

## APPENDIX N: Glossary

The following is a series of key words and their definitions used in the development of Long Range Management Plans for Vermont Agency of Natural Resource lands.

***Acceptable management practices (AMPs).*** In this plan, a series of erosion control measures for timber harvesting operations, as identified in state statutes. The AMPs are the proper method for the control and dispersal of water collecting on logging roads, skid trails, and log landings to minimize erosion and reduce sediment and temperature changes in streams.

***All-aged (Uneven-aged) system.*** Timber management which produces a stand or forest composed of a variety of ages and sizes. Regeneration cutting methods in this system include single tree selection and group selection.

***Basal area.*** A measure of the density of trees in an area. It is determined by estimating the total cross-sectional area of all trees measured at breast height (4.5 feet) expressed in square feet per acre.

***Best management practices.*** A practice or combination of practices determined to be the most effective and practicable means of preventing negative impacts of silvicultural activities.

***Biodiversity.*** The variety of plants and animals, their genetic variability, their interrelationships, and the biological and physical systems, communities, and landscapes in which they exist.

***Biophysical region.*** A region with shared characteristics of climate, geology, soils, and natural vegetation. There are currently eight biophysical regions recognized in Vermont.

***Block.*** A land management planning unit.

***Browse.*** The part of leaf and twig growth of shrubs, vines, and trees available for animal consumption.

***Buffer (Riparian Buffer Zone).*** The width of land adjacent to streams or lakes between the top of the bank or top of slope or mean water level and the edge of other land uses. Riparian buffer zones are typically undisturbed areas, consisting of trees, shrubs, groundcover plants, duff layer, and a naturally vegetated uneven ground surface, that protect the water body and the adjacent riparian corridor ecosystem from the impact of these land uses.

***Canopy.*** The more or less continuous cover of branches and foliage formed collectively by the crowns of adjacent trees and other woody growth.

***Capability.*** The potential of an area to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends on current conditions and site conditions such as climate, slope, landform, soils, and geology as well as the application of management practices such as silvicultural protection from fire, insects, and disease.

***Cleaning (Weeding).*** Regulating the composition of a young stand by eliminating some trees and encouraging others, and also freeing seedlings or saplings from competition with ground vegetation, vines, and shrubs.

**Clearcutting.** A cut which removes all trees from a designated area at one time, for the purpose of creating a new, even-aged stand.

**Commercial forest land.** Land declared suitable for producing timber crops and not withdrawn from timber production by statute or administrative regulation.

**Conservation.** The careful protection, planned management, and use of natural resources to prevent their depletion, destruction, or waste.

**Conservation easement.** Acquisition of some rights on a parcel of land designed to keep the property undeveloped in perpetuity.

**Cover.** Vegetation which provides concealment and protection to wild animals.

**Cultural operation.** The manipulation of vegetation to control stand composition or structure, such as site improvement, forest tree improvement, increased regeneration, increased growth, or measures to control insects or disease. Examples of methods used are timber stand improvement, cleaning or weeding, release, and site preparation.

**DBH (diameter at breast height).** The diameter of the stem of the tree measured at breast height (4.5 feet or 1.37 meters) from the ground.

**Deer wintering area.** Forest area with at least 70 percent conifer that provides suitable, stable habitat to meet deer needs during the winter.

**Den tree.** A live tree at least 15 inches DBH (diameter at breast height) containing a natural cavity used by wildlife for nesting, brood rearing, hibernating, daily or seasonal shelter, and escape from predators.

**Developed (or intensive) recreation.** Activities associated with man-made structures and facilities that result in concentrated use of an area. Examples are campgrounds and ski areas.

**Diameter at breast height (DBH).** The diameter of the stem of the tree measured at breast height (4.5 feet or 1.37 meters) from the ground.

**Dispersed recreation.** Outdoor recreation activities requiring few, if any, support facilities.

**Ecological processes.** The relationships between living organisms and their environment. Among these processes are natural disturbances such as periodic fire, flooding, or beaver activity; natural stresses such as disease or insects; catastrophic weather-related events such as severe storms or lightning strikes; or more subtle ongoing processes such as succession, hydrology, and nutrient cycling.

**Ecological reserve.** An area of land managed primarily for long-term conservation of biodiversity.

**Ecosystem.** A complex array of organisms, their natural environment, the interactions between them, the home of all living things, including humans, and the ecological processes that sustain the system.

**Ecosystem management.** The careful and skillful use of ecological, economic, social, and managerial principles in managing ecosystems to produce, restore, or sustain ecosystem integrity, uses, products, and services over the long-term.

**Endangered species.** A species listed on the current state or Federal endangered species list (VSA Title 10, chapter 123). Endangered species are those which are in danger of becoming extinct within the foreseeable future throughout all or a significant portion of their range.

**Even-aged system.** Timber management that produces a forest or stand composed of trees having relatively small differences in age. Regeneration cutting methods in this system include clearcutting, seed tree (seed cut) method, and shelterwood method.

**Forest health.** Condition in which forest ecosystems sustain their complexity, diversity, resiliency, and productivity.

**Forest type.** A natural group or association of different species of trees which commonly occur together over a large area. Forest types are defined and named after the one or more dominant species of trees, such as the spruce-fir and the birch-beech-maple types.

**Forestry.** The art and science of growing and managing forests and forest lands for the continuing use of their resources.

**Fragmentation.** Division of a large forested area into smaller patches separated by areas converted to a different land use.

**Game species.** Animals habitually hunted for food, particular products, sport, or trophies.

**Geographic Information Systems.** A computer-based means of mapping lands and resources and communicating values associated with them (GIS).

**Green certification.** A process, sponsored by several international organizations, that promotes sustainable forest management practices, providing a marketplace identify for forest products certified to have been grown and manufactured in a sustainable manner.

**Group Selection.** The removal of small groups of trees to meet a predetermined goal of size, distribution, and species.

**Habitat.** A place that provides seasonal or year round food, water, shelter, or other environmental conditions for an organism, community, or population of plants or animals.

**Hardwood.** A broad leaved, flowering tree, as distinguished from a conifer. Trees belonging to the botanical group of angiospermae.

**Healthy ecosystem.** An ecosystem in which structure and functions allow the maintenance of the desired conditions of biological diversity, biotic integrity, and ecological processes over time.

**Heritage Sites.** Sites identified by the Vermont Nongame and Natural Heritage Program of the Department of Fish and Wildlife, which have rare, threatened, or endangered species of plants or animals. Heritage sites are identified using a common standards-based methodology, which provides a scientific and universally applicable set of procedures for identifying, inventorying, and mapping these species.

**Intensive (or developed) recreation.** Outdoor recreation activities requiring major structures and facilities.

**Interior dependent species.** Those wildlife species that depend on large unbroken tracts of forest land for breeding and long term survival. The term is also often used in conjunction with

neotropical migratory bird species requiring large patches of fairly homogeneous habitat for population viability.

**Intermediate treatment.** Any treatment or tending designed to enhance growth, quality vigor, and composition of the stand after its establishment or regeneration and prior to the final harvest.

**Land conservation.** The acquisition or protection through easements of land for wildlife habitat, developed state parks, and working forests.

**Landscape.** A heterogeneous area of land containing groups of natural communities and clusters of interacting ecosystems. These can be of widely varying scales but normally include a range of elevations, bedrock, and soils.

**Mast.** The fruit (including nuts) of such plants as oaks, beech, hickories, dogwood, blueberry, and grape, used for food by certain wildlife species.

**Motorized use.** Land uses requiring or largely dependent on motor vehicles and roads.

**Multiple-use forestry.** Any practice of forestry fulfilling two or more objectives of management, more particularly in forest utilization (e.g. production of both wood products and deer browse).

**Multiple-use management.** An onsite management strategy that encourages a complementary mix of several uses on a parcel of land or water within a larger geographic area.

**Native (species).** A plant or animal indigenous to a particular locality.

**Natural Area.** Limited areas of land, designated by Vermont statute, which have retained their wilderness character, although not necessarily completely natural and undisturbed, or have rare or vanishing species of plant or animal life or similar features of interest which are worthy of preservation for the use of present and future residents of the state. They may include unique ecological, geological, scenic, and contemplative recreational areas on state lands.

**Natural community.** An assemblage of plants and animals that is found recurring across the landscape under similar environmental conditions, where natural processes, rather than human disturbances, prevail.

**Nongame species.** Animal species that are not hunted, fished, or trapped in this state. This classification is determined by the state legislature.

**Northern hardwood.** Primarily sugar maple, yellow birch, and beech. May include red maple, white ash, white birch, black cherry, red spruce, and hemlock.

**Old growth forest.** A forest stand in which natural processes and succession have occurred over a long period of time relatively undisturbed by human intervention.

**Outdoor recreation.** Leisure time activities that occur outdoors or utilize an outdoor area or facility.

**Overstory.** That portion of the trees, in a forest of more than one story, forming the upper or upper-most canopy layer.

**Pole.** A tree of a size between a sapling and a mature tree.

**Pole timber.** As used in timber survey, a size class definition; trees 5.0 to 8.9 inches (varies by species) at DBH. As used in logging operations, trees from which pole products are produced, such as telephone poles, pilings, etc.

**Regeneration treatment (harvest cut).** Trees are removed from the stand to create conditions that will allow the forest to renew or reproduce itself. This is accomplished under either an even-aged management system or an uneven-aged management system.

The four basic methods used to regenerate a forest are clearcutting, seed-tree, shelterwood, and selection (group selection or single tree selection).

**Regeneration methods.** Timber management practices employed to either regenerate a new stand (regeneration cutting) or to improve the composition and increase the growth of the existing forest (intermediate treatment).

**Regulated Hunting/Fishing/Trapping.** The harvest of wildlife under regulations stipulating setting of seasons, time frame of lawful harvest, open and closed zones, methods of take, bag limits, possession limits, and reporting or tagging of species.

**Release (release operation).** The freeing of well-established cover trees, usually large seedlings or saplings, from closely surrounding growth.

**Removal cut.** The final cut of the shelterwood system that removes the remaining mature trees, completely releasing the young stand. An even-aged stand results.

**Salvage Cutting.** The removal of dead, dying, and damaged trees after a natural disaster such as fire, insect or disease attack, or wind or ice storm to utilize the wood before it rots.

**Sanitation cutting.** The removal of dead, damaged, or susceptible trees to improve stand health by stopping or reducing the spread of insects or disease.

**Sapling.** As used in timber surveys, a size class definition. A usually young tree larger than seedling but smaller than pole, often 1.0 to 4.9 inches at DBH.

**Seedling.** A very young plant that grew from a seed.

**Seed-Tree (Seed Cut) method.** The removal of most of the trees in one cut, leaving a few scattered trees of desired species to serve as a seed source to reforest the area.

**Shelterwood method.** A series of two or three cuttings which open the stand and stimulate natural reproduction. A two cutting series has a seed cut and a removal cut, while a three cutting series has a preparatory cut, a seed cut, and a removal cut.

**Silvicultural systems.** A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. Systems are classified according to the method of carrying out the fellings that remove the mature crop and provide for regeneration and according to the type of forest thereby produced.

**Single tree selection method.** Individual trees of all size classes are removed more or less uniformly throughout the stand to promote growth of remaining trees and to provide space for regeneration.

**Site Preparation.** Hand or mechanical manipulation of a site, designed to enhance the success of regeneration.

**Snag.** Includes standing dead or partially dead trees that are at least 6 inches in diameter at breast height (DBH) and 20 feet tall.

**Softwood.** A coniferous tree. Softwood trees belong to the botanical group gymnospermae, including balsam fir, red spruce, and hemlock.

**Stand improvement.** An intermediate treatment made to improve the composition, structure, condition, health, and growth of even or uneven-aged stands.

#### **Stand Information Charts Terms.**

-AGS: Acceptable growing stock: A tree stem having a diameter of 4.5 inches or greater at breast height which has the potential of producing a sawlog product of a commercial species of any grade, now or in the future.

-BA: Basal Area: A measure of the density of trees in an area. It is determined by estimating the total cross-sectional area of all trees measured at breast height (4.5 feet) expressed in square feet per acre.

-MBF: Thousand board feet, a measure of forest product volume in log containing trees.

-QMD: Quadratic mean diameter: A measure of central tendency which is considered more appropriate than arithmetic mean characterizing the group of trees which have been measured. Compared to the arithmetic mean, QMD assigns greater weight to larger trees - QMD is always greater than or equal to arithmetic mean for a given set of trees. QMD can be used in timber cruises to estimate the standing volume of timber in a forest, because it has the practical advantage of being directly related to basal area which in turn is directly related to volume.

-Relative Density: Is a measure of the stocking of a stand of trees based on the number of trees per unit area and diameter at breast height of the tree of average basal area. It may also be defined as the degree of crowding within stocked areas, using various growing space ratios based on crown length or diameter, tree height or diameter, and spacing. Stand density index is usually well correlated with stand volume and growth, and several variable-density yield tables have been created using it.

-Site Quality: Site quality as used in forest assessment work has a range of 1 through 4, assigned on a per stand basis, with 1 being the best sites, and 4 the worst sites. The site quality of a site is based on soils and tree measurements compared to site index charts developed for this purpose.

-UGS: Unacceptable growing stock: A tree stem which does not have the potential of producing a sawlog product of a commercial species of any grade, now or in the future.

**Stewardship.** Caring for land and associated resources with consideration to future generations.

**Sustainability.** The production and use of resources to meet the needs of present generations without compromising the ability of future generations to meet their needs.

**Sustained yield.** The yield that a forest can produce continuously at a given intensity of management.

**Thinning.** Removing some of the trees in a dense immature stand primarily to improve the growth rate and form of the remaining trees and enhance forest health.

***Threatened species.*** A species listed on the state or Federal threatened species list. Threatened species are those likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

***Timber lands.*** Properties that are managed primarily for the maximum production of forest products.

***Timber Stand Improvement.*** Activities conducted in young stands of timber to improve growth rate and form of the remaining trees.

***Traditional uses.*** Those uses of the forest that have characterized the general area in the recent past and present, including an integrated mix of timber and forest products harvesting, outdoor recreation, and recreation camps or residences.

***Uneven-aged (All-aged) system.*** Timber management which produces a stand or forest composed of a variety of ages and sizes. Regeneration cutting methods in this system include single tree selection and group selection.

***Watershed.*** The geographic area within which water drains into a particular river, stream, or body of water. A watershed includes both the land and the body of water into which the land drains.

***Weeding (cleaning).*** Regulating the composition of a young stand by eliminating some trees and encouraging others, and also freeing seedlings or saplings from competition with ground vegetation, vines, and shrubs.

***Wilderness.*** Areas having pristine and natural characteristics, typically roadless and often with some limits on uses. (This is not the federal definition of wilderness.)

***Wildlife habitat.*** Lands supplying a critical habitat need for any species of wildlife, especially that which requires specific treatment and is of limited acreage.

***Working forest.*** Land primarily used for forestry purposes but also available for recreation, usually where both managed land and land not presently being managed is present.

***Working landscape.*** A landscape dominated by land used for agricultural and/or forestry purposes.