

Glossary of Terms

The following definitions apply to this manual:

Accuracy	How close measurements or estimates are to their actual value or quantity.
Advanced decay	The late stage of decay in which the decomposition is readily recognized as the wood becomes punky, soft, stringy, pitted, or crumbly.
Adventitious	Developing in an unusual position, added from the outside, as adventitious branching.
Annual ring	The annual increment of wood (including early-wood and late-wood) which appears on a transverse section (or cross section) of a piece of wood and denoting one year's growth.
Bark	The tissues of a tree is outside cambium is composed of inner living bark and outer dead bark.
Bark Seams	Seams of bark extending into or embedded in the log.
Bias	A consistent or systematic distortion of sampling results or measurements arising from an incorrect method of sampling or measurement.
Bole	The trunk of a tree (seedlings and saplings have stems, not boles).
Bolt	Any short log specially cut to length, usually for the manufacture of a specific product.
Borer holes	Voids made by wood-boring insects or worms.
Branch whorl	A more or less circular arrangement of branches around a point on the bole of a tree.
Burl	A hard woody bump on a tree, more or less rounded in form, usually resulting from the entwined growth of a cluster of adventitious buds.

Butt end	The larger end of a log.
Butt log (or First Cut Log)	This refers to the first log cut from the bottom of the tree.
Butt rot	Any decay or rot developing in, and sometimes characteristically confined to, the butt log.
Butt swell	That part of a log outside its normal taper and extending from where the normal taper ends and the flare begins to the large end of the log. It is usually manifest only in butt logs due to the self buttressing growth of the tree near its base.
By the piece	By a count or tally of pieces.
Callipering	To take a diameter measurement at a point on a log other than at an end.
Catface	A defect on the surface of a tree or log resulting from a wound where healing has not re-established the normal cross section.
Check	A separation of the wood, perpendicular to the grain. See also End Check, Surface Check and Weather Check.
Clear	Free of knots and stain, and at least 2.5 m long in the case of lumber. Clear shingles must be free of knots, insect damage and meet the minimum shingle dimensions.
Coast	For the purpose of scaling, coast is defined as that area of the province where a log based stumpage appraisal is used (generally west of the Cascade Mountains).
Coefficient of variation	A measure of variability among units expressed as the ratio of the standard deviation (s) to the mean (x) and is usually expressed by the formula $CV = s/x$.
Collar	The portion of the log between the inside of the bark and a hole or rot in the heart of the log (the same as shell).
Compression wood	Is a type of defect that forms in conifers on the underside of leaning stems on the leeward side of trees exposed to strong winds, in crooked stems and in the lower part of trees growing on a slope.
Crook	An abrupt bend in the length of a log.

Dead side	A misshapen side of a log caused by the lack of growth of wood because of the death or removal of the inner bark, or phloem, along the side of the living tree.
Decay	The decomposition of wood substance cause by the action of wood-destroying fungi, resulting in softening, loss of strength and mass, and often change of texture and colour.
Defect	Any abnormality or irregularity which lowers the commercial value of wood. Typically defects will reduce a log's firmwood volume and/or log grade.
Diameter, small end	The average diameter, inside bark, at the upper end of the log.
Diametre breast height (DBH)	The stem diameter of a tree measured outside bark at breast height (1.30 m above ground level). DBH is used for standing trees, usually in the context of cruise data. The minimum butt diameter is usually used in the context of utilization standards.
Diametre deduction	A method of compensating for through-running firmwood defects by reducing the recorded radius or radii of a log or slab.
Diametre tape	A tape measure specially graduated so that the diameter may be read directly when the tape is placed round a tree bole, or piece of roundwood.
Dryland sorts	Flat areas, usually paved where loads of logs are lifted out of the water or off loaded from logging trucks and spread onto the ground for scaling, grading and subsequent sorting.
Earlywood	That part of the growth ring which is produced at the beginning of the growing season (usually it is less dense and lighter in colour than late wood). It is also called springwood.
End Checking	A type of weather check caused by rapid drying at the cut faces of a freshly cut log. They are usually multiple and normally penetrate only a short distance into a log.
Estimate (of a sample)	A value for a characteristic or parameter derived through using a sampling method.
Face (of a pile)	One of the surfaces of a pile of logs showing only the cut ends of the logs.

Figure	Any design or distinctive markings on the long surfaces of wood.
Fire scar	A healing or healed-over injury, caused or aggravated by fire, on a woody plant.
Firm redheart	A form of incipient decay characterized by a reddish colour produced in the heartwood that does not render the wood unfit for the majority of uses. Firm redheart contains none of the white pockets that characterize the more advanced stage of decay (not to be confused with natural red heartwood).
Firmwood deductions	Deductions made from the gross volume of a log to account for rot, hole, char and missing wood.
Flare	A rapid increase in the taper of a log at the butt end of the log due to swell.
Foreign material	Any material extraneous to roundwood such as earth, ice, snow, and branches, any of which add mass to the load.
Fork	A division of a log or a stem of a tree into two or more branches.
Fuelwood	Roundwood, whole or split, produced for heating purposes.
Grade reduction	In log grading, the process of determining the portion of the log not suitable for the manufacture of various products.
Grain	the general direction of the longitudinal wood elements in the tree.
Grain density	Used in some log grading, refers to the spacing between the annual rings and measured as a ring count over a set distance.
Gross scale	The volume of a log inside bark and includes unsound wood and holes in the log.
Gross volume	Total inside bark volume and includes any defects.
Gross weight	The weight of a load, including the truck weight, before unloading
Heart rot	Any rot characteristically confined to the heartwood. It generally originates in the living tree.
Heart shake	A shake that originates at the pith of a log and extends across the annual rings (also called heart check and reft crack).

Heartwood	The inner core of a woody stem wholly composed of non-living cells and usually differentiated from the outer enveloping layer (sapwood) by its darker colour. It is usually more decay resistant than sapwood.
Hogged Tree Material	Tree residue or by-products that have been shredded into fragments by mechanical action.
Hole	Any opening in a log, other than check, shake or split. It may extend partially or entirely through a log and be from any cause.
Incipient decay	The early stage of decay in which the decomposition has not proceeded far enough to soften or otherwise change the hardness of the wood noticeably. It is usually accompanied by a slight discolouration of the wood (see also Firm Redheart).
Insect holes	Voids made by insects or insect larvae.
Interior	For the purpose of scaling, interior is defined as the area where a lumber and chip based stumpage appraisal system is used (generally east of the Cascade Mountains).
Intermediate decay	A more advanced stage of decay than incipient decay characterized by a change in the colour of the wood and some slight decomposition and loss of strength. (see also White Speck).
Knot indication	On the coast, a characteristic feature showing in the bark of a log which indicates a branch once grew there, but has since been shed and the residual knot covered with new growth wood. Sometimes knot indications will also show on the sapwood surface when the bark has been removed.
Knot Spacing	In the interior, a measurement of ≥ 3 cm knots both along the length and side-to-side for grade 1 logs only.
Latewood	The denser, smaller-celled, usually darker, later formed part of an annual ring, also called summerwood.
Length deduction	A method of compensation for firmwood defects by reducing the recorded length of a log or slab.
List of permissible defects	Are those common to the species and a defect may not appear if it is not a common defect or does not affect that species.
Log	Any section of the bole, or of the thicker branches, of a felled tree, after trimming and cross cutting.

Log rule	A table showing the estimated or calculated volume of wood that is contained in logs of given length, form, and end diameter inside bark.
Lumber	Lumber must be 2.5 m long, free of rot and fractures. Lumber is a manufactured product derived from a log in a sawmill, or in a sawmill and planing mill, which when rough shall have been sawed, edged and trimmed at least to the extent of showing saw marks or other marks made in the conversion of logs to lumber on the four longitudinal surfaces of each piece for its overall length, and which has not been further manufactured other than by cross-cutting, ripping, re-sawing, joining crosswise and/or endwise in a flat plane surfacing with or without end matching and working. (source NLGA)
Mass	The same as the weight.
Mean	The average of a set of measurements derived by summing all values and dividing by the total number of measurements.
Merchantable lumber	Good, strong, general purpose lumber graded as better than utility or number 3, and not less than 2.5 m long (this is assessed on the basis of knots and twist).
Minimum collar thickness	Same as minimum shell thickness. The collar of firmwood surrounding heart defects considered in grading to be the minimum thickness for the manufacture of lumber.
Ministry	'Ministry' means the Ministry of Forests, Lands and Natural Resource Operations.
Missing wood	Wood that is absent from a log or part of a log that otherwise would usually be regarded as naturally complete. It may be caused by advanced decay, fire, or the operation of a machine.
Moisture content	The mass of water in wood expressed as a percentage of its total weight.
Mould or mildew	A superficial fungal growth usually appearing in the form of a woolly or furry coating of varying colour.
Net firmwood volume	The volume remaining after all allowable firmwood deductions for defects from gross volume have been made; in stacked measure, deductions include voids.

Normal taper	The regular decrease in diameter of a log from its large to small end, exclusive of butt swell.
Otherwise grade	On the coast, a log which meets all the requirements of the higher grade, including being free of non-permissible defects, but has more grade reduction than allowed for the higher grade.
Out of round	Used to describe a shape and means that it departs from what is usually regarded as approximately circular.
Parcel	Any quantity of grouped logs.
Peeled	All or most of the bark has been removed.
Peeler block	Peeler block is a segment of a log's length, usually 2.6 m, suitable for the manufacture of veneer on a rotary lathe.
Piece product	A product scaled by the number of separate pieces of one kind.
Piece scale	The scaling method whereby each piece is scaled by recording the timber mark, species and by taking its length, top and butt diametres, deducting for defects, and assigning a grade.
Pipe	A hole, the product of decay, running through the centre of a log.
Pistol grip	A pronounced bend at the butt end of a log resembling the handle of a pistol.
Pitch ring (or silt shake)	An accumulation of pitch or resin fully or partially around the circumference of an annual ring, where there is no visible wood separation. Where a pitch ring appears at only one end of a log, no loss for lumber or plywood is considered. Where a pitch ring appears at both ends of a log it is treated as a tight ring shake, and the log is graded accordingly.
Pith	The small cylinder of primary tissue of a tree stem around which the annual rings form.
Pocket rot	In wood, any rot localized in small areas, generally forming rounded or lens shaped cavities. See also Decay
Population	The aggregate of all units from which samples are selected to make estimates about the aggregate.

Precision	The closeness, to each other of repeated measures of the same quantity. When precision is achieved, values will be clustered around their mean.
Probability statement	A statement that gives a range of a characteristic within which the true value lies, with a stated probability that the statement is correct (e.g., there is a 95% probability that value X will be within 2 sampling errors of the actual value).
Punky	A soft, weak, often spongy wood condition caused by decay. See also Decay
Quality considerations	In log grading, the factors which reduce the log's quality in terms of its potential product recovery and is usually confined to the size and placement of knots and the degree and placement of any twist observed on the log.
Radius and diameter	Log radius in the grade rules is expressed as centimetres of radius, which is equal to and interchangeable with, rads of diameter. An exception should be noted in the grade rule for firmwood reject where the measurement is expressed in centimetres of diameter.
Return Number	Also called a raft or return number. It is a unique number (in conjunction with the scaler's licence number and date), and is assigned to a parcel of timber by a scaler. The scaler assigns #0001 to their first parcel scaled and continues consecutively through to 9999. If the scaler scales more than 9999 parcels of timber they then restart with 001. The dates will then determine the uniqueness of the number.
Ring rot	Any rot localized mainly in the early wood of the annual rings, giving a concentric pattern of decayed wood in cross section.
Ring shake	A separation of the wood following the circumference, or part of the circumference, of an annular ring.
Rot	See Decay.
Round (adjective)	Approximately correct; of an approximate circular cross section.
Round (transitive verb)	To express as a round number.

Rounding	The process of approximating to a number by omitting certain of the end digits, replacing by zeros if necessary, and adjusting the last digit retained so that the resulting approximation is as near as possible to the original number. If the last digit is increased by unity, the number is said to be rounded up; if decreased by unity, it is rounded down. When both are under consideration, the process is said to be one of rounding off.
Round wood	Any section of the stem, or of the thicker branches, of a tree of commercial value that has been felled or cut but has not been processed beyond removing the limbs or bark, or both, or splitting the section (for fuel wood).
Sample	A unit or part selected from a population that is representative of that population.
Sample scaling	The method of scaling where only a portion of the total production is piece scaled. Weight scaling is the most prominent example of sample scaling. Sample scaling is also used to scale some special forest products.
Sample size	The number of samples to be taken to sample the population to meet the sampling objectives.
Sampling error	A statistic which defines how reliable (or precise) sampling results are (the same as the standard error of the estimate, or the standard error of the mean and the standard error).
Sap rot	Any rot characteristically confined to the sapwood.
Sapwood	The living wood of pale colour near the outside of the log. Under most conditions the sapwood is more susceptible to decay than heartwood.
Scale (noun)	The measured or estimated quantity, expressed as the volume, or area, or length, or mass, or number of products obtained from trees and measured or estimated after they are felled.
Scale (verb)	To measure or estimate the quantity, expressed as the volume, or area, or length, or mass, or number of products obtained from trees after they are felled.

Scale stick	A graduated stick for measuring the end diameters of logs or felled trees inside bark. Of many types, it usually has a shaped handle on one of its ends, a tine at the other, and a log rule reproduced on its length; it also means a graduated stick for measuring the external dimensions of stacked wood.
Scaler	A person who is licensed or appointed to scale timber under the <i>Forest Act</i> .
Scales	An instrument or machine for determining weight.
Schedule of Coast Timber Grades	The set of coast grade rules appended to the <i>Scaling Regulation</i> .
Schedule of Interior Timber Grades	The set of interior grade rules appended to the <i>Scaling Regulation</i> .
Second cut log	This refers to logs cut after the butt log.
Shake	One or more separations along the grain of a log or tree, normally radiating outward from the pith (i.e., heart shake, [also called heart check]); caused by stresses during growth. Where several such separations radiate outward, they are referred to as "star shake" (see "Ring Shake").
Shells	See Collars.
Shingles	Must be at least 23 rads long, 4 rads wide, have no knots larger than 7 cm or 3.5 rads and have no knots on any of the four edges.
Shop grade (coast)	Refers to clear lumber at least 2.5 m long, which is cut out from between large knots.
Side	Regardless of whether on land or in the water, the surface of a log has two visible sides, one on each side of a vertical plane that passes through the centre of each end of the log.
SI units	Only the base, supplementary, and derived units of measure included within the International System of Units (SI) (see CSA Standard CAN3-Z234.2).
Significant digit	Any digit that is necessary to define the specific quantity or value.
Slab	A piece of timber that has fractured along a plane roughly parallel to the longitudinal axis of the original log.

Softwood	Generally, one of the botanical groups of trees that in most cases have needle- or scale-like leaves; the conifers; also the wood produced by such trees. The term has no reference to the actual hardness of the wood.
Solid Wood Equivalent	The firmwood volume of logs required to produce a given quantity of a specified product.
Sound wood	Wood free from defect.
Special Forest Products	As defined under the <i>Forest Act</i> and must be listed in the Special Forest Products Regulation.
Spiral check	Wood separations starting on a log's surface and travelling toward the pith. If the natural grain of the log twists, the checks will follow and spiral around the log's axis.
Spiral grain	See Twist.
Split	Cleft completely and lengthwise along the grain of a log; usually results from falling, bucking or handling damage.
Stack	For scaling purposes, an orderly arrangement of bolts less than or equal to the 2.6 m class in length.
Stacked cubic metre (symbol m ³ [stacked])	The total amount of wood, bark, and airspace contained in a stack of round wood, as determined by its external dimensions, equal to 1 m ³ .
Stacked cubic metre peeled (symbol m ³ [stacked] peeled)	The total amount of wood and airspace contained in a stack of peeled round wood, as determined by its external dimensions, equal to 1 m ³ .
Stacked scaling	The act or process of measuring or estimating the total amount of wood, bark, and airspace contained in a stack of round wood, where the bolt length is less than or equal to the 2.6 m class as determined by its external dimensions.
Stratum	A subdivision of the entire population.
Surface checks	Checks or fractures on the outside surface of the log that extend through the bark into the adjacent sapwood. Severe checking will extend into the heartwood.

Sweep	A gradual curve in the length of a log, as distinct from an abrupt bend or curvature.
Tally	A form completed by a scaler used to capture timber details such as timber marks, species, grade, volume, products, and dimensions. It also identifies the time and place of scale, as well as for whom timber is scaled. It is used as a basis for stumpage collection.
Tally number	See Return number.
Taper	The progressive decrease or increase in the diameter of a log from one end or point on its length to another.
Tare	The weight of the unloaded vehicle or container.
Tolerance	The total range of variation permitted for a required size.
Tree length	The trimmed bole of a tree that has been felled and had the top removed.
Trim allowance	The sound wood surrounding rot and other defects made in grade deductions to account for loss in lumber recovery because a sawyer must square defects out.
Trunk	See Bole.
Twist	A quality consideration in log grading where the logs grain is aligned in a spiral-shaped orientation around the axis of the log. It is the same as spiral grain and its measurement is often referred to as the slope of grain.
Unit of measurement for lumber	Board foot is the unit of measurement of lumber. A board foot is the quantity of lumber contained in or derived by drying, dressing or working from a piece of rough lumber 1 inch thick, 1 foot wide, and 1 foot long, or its equivalent in thicker, wider, narrower or longer lumber. (source NLGA)
Upper	Closest to the small end, or top end, of a log.
Variable	A characteristic of a population that may vary from one unit to another.
Variance (of a population)	A measure of the dispersion of individual unit values about their mean.
Void	An unnecessary airspace in a stack of round wood large enough to accommodate the average size of log or bolt in the stack.

Weather check	A type of check caused by rapid drying of the outer surface of a freshly cut log. They are usually multiple where exposed to the drying effect of the wind and sun, and may eventually develop into one or more deep checks (see also End Check).
White Speck	The intermediate stage of Fomes pini decay, characterized by small white pits or streaks in the wood.
Woodchip	A woodchip is a small thin portion of wood cut from a larger piece by a mechanically operated knife.
Worm holes	See Borer holes. Voids made by insects or insect larvae.

This page is intentionally left blank.