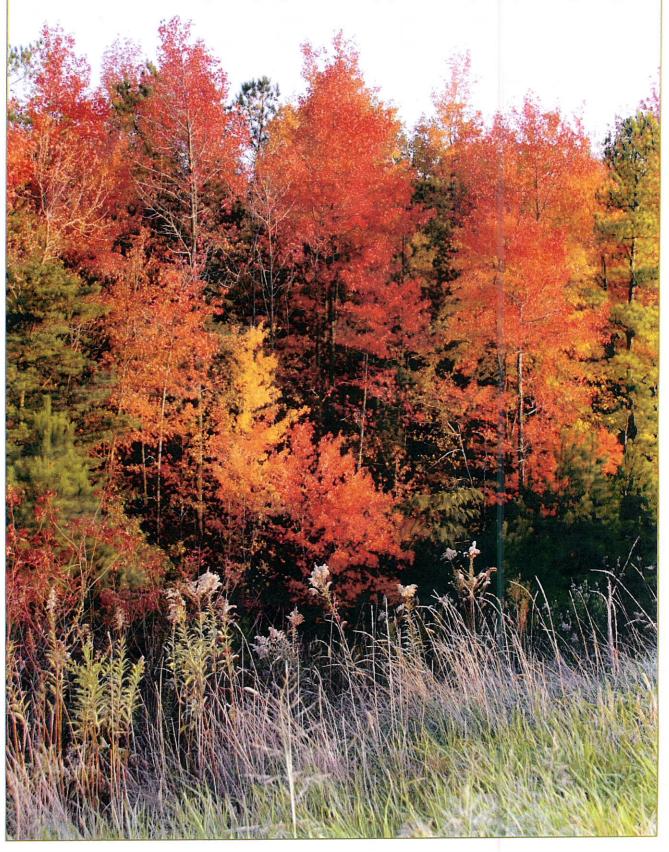
Forestry Talk for Forest Landowners



FORESTRY TALK for FOREST LANDOWNERS

When discussing forest management practices, a professional forester often uses abbreviations and terms that are unfamiliar to many landowners. This can produce confusion and a lack of communication between the landowner and the forester. Many aspects of forest land management are explained or described only in technical terms. Successful forest management will be easier for landowners if they learn basic forestry language to improve their communication with professional foresters.

This publication should help foresters and landowners understand one another and promote better management of our forest resources.

Acid Soils: – A term applied to soils with a pH value below 7.0. Strongly acid soils are those whose pH value is below 6.0. Some species, such as many of the conifers, grow well in moderately acid soils. Other species, including some hardwoods, do poorly in acid soils.

Acre: – An area of land that contains 43,560 square feet, and measures approximately 208 feet on each side.

Afforestation: – Establishing a forest on an area that did not previously contain trees. (such as farm land)

All-age forest: – A forest in which trees of all ages and usually all sizes are present. This is in contrast to an "even-age" forest.

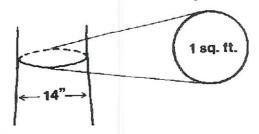
Allowable cut: – The volume of wood or the amount of the product available for cutting, under a particular management plan, during a given time. (Typically the goal is such that tree growth exceeds removal or harvest.)

Annual Rings: - See growth rings.

<u>Aspect:</u> – The compass direction toward which a slope faces.

<u>Association:</u> – A collection of plants with ecologically similar requirements, including one or more dominant species from which the group derives a definite character.

Basal Area: –(1) Of a tree: The cross-sectional area (in square feet) of the trunk at breast height (4.5 feet above ground). For example, the basal area of a tree 14 inches in diameter is about one square foot.



(2) Of an acre of forest: The sum of basal areas of the individual trees on the acre. This measurement is often used to estimate the stocking level of a forest. For example, a well stocked stand of hardwoods might contain 90 to 120 square feet of basal area per acre.

<u>Biltmore Stick:</u> – A tool calibrated to measure the diameter of a tree at breast height (4.5 feet above ground level). Biltmore sticks are calibrated with different scales depending on the user's arm length.

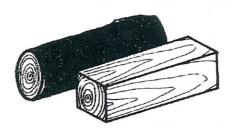
<u>Biological Diversity/Biodiversity:</u> – The variety of life in all its forms and all its levels of organization. Biodiversity refers to diversity of genetics, species, ecosystems, and landscapes.

<u>Blaze:</u> – To mark a tree, usually by painting or cutting the bark. Forest property lines are often marked by blazing trees along the boundary lines.

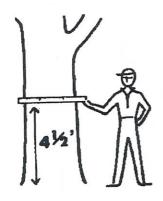
Board Foot: – A unit for measuring wood volume in a tree, log, or board. A board foot is commonly one foot by one foot by one inch, but any shape containing 144 cubic inches of wood equals one board foot.

Bole: - The main trunk (stem) of a tree.

Bolt: - A short log or a squared timber cut from a log.



Breast Height: – A point on a tree trunk 4.5 feet above the general ground level. Tree diameter is generally measured at this height.



<u>Browse:</u> – Parts of woody plants, including twigs, shoots, and leaves, that are eaten by forest animals.

<u>Buck:</u> – To cut trees into shorter lengths, such as logs or cordwood.

 $\underline{\text{Butt }} \underline{\text{Log:}} - A \text{ log cut from the bole immediately above the stump.}$

<u>Caliper:</u> – A tool used to measure the diameter of a tree.

<u>Canopy:</u> – The continuous cover formed by tree crowns (tops) in a forest.

<u>Clearcut:</u> – A harvesting technique that removes all the trees (regardless of size) on an area in one operation. Clearcutting is normally used with species like loblolly pine that require full sunlight to reproduce and grow well. This produces an evenaged stand.



<u>Clear Log:</u> – This term is used in grading veneer and high-quality sawlogs. A graded log is divided into quarters, or faces, and each face is graded. A face is clear if no knots, pin-knots, bumps, or other defects are within that face. The number of faces that are clear aid in determining the grade or quality of the log.

<u>Climax Ecosystem:</u> — The final stage of forest succession that continues to occupy an area unless there are significant changes in the environment. Delaware's climax forests often contain oak, beech, or hickory.

<u>Clinometer:</u> – An instrument used to determine the height of a tree.

<u>Codominant Tree:</u> – A tree that extends its crown into the canopy and receives direct sunlight from above, but limited sunlight from the sides. One or more sides of a codominant tree are crowded by the crowns of other codominant or dominant trees.

Commercial Clearcut: — A harvest cut that removes all <u>merchantable</u> (saleable) timber from an area.

Conifer: – A tree belonging to the order Coniferales. These trees are usually evergreen, bear cones, and have needles, awl or scalelike leaves. Examples of these are pines, spruces, firs and cedars; often called softwoods.

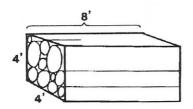
<u>Conservation</u>: – Conservation is the protection, improvement and wise use of natural resources. This is practiced to assure the attainment of the highest economic and/or social values of a woodland or natural area.

Consulting Forester: – An independent professional who manages forests and markets forest products for private woodland owners. Consulting foresters do not have direct connections with firms that buy wood products, but are retained by woodland owners as their agents.

<u>Cooperative Extension Service (CES):</u> – The educational arm of the USDA that links university research to people who can benefit from it.

<u>Coppice:</u> – Tree growth originating from a dormant bud near the base of a plant or on a shallow root. This often occurs after the original tree is harvested.

Cord: – A stack of wood containing 128 cubic feet. Normal dimensions of a standard cord are 4 feet x 4 feet x 8 feet.



<u>Crook:</u> - A tree defect characterized by a sharp bend in the main stem.

<u>Crop Tree:</u> – A tree allowed to grow until the final harvest. It is usually selected based on its location in relation to other trees and its quality.

<u>Crown:</u> – The uppermost branches and foliage of a tree.

<u>Crown Classes:</u> – See dominant, codominant, intermediate, overtopped, and suppressed.

<u>Crown Cover or Crown Closure:</u> – The percentage of a given area covered by tree crowns.

Cruising (Timber Cruise): — A method used by a forester to evaluate or estimate the volume and quality of the trees in a woodlot. There are many ways to cruise a forest, depending on what information is needed. Foresters often speak of a 10%, 40%, or even a 100% cruise, which refers to the intensity or the number of trees actually examined or measured.

Cubic Foot: – A wood volume measurement containing 1,728 cubic inches, such as a piece of wood measuring one foot on each side. A cubic foot of wood contains about 6 to 10 usable board feet of wood.

<u>Cull:</u> – A tree or log of merchantable size that has little or no market value due to defects.

Cutting Cycle: – The planned interval between major harvesting operations in the same stand. The term is usually applied to uneven-aged stands. For example, a cutting cycle of 10 years in a hardwood stand means a timber harvest occurs every 10 years.

<u>Deciduous:</u> – Shedding or losing leaves annually, the opposite of evergreen. Trees such as maple, ash, oak, and baldcypress are deciduous.

<u>Defect:</u> – Rot, crookedness, cavities, excessive limbs, etc. that make the log or tree unusable for the intended product. A defect can make all or part of the tree or log unusable.

<u>Dendrology</u>: – The study of the identification, habits, and distribution of trees.

<u>Den Tree:</u> – A tree with cavities suitable for birds or mammals to nest in.

<u>Diameter at Breast Height (DBH):</u> – Standard measurement of a tree's diameter, usually taken at 4.5 feet above the ground.

DIB (or d. i. b.): – The diameter of a log inside the bark.



<u>Dimension Lumber:</u> – Hardwood dimension lumber is processed to be used whole in the manufacture of furniture or other products. Softwood dimension lumber consists of boards more than 2 inches think but less than 5 inches thick. This wood is used in construction and is sold as 2x4's, 4x8's, and 2x10's.

<u>Dominant Trees:</u> – Trees that extend above surrounding individuals and capture sunlight from above and around the crown.

Drum Chopper: — This is a tool used in site preparation for reforestation. The chopper itself is a large, hollow drum with chopping blades attached to the outside. It is filled with water for weight, and pulled by a large crawler tractor across an area that has been clearcut. This process chops up the remaining logging debris, and trees that were too small for forest products. Drum chopping normally precedes controlled burning, as it reduces the burnable material to a smaller, more uniform size. The smaller, uniform-sized fuels burn more evenly, and produce better results.

<u>Ecology:</u> – The study of interactions between organisms and their environment.

Ecosystem: – An interacting system of living organisms (plants and/or animals), soil, and climatic factors.

Edge: – The boundary between two ecological communities; for example, field and woodland. Edges provide valuable wildlife habitat. Timber harvests often produce edge effects in woodlands.

<u>Epicormic Branching:</u> — Branches that grow out of the main stem of a tree from buds produced under the bark. Severe epicormic branching increases knottiness and reduces lumber quality.

Even-aged Forest: – A forest in which all the trees are the same age (within 10 to 15 years).



Even-aged Forest Management: — Periodic harvesting of all the trees on part of the forest. This is done once, or in several cuttings over a short time. This practice produces a stand containing trees nearly all the same age. In Delaware, this type of management is commonly applied to conifers such as loblolly pine.

<u>Evergreen:</u> – A tree or other plant that retains foliage year round.

Extension forester: – A Cooperative Extension Service professional who educates woodland owners on how they can effectively manage their forests.

Felling: - The cutting of standing trees.

FIP (Forestry Incentive Program): – A federal costsharing program that reimburses a landowner for part of the expenses incurred in forestry practices. Approved forest management activities, such as tree planting and thinning/releasing, are examples of costshared activities. This program is administered by the USDA Natural Resources Conservation Service. <u>Forest:</u> – A biological community in which the dominant vegetation is trees and other woody plants.

<u>Forest Fragmentation:</u> – The subdivision of large natural landscapes into smaller, more isolated fragments. Fragmentation affects the viability of wildlife populations and ecosystems.

Forest Management: – (1) General definition: Giving the forest proper care so that it remains healthy and vigorous. The forest can then provide the desired products and financial return at the proper time. (2) Technical definition: The application of technical forestry principles, practices, and business techniques (such as accounting, benefit-cost analysis, etc.) to the management of a forest.

<u>Forest Types:</u> – Associations of tree species that have similar ecological requirements. Some examples in Delaware include oak-gum-cypress, oakhickory, oak-pine, and northern hardwood.

Forested Wetland: – An area characterized by woody vegetation taller than 20 feet where soil is at least periodically saturated or covered by water. Wetlands are typically determined using soil type, vegetation, and topography.

<u>Forester:</u> – A professional with a college degree in forestry or forest management.

<u>Forestry:</u> – The science, art, and practice of managing trees and forests and their associated resources for human benefit.

<u>Fork:</u> – A tree defect characterized by the division of a bole or main stem into two or more stems.

<u>Frilling:</u> – A method of killing trees by inflicting a series of cuts around the bole and applying an herbicide to the wounds. Frilling or girdling can be used to reduce the density of a stand or to kill individual undesirable trees.

<u>Girdling:</u> – A method of killing trees by cutting through the cambium layer under the bark, thus interrupting the flow of water and nutrients.



<u>Grading:</u> – Evaluating and sorting trees or logs according to quality.

<u>Group Selection:</u> – A process of harvesting patches of trees to open the forest canopy and encourage reproduction of uneven-aged stands.

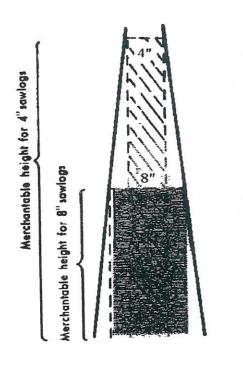
Growth Rings: – The layers of wood a tree adds each season; also called annual rings. These rings are frequently visible when a tree is cut and can be used to estimate its age and growth rate.

<u>Habitat:</u> – The local environment in which a plant or animal lives.

<u>Hardwoods:</u> – A general term used to describe broadleaf, deciduous trees.

Harvest: – (1) Generally, harvesting is the removal of all or portions of the trees in an area. (2) Technical definition: A harvest is the removal of trees in an area to 1) gain income, and 2) develop the environment necessary to regenerate the forest. On occasion, it is used to achieve a specific goal, such as the development of special wildlife habitat.

Height, Merchantable: – The height of a tree (or length of its trunk) up to which a particular product may be produced. For example, if the smallest usable diameter of pulpwood sticks is 4 inches, the merchantable height of a straight pine tree would be its height up to a trunk diameter of 4 inches. If the product is 8-inch minimum diameter sawlogs, the merchantable height is estimated up to a trunk diameter of 8 inches. Note: One must know the desired product to estimate merchantable height.



Ground Level

<u>Height</u>, <u>Total</u>: – The height of the tree from ground level to its very top.

Herb: - A non-woody plant.

Herbaceous Vegetation: -Low-growing, non-woody plants, including wildflowers and ferns, in a forest understory.

Herbicide: – Chemicals that kill herbaceous (non-woody) plants. In common usage, however, this term is used interchangeably with the word phytocide (plant killer).

High Grading: – The removal of all mature, good-quality trees from a stand, leaving inferior species and individuals. High grading should be distinguished from uneven-aged management in which mature and immature trees are removed to aid regeneration.

<u>Hypsometer:</u> – Any of several tools or instruments designed to measure the height of trees. The clinometer is such a tool.

Improvement Cut: - A weeding done in stands of pole-size or larger trees, in order to eliminate undesirable specimens.

Increment Borer/Core Borer: — A hollow auger-like instrument used to bore into the trunk of a tree to remove a cylinder of wood. This cylinder contains a cross section of the tree's growth rings, and is used to determine the tree's age and/or growth rate.

Industrial Forester: – A professional employed by a wood-using industry, usually a sawmill, who purchases timber from private woodland owners. Many industrial foresters offer free forest management or marketing services to the landowners who sell timber to the forester's employer.

Intermediate Crown Class: – Trees with crowns that extend into the canopy with dominant and codominant trees. These trees receive little direct sunlight from above and none from the sides. Crowns generally are small and crowded on all sides.

Intermediate Cut: – This is the removal of immature trees from the forest sometime between establishment and major harvest. The primary goal of an intermediate cut is improving the quality of the remaining forest stand. An intermediate cut may generate income as a commercial cutting or, in some cases, may actually cost the forest landowners as in a noncommercial cutting.

<u>Intermediate Shade Tolerance:</u> – A characteristic of certain tree species, such as red maple, that allows them to survive, though not necessarily thrive, in relatively low light conditions.

<u>Landing</u>: – A cleared area within a timber harvest where logs are processed, piled, and loaded for transport to a sawmill or other facility.

Log: – (1) A piece of the woody stem of a tree. (2) The trunk portion of a tree. (3) A unit of measurement of a tree stem section, usually 16 feet in length, for wood volume determination.

<u>Logger:</u> – An individual whose profession is cutting timber, including pulpwood.

Log Rule: – A device, usually presented in tabular or mathematical form, expressing log volume based on log diameter (small end) and length. For example, a log measuring 12 inches in diameter, and 16 feet long contains 60 board feet of lumber.

<u>Lump-sum Sale:</u> – A timber sale in which an agreedupon price for standing trees is set and usually paid before the wood is removed.

Marking: – This is a method of selecting the trees that will be harvested within a woodlot. Most foresters use this method when managing unevenaged hardwood stands. The forester selects those trees that are ready to be harvested. This will often include smaller trees that are defective or crowding future crop trees. A specially manufactured paint, designed to remain on the tree for a long time, is normally used to mark the trees. The trees are normally marked in two places, one on the trunk at shoulder height, and one low on the stump, below cutting height.

<u>Mast:</u> – Nuts and seeds, such as acorns, beechnuts, and chestnuts, that serve as food for wildlife.

Mature Tree: – A tree that has reached the desired size or age for its intended use. Size or age will vary considerably depending on the species and intended use.

Mensuration: – Traditionally, it is that phase of forestry that deals with the measurement of present and future tree volumes. Growth and development of individual trees and stands and their timber

products are also factors.

<u>Multiple Use:</u> – The management of forest land (or any other land) for more than one purpose, such as timber production and recreation.

Non-Commercial Cutting: – A harvest that does not yield a net income. Normally, this is because the trees cut are too small, of poor quality, or not marketable.

Nonindustrial Private Forestland (NIPF): — Forestland owned by a private individual, group, or corporation not involved in wood processing. Most of Delaware's woodlands fall in this category.

Nontidal Wetlands: – Wetlands not affected by ocean tides. Nontidal wetlands, as well as tidal wetlands, are subject to special regulations.

Old-Growth Forest: – A wooded area, usually greater than 200 years in age, that has had little, if any modification by humans. An old-growth forest often has large individual trees, a multilayered crown canopy, and a significant accumulation of coarse wood debris including snags and fallen trees.

Overmature: – A quality exhibited by trees that have declined in growth rate because of old age and loss of vigor. These trees often contain rot and other defects.

Overstocked: – The situation in which trees are so closely spaced that they compete for resources and do not reach full growing potential.

Overstory: – The level of a forest canopy that includes the crowns of dominant, codominant, and intermediate trees.

Overtopped: – The situation in which a tree cannot extend enough of its crown into the overstory and receive direct sunlight. Overtopped trees that lack shade tolerance lose vigor and die.

Patch Cut: - A clearcut on a small area.

Phytocides: - Chemicals that kill plants.

<u>Plantation:</u> – An artificially reforested area started by planting or direct seeding. This is in contrast to a natural forest which starts from natural seed fall, and/or stump sprouting.

<u>Pole Saw:</u> – A saw attached to a long pole to prune the tree's trunk without using a ladder.



<u>Pole Stand/Pole Timber:</u> – Individual trees or a group of trees whose diameters (DBH) range from 4 inches to about 12 inches.

<u>Precommercial Treatments or Operations:</u> – Cutting in forest stands to remove wood too small to be marketed. Precommercial operations improve species composition and increase the quality, growth, and vigor of remaining trees. Precommercial operations seldom generate revenue.

<u>Preservation:</u> – (1) Applied to wood and wood products, it is treating to prevent damage by insects or decay organisms. (2) Otherwise, it is the practice of maintaining a natural environment undisturbed by the influence or activities of man.

<u>Primary Processor:</u> – A person or firm that receives trees or logs and engages in the initial sawmill work on the product. Examples include a piling broker, a logger, or a veneer bolt processor.

<u>Pruning:</u> – The removal of live or dead branches from standing trees. With forest trees, pruning is done along the trunk to remove the side branches. Removal of these side branches causes the tree to produce a higher quality, knot-free wood.

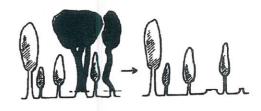
<u>Pulpwood:</u> – Wood products used primarily for conversion into wood pulp for the manufacture of paper, fiberboard, or other wood pulp products.

<u>Reforestation:</u> – Reestablishing a forest on an area where forest vegetation has been removed.

<u>Regeneration:</u> – The process by which a forest is reseeded and renewed. Advanced regeneration refers to regeneration established before the existing forest stand is removed.

<u>Regeneration Cut:</u> – A timber harvest designed to promote natural establishment of trees.

Release: – An operation carried out to release young trees (saplings or seedlings) from competition with other trees of the same size or larger. Releasing can be done mechanically by physically cutting the competing trees, or chemically by spraying an herbicide on the trees to kill the competition. The latter method is normally used in releasing conifer species, such as loblolly pine in southern Delaware, from hardwood competition.



<u>Reproduction:</u> – (1) Young trees that will grow to become the older trees in the future forest. (2) The process by which the forest is replaced or renewed. This may be:

a) Artificial reproduction by seeding or planting.

or

b) Natural reproduction from natural seeding or sprouting

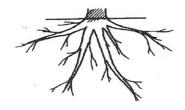
<u>Residual Stand:</u> – The trees remaining following any cutting operation.

Roots: – That portion of the tree which is generally underground and which functions in nutrient absorption, anchorage, and storage of food and waste products. There are several general types of roots including –

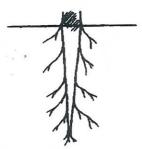
<u>Flat Root</u> – Consists of several large roots that extend out nearly horizontally with smaller roots branching from these. Produces broad, flat, shallow root systems. Typical of red maple and other trees growing in poorly drained soils or soils where the water table is close to the soil surface.



<u>Heart-shaped Root</u> – Consists of several large roots descending at various angles into the soil with smaller roots branching from these. Produces a heart-shaped root mass which is broadest near the soil surface but which penetrates a considerable distance into the soil. Typical of species such as beech and maple.



<u>Taproot</u> – A strong central descending root with lateral roots branching off horizontally. Typical of species such as black walnut, white oak, and some pines.



<u>Rot:</u> – A tree defect characterized by wood decay in a standing tree or log.

<u>Rotation:</u> – The number of years required to establish and grow a group of trees to a specified size, product, or condition of maturity.

<u>Salvage Cut:</u> – The harvesting of trees that are dead, or are in danger of dying, to utilize their remaining economic value.

Sanitation Cut: - The harvesting or destruction of trees infected or highly susceptible to insects or diseases to protect the rest of the forest stand.

Sapling: - A small tree, usually between 2 and 4 inches DBH.

<u>Sawlog:</u> – A log large enough to produce a sawn product, such as dimension lumber, usually at least 10 to 12 inches in diameter at the small end.

<u>Scale Stick:</u> – A flat stick, similar to a yardstick, calibrated so that log volumes are read directly from it when placed on the small end of a log of known length.



<u>Secondary Processor:</u> – An individual or firm who engages in the final processing of wood products for consumer use. Some examples are: furniture manufacturing plant or a paper mill.

Sediment: – This term normally refers to erosion, when fine particles of soil are washed into streams after the vegetation is removed from the land. Ground vegetation can be removed by clearing land for construction, cultivating crops, and by logging. When ground vegetation is removed from the soil, rainfall strikes the ground with considerable force. The soil cannot absorb this amount of water, so the water runs along the surface of the ground. This results in soil particles carried by the water that eventually find their way to a larger body of water.

<u>Seed Trees:</u> – Mature trees left uncut to provide seed for regeneration of a harvested stand.

<u>Seed Tree Harvest Cutting:</u> – A harvest in which a few evenly distributed trees are left to provide seed to establish a new forest stand.

<u>Seedling:</u> – A tree, usually defined as less than 2 inches DBH, which has grown from a seed (in contrast to a sprout).

Selection Cut: – A procedure for harvesting timber in which individual trees or small groups of trees are harvested at periodic intervals. The length of these intervals is normally determined in the management plan and will vary depending in part, on the species of tree, soil fertility, and climatic conditions. The selection of the trees is based on their physical condition or degree of maturity. This produces an uneven-aged stand.

<u>Shade Intolerance:</u> – A characteristic of certain tree species, such as loblolly pine, that does not permit them to survive in the shade of other trees.

Shelterwood Harvest: – A harvest in which the trees on the harvest area are removed in a series of two or more cuttings. This allows the establishment and growth of the new seedlings under the partial shade and protection of the older trees, producing an evenaged forest. This method should be used with trees that are shade tolerant.

<u>Shrub:</u> – A low-growing perennial plant with a persistent woody stem and low branching patterns.

Silviculture: – The art, science, and practice of establishing, tending, and reproducing forest stands of desired characteristics. This is based on knowledge of species characteristics and environmental needs.

<u>Site:</u> – An area evaluated on its capacity to produce a particular forest or other vegetation. This capability is based on the combination of biological, climatic, and soil factors present.

Site Index: – A measure of the quality of a site based on the height of dominant trees at a specified age (usually 50 years in the Eastern U.S.) depending on the species. Typical site indices at base age 50 for loblolly pine in Delaware are 70 - 90.

<u>Site Preparation:</u> - Preparing an area of land for forest establishment. This can include clearing, chemical vegetation control, burning, etc.

Skidder: – A skidder is a machine that is commonly used in logging. Rubber-tired skidders are used more than track machines due to lower maintenance costs and greater speed of operation. A skidder uses either steel cable, or hydraulic grapples to pull the logs from the cutting area to the loading deck. Most large industrial machine companies manufacture a product line of log skidders.

Skidding: – The act of moving trees from the site of felling to a loading area or landing. Specialized logging equipment (see skidder) is used for skidding. Skidding methods vary in their impact on soils and the remaining stands.

Slash: – The residue left on the ground after logging, pruning, or other forest operation. This debris normally includes tree tops, branches, bark, etc.



<u>Snag:</u> – A dead tree that is still standing. Snags provide important food and cover for a variety of wildlife species.

<u>Soil Texture:</u> – The feel or composition of a soil based on the proportion of sand, silt, and clay in the soil.

<u>Sprout/Sucker:</u> – A tree that has grown from the base, stump or root of another tree. Sprout growth is often described as coppice growth.

Stand: – A grouping of trees occupying a given area. This group normally has enough uniformity in composition, age, and condition that it is distinguishable from the forest on adjoining areas. A forest stand is considered "pure" if 80 percent or more of the trees present are of the same species. If less than 80 percent of all trees present are of the same species, the stand is termed mixed.

Stocking: – An indication of the number of trees present in a forest stand. Stocking level is compared with the desirable number of trees for best growth and management. Descriptive terms for these levels are; under-stocked, well-stocked, or over-stocked.

<u>Stratification</u>: – The division of a forest, or any ecosystem, into separate layers of vegetation that provide distinct niches for wildlife. See canopy, understory, and herbaceous vegetation.

<u>Stumpage:</u> – The value of a tree or group of trees as they stand in the woods uncut (on-the-stump).

Stump Height: – The distance from the ground to the top of a stump. Good logging practice dictates that stumps are as low as possible (preferably less than 12 inches) to reduce waste, to minimize visual impact on the logging site, and to promote resprouting of trees.

<u>Succession:</u> – The natural replacement of one plant community by another until ecological stability is achieved.

<u>Suppressed:</u> – A tree condition characterized by low growth rate and low vigor because of competition with overtopping trees. See overtopped.

<u>Sustained</u> <u>Yield:</u> – An ideal forest management objective in which the volume of wood removed equals growth within the total forest.

<u>Sweep:</u> – A tree defect characterized by a gradual curve in the main stem. Careful bucking can eliminate much of this defect after the tree is felled.

<u>Thinning</u>: – Cutting in an immature forest stand to reduce the tree density. This will concentrate the site nutrients and growing space on fewer, higher quality trees. Thinning provides increased growth and larger trees.

<u>Tidal Wetlands:</u> – Wetlands that are affected by ocean tides. Tidal wetlands, are subject to special regulations.

TSI (Timber Stand Improvement): – The practice of improving the quality of a forest stand by removing the less desirable trees, vines, and shrubs. This practice achieves the desired stocking level with the best quality trees.

<u>Tolerance:</u> – The ability of a tree to develop and grow in the shade of, and in competition with other trees.

<u>Tree Farm:</u> – A privately owned woodland dedicated to the production of timber crops. Additionally, it may be recognized as a "Tree Farm" by the American Forest Foundation.

<u>Tree Injectors:</u> – Equipment specially designed to inject chemicals, usually phytocides (herbicides) into the trunk of a tree.

<u>Trim Allowance:</u> – The extra 2 or 3 inches left on a bucked log to allow logs with end checks or slanted buck cuts to be trimmed to standard lumber lengths. Standard lumber lengths are typically at 2-foot intervals, such as 8', 10', 12', etc.

<u>Understocked:</u> – A stand of trees so widely spaced that, even with full growth potential realized, crown closure will not occur.

<u>Understory:</u> – The level of forest vegetation beneath the canopy.

<u>Uneven-aged Forest or Stand:</u> – A forest in which there are at least two separate age classes present. Such stands or forests are also termed "all-aged."

<u>Veneer Log:</u> – A high quality log of a desirable species suitable for conversion to veneer. Veneer logs must be large, straight, of minimum taper, and free from defects.

<u>Virgin Forest:</u> – An area of old-growth trees that has never been harvested by humans.

<u>Volume Table:</u> – This is a table that will estimate the volume of wood contained in a standing tree. These volumes are calculated using the DBH and merchantable height of the tree.

<u>Watershed:</u> – A region defined by patterns of stream drainage. A watershed includes all of the land that contributes water to a particular stream or river.

Well stocked: – The situation in which a forest stand contains trees spaced widely enough to prevent competition yet closely enough to use the entire site.

<u>Widow-Maker:</u> – This is a term used by foresters and loggers to describe a large tree limb or branch that has or may break off a tree. This branch often becomes lodged in other branches and can fall to the ground at any time. A branch or limb falling from a tree top is capable of causing serious injury, or even death. In years past, most foresters and loggers were male, thus the term "widow-maker" was applied.

<u>Wildlife</u> <u>Habitat:</u> — The native environment of an animal. Habitats ideally provide all the elements needed for life and growth: food, water, cover, and space.

<u>Windthrow:</u> – A tree felled by wind. Windthrows, also known as blowdowns, are common among shallow-rooted species and in areas where cutting has reduced stand density.

Wolf Tree: – A tree that occupies more space in the forest than its value justifies. It is usually a tree that is older, larger, or more branchy than other trees in the stand. A wolf tree often contains nest sites of various species of wildlife, however, and may as such, justifiably remain on the site.

<u>Wood Pulp:</u> – Mechanically ground or chemically digested wood or wood fiber used in the manufacture of paper, fiberboard, cardboard, etc.

Woodland Management: - See forest management.

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