

APPENDICES

APPENDIX 1 TERMINOLOGY USED IN TIMBER HARVESTING AND POST HARVEST OPERATIONS

Aboveground biomass

- Aboveground portion of a tree, excluding the root system

Acceptable growing stock

- Trees of commercial species that meet specific quality standards

Access

- Means of gaining entry to timber on a tract or logging chance.

Aerial logging

- Yarding system employing aerial lift of logs, such as balloons or helicopters.

Afforestation

- Establishment of forest crops by artificial methods, such as planting or sowing on land where trees have never grown.

Age

- *Of a tree* - the time elapsed since the germination of the seed, or the budding of the sprout or cutting from which the tree developed.
- *Of a forest* - Mean age of the trees comprising a forest, crop, or stand. In forests, the mean age of dominant (and sometimes co-dominant) trees is taken. The plantation age is generally taken from the year the plantation was begun, without adding the age of the nursery stock.

Age Class

- One of the intervals, commonly 10 or 20 years, into which the age range of tree crops is divided for classification or use. Also pertains to the trees included in such an interval.

All-aged

- Forest or stand containing trees of almost all age classes up to and including trees of harvestable age.

Allowable cut

- Volume of timber that may be harvested during a given period to maintain sustained production.

Allowable-cut effect

- Allocation of anticipated future forest timber yields to the present allowable cut; this is employed to increase current harvest levels (especially when constrained by even flow) by spreading anticipated future growth over all the years in the rotation.

Anchor cable

- Line used to tie down a yarder to prevent tipping on a heavy pull.

Anchor log

- Wooden, concrete, or metal bar buried in the earth to hold a guy rope.

Annual allowable harvest

- Quantity of timber scheduled to be removed from a particular management unit in 1 year.

Annual growth

- Average annual increase in the biomass of growing-stock trees of a specified area.

Appraised price

- Price of a particular timber sale based on the estimate of the timber's actual market value.

Area regulation

- Method of controlling the annual or periodic acreage harvested from a forest, despite fluctuations in fibre-yield volumes.

Artificial regeneration

-Renewal of the forest by planting or direct seeding; establishing a new stand of trees by planting seeds or seedlings by hand or machine.

Aspect

-Compass direction to which a slope faces.

Average yarding (skidding) distance

-Total yarding (skidding) distance for all turns divided by total number of turns for a particular setting.

Back cut

-Final cut in felling a tree. This is usually made on the opposite side of the direction of fall.

Back line

-Boundary line marked by blazed or painted trees indicating the cutting area.

Bank

-Logs cut or skidded above the required daily production and held in reserve.

Barber chair

-High slab-like splint, resembling a chair back, left standing on a stump above the undercut as a result of faulty felling or heavy lean of the tree.

Bardon hook

-Hook used with wire rope slings for gripping trees or logs to be skidded.

-A type of choker hook.

Bark beetle

-Small, cylindrical beetle of the family *Scolytidae*, the adult of which bores into and beneath the bark of various trees for the purpose of egg laying.

Bark residue

-Refers to the bark removed from a log and also to portions of wood and foreign matter such as sand, grit, or stones that may be imbedded in the bark.

Basal area

-Cross sectional area of a tree, measured at breast height (1.3 m). Used as a method of measuring the volume of timber in a given stand.

Basal area factor

-Number of units of basal area per acre (or per hectare) represented by each tree.

Bearing tree

-Tree marked to identify the nearby location of a survey corner. It is also known as a witness tree.

Bed

-To level and buffer the ground along the line on which a tree is to be felled to minimize shattering of the timber.

Bench mark

-Survey reference point, used to signify a starting point.

Bind

-To get a saw stuck when felling or bucking a tree and the sides of the cut pinch in; wedges are used to alleviate the situation.

Binder

-Chain or wire rope used to bind logs.

-Chain or cable used to secure logs on a truck.

Biodiversity (biological diversity):

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

Biomass

-Total woody material in a forest. This refers to both merchantable material and material left following a logging operation.

-In the broad sense, all of the organic material on a given area; in the narrow sense, flammable vegetation to be used for fuel in a combustion system.

- The dry weight of all organic matter in a given ecosystem. It also refers to plant material that can be burned as fuel.

Biomass harvesting

-Harvesting of all material including limbs, tops, and unmerchantable stem and stumps, usually for wood energy.

Blaze

-To permanently mark trees, indicating those to be cut or the course of a boundary, road, or trail.

Bole

-Tree stem that has roughly grown to a substantial thickness, capable of yielding sawn timber, veneer logs, or large poles.

Boring

-Starting a cut in the centre of a log using the tip of the saw blade. Also known as a plunge cut.

Brand

-Log mark used to identify logs. Usually applied in the log yard at the sawmill site.

Broadcast burn

-Controlled fire used as a silvicultural treatment to burn a designated area within well-defined boundaries for the purpose of reducing fuel hazards.

Brush

-Growth of small trees and shrubs.

Brush cut/out

-To clear away brush from a trail, survey line, or around a tree before working.

Buck

-To saw felled trees into shorter lengths.

Buffer strip or buffer zone

-Strip of uncut timber left between cutting units or adjacent to another resource. Also known as a green strip, leave strip, or streamside management zone.

-Land that blocks or absorbs unwanted impacts of forestry activities

Bulk density

-Measure of weight per unit of volume of a material; generally serves as an indicator of the specific gravity of wood.

Bulldozer

-Steel blade mounted across the front of a standard crawler tractor that can be raised and lowered but cannot be angled to one side or the other; therefore all pushing is straight forward.

Butt

-Base of a tree.

-Large end of a log.

Butt cut

-First log cut above the stump.

Butt off

-To cut off a piece of a log because of a defect.
-To square the end of a log.

Buttress

-Ridge of wood that develops in the angle between a lateral root and the butt of a tree, which may extend up the stem to a considerable height.

Cable

-Wire rope used for lines in yarding systems.

Cable logging

-Yarding system employing winches in a fixed position.

Cable yarding

-Taking logs from the stump area to a landing using an overhead system of winch-driven cables to which logs are attached with chokers.

Canopy

-More or less continuous cover of branches and foliage formed collectively by adjacent tree crowns.

Capital

-Plant, equipment, and related facilities used to produce a flow of goods and services.

Cash flow

-Difference between cash receipts and cash, expenditures over a given time.

Chain saw

-Saw that is powered by a gasoline, hydraulic, or electric motor; cutting elements are on an endless chain similar to a bicycle chain.

Chemical thinning

-Any thinning in which the unwanted trees are killed by chemical poisoning; band or frill girdling may be done at the same time. (See silviculture)

Choked

-Condition in which a log is attached to a skidding unit by means of a wire rope or chain choker.

Choker

-Short length of flexible wire rope or chain that forms a noose around the end of a log to be skidded and is attached to the skidding vehicle or to the butt rigging in a wire rope logging system.

Choker hooks

-Fastener on the end of a choker that forms the noose.

Choker man

-Person in a logging operation who places the choker around the log to be hauled to the landing.

Clear-cutting

- A harvesting and regeneration technique that removes the entire tree, regardless of size, on an area in one operation. Clear-cutting produces an even-aged forest stand.

Climax forest

-Plant community dominated by trees representing the culminating stage of natural succession for that specific locality and environment.

-Stage of forest development that is relatively stable and self-perpetuating.

Climax species

-Plant species that will remain essentially unchanged in terms of species composition for as long as the site remains undisturbed. (See also Shade tolerant species)

Clinometer

-Hand-held instrument used by foresters to measure vertical angles. Such angles, when correlated with specific distances, indicate the height of standing trees.

Co-dominants

-Trees with crowns forming the upper level of the forest canopy; these trees receive full light from above but comparatively little from the sides, and their medium-sized crowns are usually more or less crowded on the sides.
-Species in a mixed forest that are equally numerous and vigorous.

Commercial thinning

-Partial harvesting of a stand of trees for economic gains from the harvested trees and to accelerate the growth of the trees left standing.

Compartment

-Forest management subdivision or block of land, usually of continuous land ownership.

Competition

-Struggle among trees and other vegetation, generally for limited nutrients, light, and water present on a site. Competition can cause reduced tree growth. Severe competition in very dense stands may cause stand stagnation.

Complete tree harvesting

-Harvesting of a complete tree, including the roots.

Conservation

-Protection, improvement, and wise use of natural resources according to principles that will assure utilization of the resource to obtain the highest economic and/or social benefits.

Continuous forest inventory

-Timber sampling system that provides for periodic re-measurement of specific stands or plots of individual trees; this shows status and periodic change over time for the forest as a whole and major sub-divisions therein.

Contour felling

-Timber felled parallel to ground contour line.

Contract logging

-Operator undertaking all or part of the logging operation for a company.
-Independent logger who logs standing timber according to the terms of a contract.

Contractor

-Person who has a contract to do all or any part of a logging job.

Controlled burning

-Use of fire to destroy logging debris, reduce build-ups of dead and fallen timber that pose wildfire hazards, control tree diseases, and clear land. Other functions of a controlled burn include clearing a buffer strip in the path of a wildfire.

Conventional forest products

-All commercial round wood products except fuel wood.

Cover Type

-Category of forest based on its mixes of species

Coppice

-In silviculture, a tree cutting method in which renewal of a newly cutover area depends primarily on vegetative reproduction like sprouting.

Coppice regeneration

-Ability of certain hardwood species to regenerate by producing many new shoots from a cut stump.

Corduroy

-To build a road by cross-laying it with saplings or small poles to act as a firm surface for hauling or skidding logs from the cutting area to the landing.

Cost-Benefit ratio

-Ratio obtained by dividing the anticipated benefits of a project by its anticipated costs. Either gross or net benefits may be used as the numerator.

Cost of capital

-The investment required to create and maintain productive capital.

Cover type

-Category of forest defined primarily by its vegetative composition and/or locality factors.

-Category of forest, based on its mixes of species

Creaming

-Logging operation where only the best trees in the stand are cut.

Crop tree

-Any tree forming or selected to form a component of the final crop. The tree is usually selected when the stand or plantation is young.

Cross cut

-Wood cut across the grain.

Crown

-Upper part of a tree, including the branch system and foliage.

Crown class

-Class into which the trees forming the crop or stand may be divided on the basis of both their crown development and crown position relative to the crowns of adjacent trees and the general canopy.

Crown cover

-Ground area covered by a crown, as delimited by the vertical projection of its outermost perimeter.

Crown density

-Thickness, both spatially (depth) and in closeness of growth (compactness) of an individual crown as measured by its shade density. Collectively, crown density should properly be termed canopy density, as distinct from canopy cover.

Crown height

-Vertical distance of a standing tree from ground level to the base of the crown, measured to the lowest live branch whorl or to the lowest live branch or to a point halfway between the two.

Crown length

-Vertical distance of a standing tree from the tip of the leader to the base of the crown, measured to the lowest live branch whorl or to the lowest live branch or to a point halfway between the two.

Crown length ratio

-Of a standing tree, the ratio of crown length to tree height.

Crown thinning

-Removing superfluous live growth in a tree crown to admit light, reduce weight, and lessen wind resistance.

Cruise

- Survey of forest land that includes the location, volume, species, size, and quality of timber stands.
- Estimate obtained in such a survey.

Cutover (Logged over)

- Land that has previously been logged.

Cutter (Logger)

- One who fells, limbs, tops, and/or bucks trees.

Cutting (Logging)

- Process of felling trees.
- Area on which the trees have been, are being, or are to be cut.

Cutting unit

- Area of timber designated for harvest.

Day rate

- Method of paying loggers by the day or hour instead of by the piece.

Deck

- Pile of logs on a landing.
- Area or platform on which wood is placed. Also known as a log landing or log market.

Defect

- Crook, conk, decay, split, sweep, or other injury that decreases the amount of usable wood that can be obtained from a log.

Diameter at Breast Height (D.B.H)

- Diameter of tree stem measured at 4.5 feet (1.3 m) above the ground

Diameter at ground line

- Diameter measure of a standing tree at the estimated cutting height.

Diameter classes

- Classification of trees based on diameter outside bark measured at d.b.h.

Diameter inside (under) bark

- Diameter measurement of a standing tree or log in which the estimated or actual thickness of the bark is discounted.

Diameter limit

- Maximum diameter of trees to be cut, as in a timber sales contract.

Diameter limit cutting

- The cutting of all the trees in a stand above a specified diameter, generally without regard to tree species (can be species specific), quality or individual tree location. The diameter limit may vary by species.

Diameter outside (over) bark

- Measurement of tree diameter in which the bark is included.

Diameter tape

- Tape measure specially graduated so that diameter may be read directly when the tape is placed around a tree stem or log.

Directional (controlled) felling

- Predetermining the way a tree will land when it hits the ground. Wedges may be used to provide a lever that directs the tree into its lay. (NB It is extremely difficult to direct a tree against its natural lean)

Dominant trees

- The most numerous and vigorous species in a mixed forest.
- Larger-than-average trees with well-developed crowns extending above the general canopy level and receiving fall light from above and partial light from the side.

Ecology

-Study of plants and animals in relation to their physical and biological surroundings.

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. Ecosystems are commonly described according to the major type of vegetation, for example, forest ecosystem, old-growth ecosystem, or range ecosystem.

Ecosystem management:

-The use of an ecological approach to achieve productive resource management by blending social, physical, economic and biological needs and values to provide healthy ecosystems.

Even-aged

-Stand of trees in which there are only small differences in age among the individual trees.

Even-aged management

-Silvicultural system in which the individual trees originate at about the same time and are removed in one or more harvest cuts, after which a new stand is established.

Experimental plot

-Area of ground laid out to determine the effects of a certain method of treatment.
-Major area-unit of an established experimental study requiring recurrent examination often divided into subplots.

Faller

-One who fells trees. Also known as a feller.

Failing wedge

-Wedge used to throw a tree in the desired direction.

Felling

-Cutting or uprooting standing trees, causing them to fall as a result of the cutting or uprooting.

Field test

-Experiment conducted under field conditions. Ordinarily less subject to control than a formal experiment; it may also be less precise. Also known as a field trial.

Fixed costs

-Operation costs that will remain relatively constant for all levels of output.

Forest (production)

-Area managed for the production of timber and other forest products or maintained as wood vegetation for such indirect benefits as protection of catchment areas or recreation.

(Re-)Forestation

-Establishment of a forest, naturally or artificially, on an area, whether previously forested or not.

Forest ecology

-The relationships between forest organisms and their environment

Forest economics

-Generally, that branch of forestry concerned with the forest as a productive asset subject to economic principles.

Forest floor

-General term for the surface layer of soil supporting forest vegetation; includes all dead vegetation on the mineral soil surface in the forest as well as litter and unincorporated humus.

Forest inventory

-An assessment of forest resources, including digitized maps and a database which describes the location and nature of forest cover (including tree size, age, volume and species composition) as well as a description of other forest values such as soils, vegetation and wildlife features.

Forest management

-The practical application of scientific, economic and social principles to the administration and working of a forest for specified objectives. Particularly, that branch of forestry concerned with the overall administrative, economic, legal and social aspects and with the essentially scientific and technical aspects, especially silviculture, protection and forest regulation.

Forest residuals

-Sum of wasted and unused wood in the forest, including logging residues; rough, rotten, and dead trees; and annual mortality.

Forest structure

-Structure is a pattern in three dimensions, which can be described both horizontally and vertically. And just like a building, the structure of a forest stand often relates or reveals something about the way in which it functions, or its purpose. In the horizontal level, patterns of openings, closed forest, tree size and species are part of the structure. In the third dimension, the number of layers between the ground surface and the uppermost canopy are a key component of structure

Forest technology

-machinery and equipment used in forest management

Forestry

-Generally, a profession embracing the science, business, and art of creating, conserving, and managing forest, and forest lands for the continuing use of their resources, materials, and other forest products.

Forest type

-Classification of forest land in terms of potential cubic

-Foot volume growth per acre at the culmination of mean annual increment (C.M.A.I.) in fully stocked natural stands.

-Classification of forest land based on the species forming a plurality of live-tree stocking. 'Type is determined on the basis of species plurality of all live trees that contribute to stocking.

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

Front end loader

-Wheeled or tractor loader, with a bucket or fork hinged to lifting arms, that loads or digs entirely at the front end.

-Track or rubber-tired machine equipped with forks.

Fuel wood

-Wood salvaged from mill waste, cull logs, and branches; used to fuel fires in a boiler or furnace.

Gap (canopy)

-Opening in the forest canopy

Girdle

-To encircle a tree with cuts to sever the bark and cambium layer, thus killing the tree.

Gravity logging

-Any cable system that depends on the force of gravity for downhill travel of the carriage.

Green strip

-Uncut strip of timber left along streams and roads. Also known as buffer strip, leave strip, streamside management zone.

Ground

-Territory on which a logging operation is being conducted.

Ground clearance

-General term for removing unwanted vegetation, slash stumps, roots, and stones from a site before afforestation or reforestation.

Ground skidding

-Pulling logs parallel to the ground without using an arch or fairlead to raise the forward end.

Growing stock

-Sum (by number or volume) of all the trees in a forest or in a specified part of the forest.

Growth

-Increase in diameter, basal area, height, and volume of individual trees or stands during a given period of time. Also known as increment.

Hang-up

-In felling, to have a tree catch on another so that it becomes lodged.

-In skidding, to get a load stuck in the mud or behind some obstacle.

Hardwood

-Dicotyledonous trees, usually broad-leaved and deciduous.

Harvest

-*In general use* - the removal of some or all of the trees on an area.

-*Technical definition* - a harvest cut is the removal of trees on an area to obtain products and/or income.

Harvesting

-Removing merchantable trees (contrasts with cuttings, which remove immature trees).

Haul

-Conveying wood from a loading point to an unloading point.

-The distance wood is transported.

High grade

-Good (best) quality timber.

Industrial wood

-All round-wood products except fuel-wood.

Intensive forest management

-Utilization of a wide variety of silvicultural practices, such as planting, thinning, fertilization, harvesting, and genetic improvement, to increase the capability of the forest to produce.

Intermediate trees

-Trees with small, crowded crowns below (but extending into) the general canopy level; these trees receive a little light from above and none from the side. May also be referred to as sub-canopy.

Inventory

-A survey of a forest area to determine such data as area, condition, timber, volume and species for specific purposes such as planning, purchase, evaluation, management or harvesting

Land classification

- Classification of forest land in terms of its inherent capacity to grow crops of industrial wood. A site index or the stand age may be used as units of measurements.

- *Site index*-Expression of the growing potential of a specific forest site based on the height of a free-growing dominant or co-dominant tree of a representative species in a forest of the same type at a specified age.

- *Stand age*-Age of trees of the dominant forest type and stand-size class.

Landing

-Cleared area in the forest to which logs are skidded for loading onto trucks for shipment to a saw mill.

Lean

-Degree and direction to which the tree leans from a perpendicular position.

Litter

-Freshly fallen and slightly decomposed plant matter on top of the forest floor

Log

-Length of tree suitable for processing into lumber, veneer, or other wood products.

-To harvest trees on an area.

Logger

-A person employed in the production of logs and/or wood from standing timber.

Logging plan

- Layout, on a topographical map, of roads, landings, and setting boundaries of a logging area.

Logging residues

-Unused portions of growing stock from trees cut during by logging.

Logging truck

-Vehicle used to transport logs.

Machine rate

-Cost per unit of time for owning and operating a logging machine or some other piece of logging equipment. In accordance with engineering practices, the rate is composed of fixed costs such as depreciation, interest, taxes, and license fee, and variable costs including fuel, lubricants, and repairs and replacement of components.

Man-hour

-Unit of work performed by one man in 1 hour.

Marking

-Selecting and indicating, by a blaze or paint sport, the trees to be cut or left in a timber cutting operation.

Mature timber

-Stand of trees that has attained an age or size that satisfies the primary economic goal for which it was managed.

Mean annual increment

-Average growth per year.

Mensuration

-In forestry, the measurement of both standing and harvested timber.

Merchantable

-Logs exceeding a minimum size and a minimum usable volume that are suitable for sale.

Model (mathematical)

-Theoretical abstraction, usually capable of mathematical manipulation, used to evaluate a problem or a subject of interest.

Multiple entry

-Entering a stand for commercial harvesting more than once in any one continuous rotation.

Multiple-use management

-Management of land resources with the objective of achieving optimum yields of products and services from a given area without impairing the productive capacity of the site.

Natural regeneration

-Renewal of the forest achieved either by natural seeding or from the vegetative reproduction of plants on the site.

Net annual growth

-Increase in volume of trees during a specified year. Components of net annual growth include the increment of net volume of trees at the beginning of the specified year that survive to the year's end, plus the net volume of trees reaching the minimum size class during the year, minus the volume of trees that died during the year, and minus the net volume of trees that become rough or rotten trees during the year.

Net scale

-Actual amount of merchantable wood contained in a log as opposed to the gross scale, which includes defect.

Non-commercial species

-Tree species in which small size, poor form, or inferior quality is typical. These species do not normally develop into trees suitable for conventional forest products.
- Tree species with no commercial value.

Notch

-To make an undercut in a tree, preparatory to felling it in a given direction. Also known as a box or an undercut.

Old growth

-Growth in a mature forest.

Operational cruise

-Timber inventory that includes the estimation of timber volumes or other stand information on specific geographic areas for specific purposes, as contrasted with more broadly based estimates for forest wide planning.

Operations research

-Scientific approach to decision making that involves the operations of organizational systems.

Optimum road spacing

-Distance between parallel roads that gives the lowest combined cost of skidding and road construction costs per unit of log volume.

Overstorey

-Tall mature trees that rise above the shorter immature understorey trees.

Overstorey removal

-Any silvicultural treatment with the desired end result being the removal of the overstorey component from the growing stock of a multi-storied stand. Examples are outright harvest, poison girdling, and simply felling the overstorey.

Parent tree

-Any tree whose seeds are used to produce progeny for regeneration

Partial cut

-Logging area in which only part of the trees are felled and skidded, as opposed to clear-cut.

Periodic annual increment

-Mean annual growth or increase in volume during a specific period of time.

Piece rate

-Payment for labour where income is related to output.

Pioneer (shade intolerant species)

-Fast-growing, early successional plant species. Usually found in disturbed areas

Plantation

-Forest stand regenerated artificially either by sowing or planting. May also be referred to as (manmade forest).

Planting

-Artificial regeneration method in which a new stand of trees is established by restocking the area with tree seedlings.

Plunge cut

-Starting a cut in the centre of a log using the tip of the chain saw blade. Also known as boring.

Pole

-Young tree at least 4 inches and less than 8 to 12 inches in d.b.h.

-Any considerable length of round timber below saw log size, ready for use after removal of the bark without further conversion.

Potential yield

-Estimated maximum sustained yield cutting level (stated for a period of time such as a year or decade) attainable with intensive forestry; considers productivity of the land, conventional logging technology, standard cultural treatments, and interrelationships with other resource uses and the environment.

Prescribed burning

-Deliberate use of fire under conditions where the area to be burned is predetermined and the intensity of the fire is controlled.

Preventive maintenance

-Maintenance measures taken in advance to avoid breakdowns.

Primary logging road

-Road designed and maintained for a high level of use by heavy vehicles. Typically an all-weather gravel road that is part of a permanent road system.

Reduced Impact Logging

- A series of distinct components or steps designed to minimize the disturbances associated with (conventional) selective timber harvest. It adapts the best possible harvest techniques to local site and market conditions.

Reforestation

-Restocking an area with forest trees.

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)

Residual stand

-Trees remaining in an area after the cutting operation has been completed.

Residue

-Wood or bark that is left after a manufacturing process.

Rotation

-Period of years between establishment of a stand of timber and the time when it is considered ready for final harvest and regeneration.

Round wood

-A length of cut tree generally having a round cross-section.

Round wood products

-Logs, or other round sections cut from trees for industrial or consumer use.

Sapling

-Young tree stem ranging from 1 – 6 inches d.b.h (may also be referred to as a pole)

Secondary logging road

-Road designed for relatively little use. Typically a dirt road, with no gravel, used only during dry weather.

Secondary growth

-Trees that regenerate naturally after the first growth of timber has been cut or destroyed.

Seedling

-Young tree grown from seed, from the time of germination until it reaches sapling size.

Seedling and sapling stands

-Where 10 percent of the stand consists of growing stock trees, and saplings and/or seedlings constitute more than half this stocking.

Seed tree

-Tree that produces seeds; usually a superior tree left standing at the time of cutting to produce seeds for regeneration. May also be referred to as a parent tree.

Selection cutting (selective harvesting)

-Cutting only a portion of the trees in a stand, usually those marked or designated by a forester.

Shade Intolerant (Pioneer) Species

-Tree relatively incapable of developing and growing normally in the shade of, and in competition with, other trees.

Shade tolerant (Climax) Species

-Trees with the ability to grow in the shade

Shelter wood logging

-Method of harvesting timber so that selected trees remain scattered throughout the tract to provide seeds for regeneration and shelter for seedlings.

Shelter wood system

-Even-aged silvicultural system in which a new stand is established under the protection of a partial canopy of trees. The mature stand is generally removed in a series of two or more cutting cycles, the last of which is when the new even-aged stand is well developed.

Silvicultural system

-Process of tending, harvesting, and replacing forest trees, which results in the production of forests with distinct compositions. Systems are classified according to the method of harvest cutting used for stand reproduction.

Silviculture

-Generally, the science and art of cultivating (such as with growing and tending) forest crops, based on the knowledge of silvics. More explicitly, the theory and practice of controlling the establishment, composition, constitution, and growth of forests.

Site class

-Classification based on ecological factors and the potential production capacity of an area; a measure of the relative production capacity of a site.

Skid

-Load being pulled by the skidder.

Skidder

-rubber tired machine made to skid logs or trees. Logs are either pulled by cables, chains, or a grapple.

Skidding

-Transporting trees or parts of trees by trailing or dragging them from stump to a collection point.

Skid trail

-Temporary road for skidder travel to landing

Slash

-Woody material or debris left on the ground after an area is logged.

Snag

-Standing dead tree

Soil compaction

- Increased soil density resulting from the packing effect of machines moving over the soil. Compaction disturbs the soil structure and can cause decreased tree growth, increased water runoff, and soil erosion.

Species

-Group of similar individuals having a number of correlated characteristics and sharing a common gene pool. The species is the basic unit of taxonomy on which the binomial system has been established and is both the singular and plural form of the word.

Sprouting

-New tree (or branches) arising from an old tree or remnant of an old tree. Can occur from roots and stumps.

Spur road

-Road that supports a low level of traffic, such as a level that would serve one or two settings. Little or no engineering design work is needed to build it.

Stand

-Section of a forest with sufficient uniformity to be distinguishable and to be managed as a single unit

-*In silviculture and management* - a tree community that possesses sufficient uniformity in composition, constitution, age, spatial arrangement, or condition to be distinguishable from adjacent communities. This tree community forms a silvicultural or management entity; for example, a sub-compartment. Both natural and artificial crops are included, and there is no connotation of a particular age.

-*In mensuration* - the amount of timber and/or fuel wood standing on an area, generally expressed as volume per unit area.

Stand density

-Quantitative measure of tree stocking frequently expressed in terms of number of trees, basal area, or volume per unit area.

Stand improvement

-Measures such as thinning, release cutting, girdling, weeding, or poisoning of unwanted trees to improve growing conditions.

Stand table

-Table showing the number of trees by species and diameter classes, generally per unit area of a stand

Stem

-Main body of a tree from which branches grow.
-Used loosely to refer to trees. For example: stems per unit area.

Stocking

-Degree of utilization of land by trees. Measured in terms of basal area and/or the number of trees in a stand compared to the basal area and/or number of trees required to fully utilize the growth potential of the land.

Succession:

- Natural change in vegetation (tree species) over time following a disturbance.

Sustained yield

-Timber yield that a forest can produce continuously at a given intensity of management. It implies continuous production planned to achieve a balance between growth (increment) and harvest at the earliest practical time.

Thinning

-Cuttings made in immature stands in order to stimulate the growth of the trees that remain and to increase the total yield of useful material from the stand.

Timber

-General term applied to forests and their products.

Timber appraisal

-Economic appraisal of the monetary value of a timber stand.

Timber harvesting impacts

- The impact (environmental, economic and social) of the removal of some or all of the trees in an area.

Timber stand improvement

-Intermediate thinning of a forest stand, prior to its reaching mature rotation age, generally for the purpose of improving growing conditions or controlling stand composition.

Timber volume

- Volume of sound wood in the bole of sawn timber and pole timber from a stump to the point where the central stem breaks into limbs.

Tree

-Woody plant that usually grows to at least 20 feet (6 m) in height at maturity, typically having a single trunk with no branches within 3 feet (0.9 m) of the ground.

Undercut

-Wedge-shaped notch cut in the base of a tree to govern the direction of its fall. Also known as a box or a notch.

Understorey

-Young trees that are growing beneath the tall mature trees in a forest.

Uneven-aged

-Stands composed of intermingling trees that differ markedly in age within a minimum range of 10 to 20 years.

Uneven-aged management

-Silvicultural system in which individual trees originate at different times and result in a forest with trees of all ages and sizes. Harvest cuts are on an individual-tree selection basis.

Winch

-Steel spool connected to a power source. Used for reeling or unreeling cable. Also known as drum.

Windfall

-Tree or trees that have been uprooted or broken off by the wind.

Yield

-Estimate in forest mensuration of the amount of wood that may be harvested from a particular type of forest stand by species, site, stocking, and management regime at various ages.

Yarding

-Initial hauling of a log from the stump to a collection point. May be referred to as skidding.