

State of the Park Report Glossary of Terms

Abiotic A non-living factor in an environment; e.g., light, water, temperature, climate.

Adaptive management Adaptive management rigorously combines management, research, monitoring, and means of changing practices so that credible information is gained and management activities are modified by experience.

Addling (Egg Addling) A form of wildlife management where eggs are removed from the nest, embryo development is terminated and the egg is replaced in the nest to deter further egg laying.

Alien invasive species Non-indigenous species (e.g. plants or animals) that adversely affect the habitats they invade economically, environmentally or ecologically (IUCN).

Anadromous Refers to fish that live in the ocean and return to fresh water to breed. (Pacific salmon spp.)

Anthropogenic Resulting from the influence of humans.

Benthic Relating to the bottom of a sea or lake or to organisms that live there.

Berm A narrow ledge, mound, wall or 'brim' usually at the bottom of a slope. Can be landscaped (i.e.; made of earth or sand).

Best management practices Are techniques, methods, processes, activities, incentives or rewards that are more effective at delivering a particular outcome than any other technique, method, process, etc. The idea is that with proper processes, checks, and testing, a desired outcome can be delivered with fewer problems and unforeseen complications. Best practices can also be defined as the most efficient (least amount of effort) and effective (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time for large numbers of people.

Biodiversity The diversity of plants, animals, and other living organisms in all their forms and levels of organization. This includes genes, species, ecosystems, and the evolutionary and functional processes that link them.

Biogeoclimate Zone A biogeoclimate zone is a geographical area with a relatively uniform macroclimate, characterized by a mosaic of vegetation, soils and, animal life reflecting that climate. The zones are usually named for the potential climatic climax or self-perpetuating vegetation established on mesic (average moisture) sites and zonal (climatically determined) soils.

Biosphere The area in which all living things exist; this sphere includes all of the microorganisms, plants, and animals of Earth, even humans.

Birds of prey Any of the various predatory carnivorous birds such as the eagles, hawks, falcons, owls and vultures.

Blowdowns Uprooting by the wind. Also refers to a tree or trees so uprooted.

Brushing A silviculture activity done by manual or mechanical means to control competing forest vegetation and reduce competition for space, light, moisture, and nutrients with crop trees or seedlings.

Canopy Cover The forest cover of branches and foliage formed by tree crowns.

Carbon monoxide (CO) CO is an odourless, tasteless and colourless gas produced by the incomplete burning of materials which contain carbon, including most transport fuels. CO is toxic, acting by reaction with haemoglobin and reducing its capacity for oxygen transport in the blood. Even in busy urban centres, CO concentrations rarely exceed health related standards. Air pollution causes health effects and environmental problems.

Carrying Capacity Carrying capacity is the equilibrium established between any life form and its environment. It is frequently expressed as a number indicating the population of any given animal a given area can support.

Climate Change *Climate change*, more commonly known as *global warming*, is caused by the emission of heat trapping gases produced by vehicles, power plants, industrial processes and deforestation. As these gases build up, they act like a big blanket, over-heating the planet and threatening our health, our economy and our environment.

Cluster planting Vegetation that seeks and uses the limited common resources (space, light, water, and nutrients) of a forest site needed by preferred trees for survival and growth.

Conifers Cone-bearing trees that have needles or scale-like leaves, usually evergreen. Produce wood known commercially as 'softwoods'.

Conservation Management of the human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations. It includes the preservation, maintenance, sustainable utilization, restoration and enhancement of the environment.

Cordillera Mountain range or ranges including valleys, rivers, and lakes forming the main mountain axis of a continent

Course woody debris Sound and rotting logs and stumps that provide habitat for plants, animals, and insects and a source of nutrients for soil development.

Culvert A transverse drain pipe or log structure covered with soil and lying below the road surface.

Danger tree A live or dead tree whose trunk, root system or branches have deteriorated or been damaged to such an extent as to be a potential danger to human safety.

DBH (diameter at breast height) The stem diameter of a tree measured at breast height, 1.3 metres above the ground.

Deadfall A mass of fallen timber and tangled brush.

Deciduous Perennial plants that are normally leafless for some time during the year.

Decomposition Chemical breakdown of a compound (e.g. a mineral or organic compound) into simpler compounds, often accomplished with the aid of microorganisms.

Disturbance A discrete event, either natural or human-induced, that causes a change in the existing condition of an ecological system.

Dredging To clean, widen or deepen an area using a machine with scooping or sucking devices.

Ecological health Both the occurrence of certain attributes that are deemed to be present in a healthy, sustainable resource and the absence of conditions that result from known stresses or problems affecting the resource.

Ecological integrity An ecosystem is defined as having Ecological integrity "when it is deemed characteristic for its natural region, including the composition and abundance of native species and biological communities, rates of change and supporting processes" (Parks Canada, 2009).

Ecology The study of the relationships between living organisms, (microorganisms, plants and animals, including humans), and the relationships between the organisms and their physical environment.

Ecosystem a functional unit consisting of all the living organisms (plants, animals, and microbes) in a given area, and all the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow. An ecosystem can be of any size-a log, pond, field, forest, or the earth's biosphere-but it always functions as a whole unit. Ecosystems are commonly described according to the major type of vegetation, for example, forest ecosystem, old-growth ecosystem, or range ecosystem.

Ecosystem Approach A strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. It is based on the application of appropriate scientific methodologies focused on levels of biological organization that encompasses the processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral part of ecosystems.

Ecosystem Stressors Events and actions (often the results of modern human activities) that have direct or indirect effects on biodiversity because of changes to the ecological processes that maintain biodiversity.

Ecotone A transition area between two adjacent ecological communities. Usually exhibiting competition between organisms common to both.

Edge The outer band of a patch that has an environment significantly different from the interior of the patch.

Electrofishing A Scientific survey method using electricity to stun fish before being caught. Used to determine abundance, density and species composition.

Endemic Restricted or peculiar to a particular area.

Eutrophication A process where accumulation of dissolved nutrients (phosphates) stimulates aquatic plant growth, causing a depletion of dissolved oxygen in a body of water

Even-aged stand A stand of trees consisting of one or two age classes.

Extirpation Localized extinction of a species.

Forest Fuel management The planned manipulation and/or reduction of living or dead forest fuels for forest management and other land use objectives (such as hazard reduction, silvicultural purposes, wildlife habitat improvement) by prescribed fire, mechanical, chemical or biological means and/or changing stand structure and species composition.

Forest health A forest condition that is naturally resilient to damage; characterized by biodiversity, it contains sustained habitat for timber, fish, wildlife, and humans, and meets present and future resource management objectives.

Forest Inventories a survey of the forest area to determine data and species for specific purposes such as planning, evaluation, or management.

Forest type A group of forested areas or stands of similar composition (species, age, height, and stocking) which differentiates it from other such groups.

Grassland A Vegetation zone dominated by grasses, generally occurring in climates too dry for tree growth.

Habitat The place in an ecosystem in which an organism lives and/or the conditions of that environment including the soil, vegetation, water, and food.

Habitat enhancement Manipulation of any habitat which results in improvement of its value and the ability to meet specified requirements of one or more species.

Hazardous or Danger Tree A tree, or any component of a tree that has sufficient structural infirmity to be identified as having a high risk of falling and causing personal or property damage.

Hydrocarbons (HC) and volatile organic compounds (VOC) HC belong to a larger group of chemicals known as volatile organic compounds (VOC). HC are compounds of hydrogen and carbon only, while VOC may contain other elements. They are produced by incomplete combustion of hydrocarbon fuels, and also by their evaporation. Because there are many hundreds of different compounds, HC and VOC display a wide range of properties. Some, such as benzene, are carcinogenic; some are toxic and others harmless to health.

Hydrology The science that describes and analyzes the occurrence of water in nature, and its circulation near the surface of the earth.

Indigenous Native; produced, growing, or living, naturally in a country or climate; not exotic; not imported.

Invasive Species Non-native species that enter an ecosystem and alter it by out-competing native species for food and space.

Keystone species a species that plays an important ecological role in determining the overall structure and dynamic relationships within a biotic community. A keystone species presence is essential to the integrity and stability of a particular ecosystem.

Limnology The study of bodies of fresh water.

Merchantable timber A tree or stand that has attained sufficient size, quality and/or volume to make it suitable for harvesting.

Mesic Of, characterized by, or adapted to a moderately moist habitat.

Microclimate A local, uniform climate of a specific place or habitat.

Mineral soil Soil consisting predominately of, and having its properties determined by, inorganic matter. Usually contains less than 20 percent organic matter.

Native species (see indigenous)

Nitrogen oxides (NO_x) NO_x is a term used to describe a mixture of nitric oxide (NO) and nitrogen dioxide (NO₂). They are inorganic gases formed by combination of oxygen with nitrogen from the air. NO is produced in much greater quantities than NO₂, but oxidises to NO₂ in the atmosphere. NO₂ causes detrimental effects to the bronchial system. Nitrogen dioxide concentrations frequently approach, and sometimes exceed air quality standards in many European cities. NO_x is emitted when fuel is being burned e.g. in transport, industrial processes and power generation.

Nocturnal Active during the night.

Non-native (alien) Species (See Invasive Species)

Ozone (O₃) Ground-level ozone (O₃), unlike other pollutants mentioned, is not emitted directly into the atmosphere, but is a secondary pollutant produced by reaction between nitrogen dioxide (NO₂), hydrocarbons and sunlight. Ozone levels are not as high in urban areas (where high levels of NO are emitted from vehicles) as in rural areas. Sunlight provides the energy to initiate ozone formation; consequently, high levels of ozone are generally observed during hot, still sunny, summertime weather.

Particulate matter (PM_{10/2.5}) Airborne particulate matter varies widely in its physical and chemical composition, source and particle size. PM₁₀ particles (the fraction of particulates in air of very small size (<10 µm)) and PM_{2.5} particles (<2.5 µm) are of major current concern, as they are small enough to penetrate deep into the lungs and so potentially pose significant health risks. Larger particles meanwhile, are not readily inhaled, and are removed relatively efficiently from the air by sedimentation. The principal source of airborne PM₁₀ and PM_{2.5} matter in European cities is road traffic emissions, particularly from diesel vehicles. The limit values are very often exceeded in European cities.

Patagium Thin membrane extending between the body and a limb.

Peat Unconsolidated soil material consisting largely of non decomposed, or only slightly decomposed, organic matter accumulated under conditions of excessive moisture.

Pest Any forest health agent designated as detrimental to effective resource management.

Pheromone Any chemical substance released by an animal that serves to influence the physiology or behavior of other members of the same species.

Planting Establishing a forest by setting out seedlings, transplants or cuttings in an area.

Plot a carefully measured area laid out for experimentation or measurement.

Podzol Type of light-coloured soil found predominantly under coniferous forests in cool regions where rainfall exceeds evaporation. The constant downward movement of water leaches nutrients from the upper layers, making podzols poor agricultural soils. Podzols are very acidic soils.

Population A group of the same kind of organism that is living in a community, or the number of a particular species in a defined area.

Predation A type of interaction between organisms in which one organism hunts another for food.

Prescribed Burning The planned application of fire to natural fuels with the intent to confine the burning to a predetermined area.

Prescription A course of management action prescribed for a particular area after specific assessments and evaluations have been made.

Regeneration The renewal of a tree crop through either natural means (seeded on-site from adjacent stands or deposited by wind, birds, or animals) or artificial means (by planting seedlings or direct seeding).

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

Riparian Area An area of land adjacent to a stream, river, lake or wetland that contains vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent upland areas.

Seed source The locality where a seed lot was collected. If the stand from which collections were made was exotic, the place where its seed originated is the original seed source.

Seedling A young tree, grown from seed, from the time of germination to the sapling stage, having a DBH equal or less than 1 cm.

Seral stage Any stage of development of an ecosystem from a disturbed, unvegetated state to a climax plant community.

Silviculture The art and science of controlling the establishment, growth, composition, health and quality of forests and woodlands. Silviculture entails the manipulation of forest and woodland vegetation in stands and on landscapes to meet the diverse needs and values of landowners and society on a sustainable basis.

Species at Risk The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is responsible for assessing and designating the status of species at risk of disappearing from the wild in Canada. COSEWIC makes recommendations to the federal government to list species under SARA. If the Governor in Council accepts COSEWIC's assessment, the species is listed in Schedule 1 of the Species at Risk Act. Extirpated, endangered, and threatened species listed in Schedule 1 of the Species at Risk Act are accorded protection if they:

- occur on lands under federal jurisdiction (i.e., Stanley Park)
- are migratory birds protected by the Migratory Birds Convention Act, 1994;
- are aquatic species as defined by the Fisheries Act.

The British Columbia Conservation Data Centre⁰ (CDC) within the provincial Ministry of Environment oversees the listing of organisms with similar conservation risks and reviews the status of wildlife found in British Columbia. The CDC uses the information to group species in the Red List (extirpated, endangered, or threatened), the Blue List (species of special concern) or the Yellow List (not at risk).

Stand density a relative measure of the amount of stocking on a forest area. Often described in terms of stems per hectare.

Stand dynamics The study of changes in forest stand structure over time, including stand behavior during and after disturbances.

Stewardship Caring for land and associated resources and passing healthy ecosystems to future generations.

Stream a watercourse, having an alluvial sediment bed, formed when water flows on a perennial or intermittent basis between continuous definable banks.

Succession The orderly, gradual and continuous replacement of one plant or animal by another.

Sulphur dioxide (SO₂) Fossil fuels contain traces of sulphur compounds, and SO₂ is produced when they are burnt. The majority of the SO₂ emitted to the air is from power generation, and the contribution from transport sources is small (shipping being an exception). Exposure to SO₂ can damage health by its action on the bronchial system. Sulphuric acid generated from atmospheric reactions of SO₂ is the main constituent of acid rain.

Sustainable Development Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In other words, development is essential to satisfy human needs and improve the quality of human life. At the same time, development must be based on the efficient and environmentally responsible use of all of society's scarce resources - natural, human, and economic.

Swale A depression or low tract of land, either natural or man-made, that carries run-off water.

Thinning a cutting made in an immature crop or stand primarily to accelerate the diameter in increments, and to improve the average form of the trees that remain.

Topography The physical features of a geographic area, such as those represented on a map, taken collectively; especially, the relief and contours of the land.

Traditional Ecological Knowledge Knowledge that derives from, or is rooted in the traditional way of life of aboriginal people...the accumulated knowledge and understanding of human place in relation to the universe. This encompasses spiritual relationships, relationships with the natural environment and the use of natural resources, relationships between people, and is reflected in language, social organization, values, institutions and laws.

Tundra A level or undulating treeless plain characteristic of arctic regions.

Understory any plants growing under the canopy formed by other plants, particularly herbaceous and shrub vegetation under a tree canopy.

Veteran tree In growth and yield, a tree that is at least 30 years older than the age of the main stand. In multi-layered or complex-layered stands, a tree that is at least 100 years older than the oldest sample tree of the main stand.

Water table The planar, underground surface beneath which earth materials, as soil or rock, are saturated with water (dictionary.com).

Watershed An area of land that collects and discharges water into a single main stream through a series of smaller tributaries.

Weather The term "weather" refers to the short-term (daily) changes in temperature, wind, and/or precipitation of a region.

Wetland A swamp, marsh or other similar area that supports natural vegetation that is distinct from adjacent upland areas.

Wildfire An unplanned or unwanted natural or human-caused fire, or a prescribed fire that threatens to escape its bounds.

Wildlife habitat Areas of land and water that support specific wildlife or groups of wildlife.

Wildlife tree a tree or group of trees that are identified in an operational plan to provide present or future wildlife habitat. A wildlife tree is a standing live or dead tree with special characteristics that provide valuable habitat for the conservation or enhancement of wildlife. Characteristics include large diameter and height for the site, current use by wildlife declining or dead condition, value as a species, valuable location and relative scarcity.

Windfirming The selective thinning of branches to reduce the impact of high winds and the risk of future blowdowns.

Windthrow Uprooting by the wind.