



## **Basic Forestry Terms**

**Annual Ring** - Trees in climates where growth stops or slows during a portion of the year will form annual rings which can be read to determine tree age and rate of growth.

**Basal Area** - The cross-sectional area in square feet of a tree trunk measured at 4.5 feet above the ground.

**Best Management Practice (BMP)** - A practice or usually a combination of practices that are determined by a state or a designated planning agency to be the most effective and practicable means of accomplishing a management project.

**Biltmore Stick** - A tool used to measure a tree's diameter at breast height. Often times they include a scale to measure the height of a tree as well.

**Biodiversity** - The variety of different types of life found on earth. It is a measure of the variety of organisms present in different ecosystems. This can refer to genetic variation, ecosystem variation, or species variation (number of species) within an area, biome, or planet.

**Biological Control** - A method of controlling pests (including insects, mites, weeds, and plant diseases) using other living organisms.

**Board Foot** - A unit of wood measuring 1-inch in thickness by 12-inch in width by 12 inches in length or its equivalent.

**Canker** - An imperfection on the trunk, limb or twig of a tree caused by an organism that kills a part of the tree's tissue. Canker causing organisms sometimes exist in some sort of a balance with the host, never killing enough tissue to cause death. Cankers tend to weaken trees at the points where they are growing causing the tree to eventually break.

**Canopy** - A layer or multiple layers of branches and foliage at the top of a forest's trees. The collection of individual tree crowns is the canopy.

**Carrying Capacity** - The maximum number or biomass of organisms of a given species that can be sustained or survive on a long-term basis within an ecosystem.

**Clear-Cut Harvest** - A harvest and regeneration practice that removes all trees within a given area. Used most commonly in forests that require full sunlight to regenerate or areas where young forests are the preferred habitat.

**Competition** - The struggle between trees to obtain sunlight, nutrients, water, and growing space. Every part of the tree—from the roots to the crown—competes for space and food.



**Conservation** - The protection, improvement, and wise use of natural resources for present and future generations.

**Conservation Easement** - A legally enforceable transfer of usage rights for the purposes of conserving land and prohibiting real estate development.

**Cord** - A stack of compactly piled round or split wood consisting of 128 cubic feet measuring 4 feet in height by 4 feet in width by 8 feet in length.

**Cost-Share Assistance** - An assistance program offered by various state and federal agencies that pays a fixed rate or percentage of the total cost necessary to implement some forestry or agricultural practice.

**Crop Tree** - Tree selected for quality, species, size, timber potential, or wildlife value that is favored for growing to final harvest.

**Crown** - The branches and foliage at the top of an individual tree.

**Crown-Class** - A tree classification system based on the tree's relative height, foliage density, and ability to intercept light. Crown-class measures past growth performance and calls attention to crop trees that could benefit from future thinning and harvest operations. There are four classifications:

**Dominant Trees** - Larger-than-average trees with broad, well-developed crowns. These trees receive direct sunlight from all sides and above.

**Codominant Trees** - Average-to-fairly large trees with medium-sized crowns that form the forest canopy. These trees receive full light from above but are crowded on the sides.

**Intermediate Trees** - Medium-sized trees with small crowns below the general level of the canopy. Intermediate trees receive little direct light, are poor crop trees, and should be removed during thinning operations.

**Suppressed Trees**- Small trees that grow below the tree canopy and receive no direct sunlight from any direction.

**Cull** - A tree or log of marketable size that is useless for all but firewood or pulpwood because of crookedness, rot, injuries, or damage from disease or insects.

**Den tree** - A tree that has a hole in its stem that can be used as shelter by wildlife such as birds and small mammals.

**Dendrology** – The study of trees and their identifying characteristics.

**Diameter at Breast Height (DBH)** - The diameter of a tree measured in inches at breast height 4.5 feet above the ground.



**Diameter tape** - Usually a steel or cloth tape graduated with numerals that are 3.1416 inches apart. When placed around a tree at d.b.h., the tree's diameter can be read directly in inches. Same result could be obtained by using a standard measuring tape and dividing the reading by 3.1416.

**Even-Aged Management** - A forest management method in which all trees in an area are harvested at one time or in several cuttings over a short time to produce stands that are all at or near the same age.

**Forest Management Plan** - Written guidelines for current and future management practices recommended to meet an owner's objectives.

**Forest Type** - Groups of tree species commonly growing in the same stand because their environmental requirements are similar.

**Forester** – Professional with experience in a broad range of forest-related topics including forest and wildlife ecology, economics, legal issues, and the growing and harvesting of forest products. Foresters in Connecticut are required to hold a state certification which is generally based on experience, training, and ongoing continuing education. Like an architect designing a building, a forester designs the harvest plan.

**Forestry** - The science, art, and practice of managing and using trees, forests, and their associated resources.

**Fuel-Loading** - A buildup of fuels, especially easily ignited, fast-burning fuels such as pine straw.

**Geotextile** - A synthetic material placed beneath road fill and used to confine the road aggregate and to distribute the weight of the load.

**Girdling** - A physical cutting or disruption of the cambial sap flow that often results in tree mortality.

**Group Selection** - A specific type of silvicultural practice resulting in the removal of small groups of trees in order to regenerate shade-intolerant trees.

**Hardwoods (Deciduous Trees)** - Trees with broad, flat leaves shed on an annual basis whose wood hardness varies among individual species.

**High-Grading** – An exploitive harvesting technique that removes only the largest, most valuable trees from a stand and provides high returns at the expense of future growth potential. Sometimes referred to as selective cutting.

**Improvement Cut** - An intermediate silvicultural treatment made to improve the form, quality, health, or wildlife potential of the remaining stand.

**Increment borer** - A T shaped tool consisting of a bit, a handle and an extractor that is used to measure the age or growth rate of a tree. The bit is hollow and when turned into the tree, cuts a pencil shaped piece of wood showing the growth rings.



**Invasive Species** - An organism that is nonnative (or alien) to an ecosystem and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

**Inventory** - Quantitative method used to estimate the actual volume, composition, and market value of standing timber.

**Landing** - A cleared area in the forest to which logs are yarded or skidded for loading onto trucks for transport.

**Log Rule or Log Scale** - A table based on a diagram or mathematical formula used to estimate volume or product yield from logs and trees. Three commonly used rules and scales in the United States are International, Scribner and Doyle. Scribner is the common scale for pine; Doyle is the common hardwood scale; and the International 1/4" Rule best measures mill output. International is prescribed by law in Connecticut as the standard unless both parties agree otherwise.

**Logger (Timber Harvester)** - Someone in the business of cutting down trees, cutting them into logs, removing the logs from the woods to the roadside and transporting the logs to the sawmill. They are usually in business independently or may be in the employment of a sawmill. In Connecticut they are required to hold a state certification which is based on passing a written exam of relevant laws and must participate in ongoing continuing education. Like a builder following the architect's design, a logger implements the harvest plan created by the forester.

**Lump Sum** - The sale of specified timber on a specified area whereby the buyer assumes responsibility for determining timber volume and the seller guarantees ownership and boundaries.

**Marking** - The physical process of selecting trees to be cut or left during a harvest accomplished normally by spraying a spot of bright paint on a prominent part of the tree.

**Mast** - Fruits or nuts used as a food source by wildlife. Soft mast include most fruits with fleshy coverings, such as persimmon, dogwood seed, or black gum seed. Hard mast refers to nuts such as acorns and beech, pecan, and hickory nuts.

**MBF** - Abbreviation denoting one thousand board feet that is a typical unit of volume for saw logs and manufactured wood products. (It takes 11 MBF of wood to build an average 1,900-square-foot house.)

**Merchantable Height** - The stem length, normally measured from the ground to a 10-, 6-, or 4-inch diameter top, above which no other saleable product can be cut. Diameter, local markets, limbs, knots, and other defects collectively influence merchantable height.

**Mixed Stand** - A timber stand in which less than 80 percent of the trees in the main canopy are of a single species.

**Multiple Use** - The management of land or forest for more than one purpose, such as wood production, water quality, wildlife, recreation, aesthetics, or clean air.



**Nontimber Forest Products** - All forest products except timber, including resins, oils, leaves, bark, plants other than trees, fungi, and animal or animal products.

**Poletimber** - Trees from 5 to 7 inches in diameter at breast height.

**Present Use Value** - Property tax relief classification based on the land's productivity for agriculture, horticulture, or forestry production, rather than for market value. Can result in substantial tax savings in areas where land values are high. Connecticut program is called PA490.

**Preservation** - Maintaining forests in an undisturbed, unmanaged state.

**Pulpwood** - Wood used in the manufacture of paper, fiberboard, or other wood fiber products. Pulpwood-sized trees are usually a minimum of 4 inches in diameter.

**Regeneration Cut** – Any silvicultural practice with the intent to reestablish a new stand of seedlings.

**Residual Stand** - Trees left in a stand to grow until the next harvest.

**Riparian Forest or Riparian Buffers** - Vegetative areas along a body of water containing a complex assemblage of vegetation, typical of a riparian system.

**Root Collar** - The transition zone between stem and root at the ground line of a tree or seedling.

**Rotation** - The number of years required to establish and grow trees to a specified size, product, or level of maturity.

**Salvage Cut** - The harvesting of dead or damaged trees or of trees in danger of being killed by insects, disease, flooding, or other factors.

**Sapling** - A small tree, usually between 2 and 4 inches diameter at breast height.

**Sawlog or Sawtimber** - A log or tree that is large enough (usually 10 to 12 inches in diameter) to be sawed into lumber.

**Scarifying** - The disturbance or removal of the top litter layer of soil in order to prepare a site for planting.

**Sedimentation** - The deposition or settling of soil particles suspended in water.

**Seedling** - A tree, usually less than 2 inches diameter at breast height.

**Seed Tree Cut** - A harvesting method in which a few scattered trees are left in the area to provide seed for a new forest stand. Selection of seed trees should be based upon growth rate, form, seeding ability, wind firmness, and future marketability.

**Seed Year** - A year in which a given species produces a large seed crop over a sizable area.



**Selective harvest** – A user-defined term that means only that someone designated trees for harvest. Not a recognized silvicultural term.

**Shelterwood Harvest** - Removing trees on the harvest area in a series of two or more cuttings so new seedlings can grow from the seed and in the partial shade of older trees.

**Silviculture** - The art, science, and practice of establishing, tending, and reproducing forest stands of desired characteristics.

**Single Tree Selection** – The removal of individual trees under uneven-aged regeneration methods.

**Site Index** - A relative measure of forest site quality based on the height (in feet) of the dominant trees at a specific age (usually 25 or 50 years, depending on rotation length).

**Slash** - Tree tops, branches, bark, or other residue left on the ground after logging or other forestry operations.

**Snag** - A snag is a dead tree, commonly a tall, limbless tree left after a logging operation. Though of little or no commercial value, they can be very valuable wildlife resources.

**Softwoods (Conifer Trees)** — Trees that are usually evergreen, bear cones, and have needles or scale-like leaves such as pine, spruce, fir, and cedar.

**Stand** - An easily defined area of the forest that is relatively uniform in species composition, age structure and condition and can be managed as a single unit.

**Stocking** - A description of the number of trees, basal area, or volume per acre in a forest stand compared with a desired level for balanced health and growth.

**Stumpage** – The value of trees as they stand uncut in the woods (on the stump).

**Succession** - The somewhat predictable sequence of plant community replacement beginning with bare ground and resulting in a final relatively stable community.

**Sustainable Forestry** - A holistic, conservation ethic based on environmental balance and health that helps ensure forests will be managed in ways that have the potential to meet the social, physical and economic needs of the present while ensuring similar options for the future. This includes a suite of policies, plans and practices that seeks to sustain an array of forest benefits at a particular location.

**Sustained Yield** - Management of forestland to produce a relatively constant amount of wood products, revenue or wildlife.

**Thinning** – An intermediate silvicultural practice that reduces tree density and competition between trees in a stand.



**Timber Cruise** - A survey of forestland to locate timber and estimate its quantity by species, products, size, quality, or other characteristics.

**Timber Stand Improvement (TSI)** - Improving the quality of a forest stand by removing or deadening undesirable species to achieve desired stocking and species composition.

**Tolerant Species** - A species of tree that has the ability to grow in the shade of other trees and in competition with them.

**Understory** - The layer formed by the crowns of smaller trees in a forest.

**Uneven-Aged Management** - The practice of managing a forest by periodically selecting and harvesting individual trees or groups of trees from the stand while preserving its natural appearance.

**Volume** - Refers to the amount of wood in a tree or log. Expressed as board feet, cubic feet, cords or other measure.

**Water Bar** - A diagonal ditch or hump in a trail that diverts surface water runoff to minimize soil erosion.

### **Sources**

<http://www.maced.org/foi/generalforestryglossary.htm>

<http://content.ces.ncsu.edu/understanding-forestry-terms-a-glossary-for-private-landowners.pdf>

<http://www.iowadnr.gov/Environment/Forestry/ForestryLinksPublications/ForestryDefinitions.aspx>

<http://dictionaryofforestry.org/dict/browse>

<https://masswoods.net/faq/what-difference-between-forester-and-logger>