Unwanted Vegetation, Amendment to 1988 Record Of Decision. Pacific Northwest Region, Portland, Oregon.
- USFS (USDA Forest Service). 1994a.** Categorical Exclusion for Manual and Biological Control Treatments, Deschutes National Forest, Bend, Oregon.
- USFS (USDA Forest Service). 1994b.** Newberry National Volcanic Monument Comprehensive Management Plan. Pacific Northwest Region, Deschutes National Forest. Pp 184 + appendices.
- USFS (USDA Forest Service). 1995a.** Noxious Weed Management. Forest Service Manual 2080, Washington, D.C. (<http://www.fs.fed.us/im/directives/fsm/2000/2080.txt>).
- USFS (USDA Forest Service). 1995b.** Forest Service Manual (FSM) 2600, Wildlife, Fish and Sensitive Plant Habitat Management. R-6 Supplement 2600-95-3, effective 6/29/95.
- USFS (USDA Forest Service). 1995c.** Forest Service Manual (FSM) 2600, Wildlife, Fish and Sensitive Plant Habitat Management. R-6 Supplement 2600-95-3, effective 6/29/95.
- USFS (USDA Forest Service). 1995d.** The concepts and principles set by the current Landscape Aesthetic, a Handbook for Scenery Management, number 701.
- USFS (USDA Forest Service). 1995e.** Trout Creek Watershed Analysis. Ochoco National
- USFS (USDA Forest Service). 1995f.** Integrated Weed Management Environmental Assessment and Decision Notice, Ochoco National Forest and Crooked River National Grassland, Prineville, Oregon.
- USFS (USDA Forest Service). 1996.** Herbicide Information Profile - Triclopyr, Pacific Northwest Region.
- USFS (USDA Forest Service). 1997.** Herbicide Information Profile - Glyphosate, Pacific Northwest Region.

References

- USFS (USDA Forest Service). 1998a.** Noxious Weed Control Environmental Assessment. Deschutes National Forest.
- USFS (USDA Forest Service). 1998b.** Integrated Noxious Weed Management Environmental Analysis and Decision Notice. Ochoco National Forest and Crooked River National Grasslands.
- USFS (USDA Forest Service). 1998c.** Stemming the Invasive Tide: Forest Service Strategy for Noxious and Nonnative Invasive Plant Management. National Office, Washington, D.C.
- USDA Forest Service. 1998d.** Whychus (formerly Squaw) Watershed Analysis. Deschutes National Forest Sisters Ranger District.. Sisters, Oregon.
- USFS (USDA Forest Service). 1999a.** Stemming the invasive tide: Forest Service strategy for noxious and nonnative invasive plant management. Washington Office. Washington, D.C.
- USFS (USDA Forest Service). 1999b.** Herbicide Information Profile - Dicamba, Pacific Northwest Region.
- USFS (USDA Forest Service). 1999c.** Mt. Baker-Snoqualmie National Forest. Environmental Assessment for Forest-Wide Noxious Weed Management.
- USFS (USDA Forest Service). 1999d.** Willamette National Forest. Environmental Assessment for Integrated Weed Management.
- USFS (USDA Forest Service). 1999e.** Forest-wide Roads Analysis, Deschutes and Ochoco National Forests.
- USFS (USDA Forest Service). 1999f.** Noxious Weed Strategy. Pacific Northwest Region, Portland, Oregon.
- USFS (USDA Forest Service). 2000.** Herbicide Information Profile – Picloram, Pacific Northwest Region.
- USFS (USDA Forest Service). 2001a.** Guide to Noxious Weed Prevention Practices. July 5, 2001.
- USFS (USDA Forest Service). 2003.** B & B Complex Burned Area Emergency Response Report. Deschutes National Forest, Sisters, Oregon.
- USFS (USDA Forest Service). 2003b.** Herger Feinstein Quincy Library Group Supplemental Environmental Impact Statement. USDA Forest Service Pacific Southwest Region. Valejo, CA. http://www.fed.us/r5/hfqlg/documents/HFQLG_SEIS/readers_guide.pdf.
- USFS (USDA Forest Service). 2004a.** Implementing the National Fire Plan Using Livestock Grazing to Manage Vegetation (Official Letter), August 30, 2004.
- USFS (USDA Forest Service). 2004b.** Update to the Regional Forester’s Sensitive Species List. Pacific Northwest Region, Portland, Oregon.
- USFS (USDA Forest Service). 2004c.** Regional Policy for Invasive Plant Prevention. Pacific Northwest Region, Portland, Oregon.
- USFS (USDA Forest Service). 2004d.** Cache Mountain/Link Fire Weed Monitoring Report. Sisters Ranger District, Deschutes National Forest.
- USFS (USDA Forest Service). 2004e.** Crooked River National Grassland Vegetation Management / Grazing Final Environmental Impact Statement. Crooked River National Grassland and Ochoco National Forest, Prineville, Oregon.

- USFS (USDA Forest Service). 2004f.** Metolius Watershed Analysis Update. Sisters Ranger District, Deschutes National Forest.
- USFS (USDA Forest Service). 2005a.** Pacific Northwest Region Invasive Plant Program Final Environmental Impact Statement. USDA Forest Service, Pacific Northwest Region. R6-NR-FHP-PR-02-05.
- USFS (USDA Forest Service). 2005b.** Pacific Northwest Region Invasive Plant Program Record of Decision. Portland, OR.: USDA Forest Service, Pacific Northwest Region. R6-NR-FHP-PR-02-05.
- USFS (USDA Forest Service). 2005c.** Turnpike Pit Medusahead Control, Environmental Assessment and Decision Notice (2005). Paulina Ranger District, Ochoco National Forest.
- USFS (USDA Forest Service). 2005d.** Biological Assessment for the USDA Forest Service Pacific Northwest Region Invasive Plant Program. USDA Forest Service, Pacific Northwest Region, Portland, OR. June 17, 2005. 425 pp + appendices..
- USFS (USDA Forest Service). 2005e.** Westside Allotments Environmental Analysis. Paulina Ranger District, Ochoco National Forest.
- USFS (USDA Forest Service). 2006a.** Whychus Creek Wild and Scenic River Resource Assessment (DRAFT). Sisters Ranger District, Deschutes National Forest.
- USFS (USDA Forest Service). 2006b.** Site Specific Invasive Plant Treatments for Mt. Hood National Forest and Columbia River Gorge National Scenic Area in Oregon, Including Forest Plan Amendment #16. USDA Forest Service, Sandy, Oregon.
- USFS (USDA Forest Service). 2006c.** Olympic National Forest Draft Environmental Impact Statement, Beyond Prevention: Site-Specific Invasive Plant Treatment Project. Olympic National Forest, Olympia, Washington.
- USFS (USDA Forest Service). 2006d.** 18 Fire Competing Vegetation Management Environmental Assessment. Bend/Ft. Rock District, Deschutes National Forest, Bend, Oregon.
- U.S. Dept. of Commerce and NOAA 1973.** National Weather Service Precipitation frequency atlas of the Western United States. Silver Springs, MD.
- U.S. Department of Commerce. 2005.** Endangered Species Act – section 7 consultation biological and conference opinion and Magnuson-Stevens Fishery Conservation and Management Act essential fish habitat consultation. National Marine Fisheries Service, Northwest Region. Seattle, WA.
- U.S. Environmental Protection Agency. 1993.** Wildlife Exposures Handbook, Vol.1. U.S. Environmental Protection Agency, Office of Research and Development. Washington, D.C. 572pp.
- U.S. Environmental Protection Agency. 2000.** Lists of Other (Inert) Pesticide Ingredients. Office of Pesticide Programs. Washington, DC. Available at: <http://www.epa.gov/opprd001/inerts/lists.html>
- U.S. Geological Survey. 2000.** Pesticide National Synthesis Project. http://ca.water.usgs.gov/pnsp/pesticide_use_maps_1997/
- U.S. Geological Survey. 2001.** Herbicide Use in the Management of Roadside Vegetation, Western Oregon, 1999-2000: Effects on Water Quality of Nearby Streams. Water-Resource Investigations Rpt. 01-4065.

References

- U.S. Geological Survey. 2006.** The Quality of Our Nations Waters, Pesticides in the Nations Streams and Ground Water, 1992-2001. U.S. Geological Survey Circular 1291. <http://ca.water.usgs.gov/pnsp/pubs/circ1291/>
- Van der Putten, W. 1997.** Die-back of *Phragmites australis* in European wetlands: an overview of the European research program on reed die-back and progression (1993-1994). *Aquatic Botany* 59: 263-275.
- Van Wyk, D.B., 1982.** Influence of prescribed burning on nutrient budgets on mountain fynbos catchments in S. W. Cape Rep. of South Africa. Gen. Tech. Rep. PSW-58. Berkeley, CA: Southwest Forest and Range Experiment Station, Forest Service, USDA.
- Wagner, Dave. 1999.** Report on *Marsipella emarginata* var. *aquatica* from Waldo Lake outlet stream. Sponsored by the Willamette National Forest, Contract #53-04-R4-8-9800.
- Washington Department of Fish and Wildlife. 2003.** Game Management Plan: July 2003-June 2009.
- Weihe, P.E., and Neely, R.K. 1997.** The effects of shading on competition between purple loosestrife and broad-leaved cattail. *Aquatic Botany* 59: p.127-38.
- Weihner, E., Wisheu, I.C., Keddy, P.A., and Moore, D.R.J. 1996.** Establishment, Persistence, and Management Implications of Experimental Wetland Plant Communities. *Wetlands* 16(2): p.208-18.
- Wilde, S.B., T.M. Murphy, C.P. Hope, S.K. Habrun, J. Kempton, A. Birrenkott, F. Wiley, W.W. Bowerman, A.J. Lewitus. 2005.** Avian vacuolar myelinopathy linked to exotic aquatic plants and a novel cyanobacterial species. *Environmental Toxicology* 20 (3): 348-353.
- Whisenant, S.G. 1990.** Changing fire frequencies on Idaho's Snake river pants: ecological and management implications. In. Symposium on Cheatgrass Shrub Die-off and Other Aspects of Shrub Biology and Management. Las Vegas, NV.
- Williams, Shannon. 2004.** Management of Goats for Controlling Noxious Weeds: A Primer. CIS 1121, University of Idaho Extension, Idaho Agricultural Experiment Station, November, 2004.
- Wilson, L.M.; M. Schwarzlaender; B. Blossey; and C.B. Randall. 2004.** Biology and biological control of purple loosestrife. Forest Health Technology Enterprise Team, USDA Forest Service. FHTET-2004-12. 78 PP.
- Wilson, L., Karen Launchbaugh and John Wallace. 2006.** Presentation: The effects of prescribed grazing on yellow starthistle (*Centaurea solstitialis*, L.) phenological development and resource allocation. 59th Society for Range Management Annual Meeting, Vancouver B.C., February 12 – 17, 2006.
- WSNF (Warm Springs National Fish Hatchery). 1992-1996.** Operational Plan. U.S. Fish and Wildlife Service.
- Youtie, Berta, Jeanne Ponzetti, and Dan Salzer. 1999.** Fire and herbicides for exotic annual grass control: effects on native plants and microbiotic soil organisms. In: Eldridge, David and David Freudenberger, editors, Proceedings of the VI International Rangeland Congress, Townsville, Queensland, Australia, July 19-23, 1999.
- Zalunardo, D. 2006.** Personal Communication. Forest Wildlife Biologist, Ochoco National Forest. Prineville, Oregon.
- Zavaleta E. 2000.** Valuing Ecosystem Services Lost to Tamarix Invasion in the United States.

Pp.261-300 In H. A. Mooney, and R.J. Hobbs, eds. Invasive Species in a Changing World. Island Press. Washington D.C.

Zika, P.R., R. Brainer, and B. Newhouse. 1995. Grapeferns and moonworts (Botrychium, Ophioglossaceae) in the Columbia Basin. Report submitted to the Eastside Ecosystem Management Project, U.S. Forest Service, Walla Walla, Washington.

Zimmerman, C.E. and G.H. Reeves. 1996. Steelhead and rainbow trout early life history and habitat use in the Deschutes River, Oregon. 1995 annual report. USDA Forest Service, Pacific Northwest Research Station, Project No. 656107. Portland General Electric, Portland, Oregon.