

Glossary of Technical Terminology

Adapted from the NC State Extension office publication titled: *Understanding Forestry Terms: A Glossary for Private Landowners*

In discussing forest land management and everyday forest operations, you will often hear and read words and phrases that are unique to the natural resource professions. You will also encounter some common terms that have special meanings when applied to forestry. This publication lists and defines forest resource terms to help you in conversing with others about forestry matters and in making informed decisions about your forestland.

A

ACRE — An area of land measuring 43,560 square feet. A square 1-acre plot measures 209 feet by 209 feet; a circular acre has a radius of 117.75 feet.

AESTHETICS — (a) Sensitivity to or appreciation of the forest's beauty through recognition of its unique and varied components. (b) Beauty through an orderly appearance.

AFFORESTATION — The establishment of a stand of trees or forest in an area where there was no previous tree cover.

ALL-AGED or UNEVEN-AGED MANAGEMENT — The practice of managing a forest by periodically selecting and harvesting individual trees or groups of trees from the stand while preserving its natural appearance. Most common in hardwood forests.

ALL-AGED or UNEVEN-AGED STAND — A forest stand composed of trees of different ages and sizes.

ANNUAL — A plant that lives or grows for only one year or one growing season.

ANNUAL WILDLIFE SEED MIXTURE — A mixture of soybean, millet, cow pea, sorghum, lespedeza, buckwheat, and other seeds from which single-season plants are grown to serve as food or protective cover for wildlife. Some mixtures reseed naturally, while others require reseeding, light disking, and fertilization.

B

BASAL AREA — (a) The cross-sectional area (in square feet) of a tree trunk at breast height (4.5 feet above the ground). For example, the basal area of a tree that measures 14 inches in diameter at breast height is about 1 square foot. (b) The sum basal areas of the individual trees within 1 acre of forest. For example, a well-stocked pine stand might have a basal area of 80 to 120 square feet per acre.

BEDDING — Land prepared before planting in the form of small mounds. The prepared land concentrates topsoil and elevates the root zone of seedlings above temporary standing water. Fertilizer is often incorporated into the bedding.

BEST MANAGEMENT PRACTICES (BMP) — Management practices that maintain and improve the environmental values of forests associated with soils, water, and biological diversity; primarily used for the protection of water quality. These practices are often used during and following harvesting of timber.

BIOENERGY — Renewable energy produced from organic matter that is used directly as fuel or has been converted into liquids or gasses for use as a fuel.

BIOLOGICAL DIVERSITY — The variety of life forms in a given area. Diversity can be categorized in terms of the number of species, the variety in the area's plant and animal communities, the genetic variability of the animals, or a combination of these elements.

BIOMASS — Any organic matter, including forest and mill residues. Forest biomass is usually obtained through in-woods chipping of all or some portion of trees, to include tops and limbs, for energy production.

BLOCK — An area of land or timber that has been defined for management purposes. One block may be composed of stands of different species or ages.

BOARD FOOT — A unit of wood measuring 144 cubic inches. A 1-inch by 12-inch shelving board that is 1 foot long is equal to 1 board foot. Board foot volume is determined by:
[(length (feet) x width (inches) x thickness (inches)) ÷ 12]

BOLE — The main trunk of a tree.

BUCKING — A harvesting function of cutting a felled tree into shorter lengths.

BUFFER RULES — *See riparian buffer rules.*

BUFFER STRIP — A narrow zone or strip of land, trees, or vegetation bordering an area. Common examples include visual buffers, which screen the view along roads, and streamside buffers, which are used to protect water quality. Buffers may also be used to prevent the spread of forest pests.

C

CABLE SKIDDER — *See skidder.*

CANOPY — A layer or multiple layers of branches and foliage at the top or crown of a forest's trees.

CAPITAL GAINS — Profit on the sale of an asset such as timber, land, or other property. Reporting timber sales as capital gains provides certain tax advantages over reporting revenues as ordinary income.

CARBON SEQUESTRATION — Process that removes carbon dioxide from the atmosphere — trees, grasses, and other plants uptake carbon dioxide during photosynthesis and store it in biomass.

CERTIFY — To meet a set of agreed upon standards that address social, economic, and environmental considerations that promote sustainable forestry. Three common forest certification programs in the United States are Forest Stewardship Council, Sustainable Forestry Initiative, and American Tree Farm System.

CHAIN OF CUSTODY — The supply chain wood follows from the forest to the consumer, to include processing, manufacturing, storage, and distribution links. With a chain of custody certificate, the wood or fiber used in a product can be traced back along the chain of custody to a certified forest.

CHIP-N-SAW — A cutting method used in cutting lumber from trees that measure between 6 and 14 inches diameter at breast height. The process chips off the rounded outer layer of a log before sawing the remaining cant or rectangular inside section into lumber. Chip-n-saw mills provide a market for trees larger than pulpwood and smaller than sawtimber.

CLEAR-CUT HARVEST — A harvesting and regeneration method that removes all trees within a given area. Clear-cutting is most commonly used in pine and hardwood forests, which require full sunlight to regenerate and grow efficiently.

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

CONSERVATION — The protection, improvement, and wise use of natural resources for present and future generations.

CONSERVATION EASEMENT — A voluntary legal agreement between a landowner and a land trust, or government agency, that limits the use of the property in order to protect the conservation values of the land.

CONSULTING FORESTER — An independent trained professional forester working for a company that provides services to the general public on a fee or contractual basis.

CONTROLLED BURN — *See prescribed burn.*

CORD — A stack of round or split wood consisting of 128 cubic feet of wood, bark, and air space. A standard cord measures 4 feet by 4 feet by 8 feet. A face cord or short cord is 4 feet by 8 feet by any length of wood under 4 feet.

COST-SHARE ASSISTANCE — An assistance program offered by various state and federal agencies that pays a fixed rate or percentage of the total cost necessary to implement some forestry or agricultural practice.

COVER — (a) Any plant that intercepts rain drops before they reach the soil or that holds soil in place. (b) A hiding place or vegetative shelter for wildlife from predators or inclement weather.

CROP TREE — Any tree selected to grow to final harvest or to a selected size. Crop trees are selected for quality, species, size, timber potential, or wildlife value.

CROSS LAMINATED TIMBER (CLT) — A large-scale, prefabricated, solid engineered wood panel consisting of several layers of kiln-dried lumber boards stacked in alternating directions, bonded with glue, and pressed to form a solid, straight, rectangular panel.

CROWN — The branches and foliage at the top of a tree.

CROWN-CLASS — A tree classification system based on the tree's relative height, foliage density, and ability to intercept light. Crown-class measures past growth performance and calls attention to crop trees that could benefit from future thinning and harvest operations.

There are four classifications:

- **Dominant Trees** — Larger-than-average trees with broad, well-developed crowns. These trees receive direct sunlight from all sides and above.
- **Codominant Trees** — Average-to-fairly large trees with medium-sized crowns that form the forest canopy. These trees receive full light from above but are crowded on the sides.
- **Intermediate Trees** — Medium-sized trees with small crowns below the general level of the canopy. Intermediate trees receive little direct light, are poor crop trees, and should be removed during thinning operations.
- **Suppressed or Overtopped Trees** — Small trees that grow below the tree canopy and receive no direct sunlight from any direction.

CRUISE — A survey of forestland to locate timber and estimate its quantity by species, products, size, quality, or other characteristics.

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

CUTTING CONTRACT — A written, legally binding document used in the sale of standing timber. The contract specifies the provisions covering the expectations and desires of both buyer and seller.

CUTTING CYCLE — The planned time interval between major harvesting operations within the same stand—usually within uneven-aged stands. For example, on a 10-year cutting cycle in a hardwood stand, trees are harvested every 10 years.

D

DAYLIGHTING — A practice in which trees shading an access road are removed to increase the sunlight on the roadway and along its periphery. This relatively inexpensive practice maximizes forest edge and cover for wildlife and maintains passable roads year-round.

DELIMBER — A mobile machine with flailing chains or knives used in the harvesting process to remove the limbs from trees.

DIAMETER AT BREAST HEIGHT (DBH) — The diameter of a tree measured in inches at breast height—a standard 4.5 feet above the ground.

DIAMETER-LIMIT CUTTING — A selection method in which all marketable trees above a specified diameter are harvested. Diameter-limit cutting can lead to long-term degradation of the stand.

DIRECT or BROADCAST SEEDING — (a) Sowing seed for broad coverage from the air or on the ground. (b) Seeding of forest stands, roadways, or specified plots for wildlife.

DRUM CHOPPING — A site preparation technique in which logging debris is leveled by a bulldozer pulling a large drum filled with water. Chopped areas are often burned to further reduce debris and control sprouting before seedlings are planted.

E

ECOLOGY — The science or study of the relationships between organisms and their environment.

ECOSYSTEM — A biological community of living organisms and nonliving components such as air, water and mineral soil that interact. An ecosystem can be of any size — e.g., log, field, pond, woodlot, or Earth's biosphere. *See ecosystem services.*

ECOSYSTEM SERVICES — Benefits people obtain from the goods and services produced by an ecosystem — e.g., water and air purification, nutrient recycling, recreation, biomass for fuel.

EDGE — The transition between two different types or ages of vegetation.

ENDANGERED or THREATENED SPECIES — A species is endangered when the total number of remaining members may not be sufficient to reproduce enough offspring to ensure survival of the species. A threatened species exhibits declining or dangerously low populations but still has enough members to maintain or increase numbers.

ENVIRONMENT — The interaction of climate, soil, topography, and other plants and animals in any given area. An organism's environment influences its form, behavior, and survival.

EROSION — The wearing away of land or soil by the action of wind, water, or ice.

EVAPOTRANSPIRATION — The evaporation of water from the soil and the transpiration of water from the plants that live in that soil. Approximately one-quarter of a forest's annual rainfall returns to the air through evapotranspiration.

EVEN-AGED MANAGEMENT — A forest management method in which all trees in an area are harvested at one time or in several cuttings over a short time to produce stands that are all the same age or nearly so. This management method is commonly applied to shade-intolerant conifers and hardwoods.

F

FELLER BUNCHER — A machine used in the harvesting process that can cut a tree, hold it, and move to the next tree to cut. After one or more trees are cut, the machine places the trees in a small pile to be moved to a landing.

FIREBREAK — Any nonflammable barrier used to slow or stop fires. Several types of firebreaks are mineral soil barriers; barriers of green, slow-burning vegetation; and mechanically cleared areas.

FLAT or STRAIGHT PLANTING — Planting trees directly into the ground without beds or, in some cases, without first moving logging debris.

FORAGE — Vegetation such as leaves, stems, buds, and some types of bark that can be eaten for food and energy.

FORB(S) — Any herb other than grass.

FOREST — An ecosystem dominated by extensive tree cover, frequently consisting of stands of trees that are often characterized based on species, age, and size class. Forests are often categorized based on their purpose — e.g., urban forest, industrial forest, non-industrial private forest.

FOREST CERTIFICATION — The means of conserving forests by promoting responsible forestry practices that address social, economic, and environmental considerations. Forests are evaluated according to an agreed upon set of standards and certified as being well managed by a qualified independent auditor (or certifier). Wood or wood products from those forests are then labeled so that consumers can identify them as being obtained from a sustainable forest. *See certify.*

FORESTLAND — Land that has a minimum stocking level of 10% of forest trees and is at least 1 acre in size and 120 feet in crown width. This includes land that will be naturally or artificially regenerated.

FOREST MANAGEMENT — (a) Proper care and control of wooded land to maintain health, vigor, product flow, and other values (soil condition, water quality, wildlife preservation, and beauty) to accomplish specific objectives. (b) The practical application of scientific, economic, and social principles to forest property.

FOREST MANAGEMENT PLAN — Written guidelines for current and future management practices recommended to meet an owner's objectives.

FOREST TYPE — Groups of tree species commonly growing in the same stand because their environmental requirements are similar. North Carolina examples include pine and mixed hardwood; cypress, tupelo, and black gum; and oak and hickory.

FORESTRY — The science, art, and practice of managing and using trees, forests, and their associated resources for human benefit.

FORWARDER — A machine, usually self-loading, used in the harvesting process for hauling a log completely off the ground from the stump to a landing.

FORWARDING — A harvesting function of hauling a log completely off the ground from the stump to a landing by a forwarder.

FUEL LOADING — A buildup of fuels, especially easily ignited, fast-burning fuels.

G

GIRDLING — A physical cutting or disruption of the cambial sap flow within a tree. Girdling by humans, animals, or insects can often kill a tree.

GRAPPLE SKIDDER — *See skidder.*

GREEN TREE RESERVOIR (GTR) — A wooded area that has been intentionally flooded to benefit migratory ducks and waterfowl. GTRs may be planted with a grain crop, such as

millet, the summer before the winter flooding. The GTR can be an effective, low-cost method of luring waterfowl into forested tracts.

GROUP SELECTION — (a) The removal of small groups of trees to regenerate shade-intolerant trees in the opening (usually at least $\frac{1}{4}$ acre). (b) A specific type of selective cutting.

H

HABITAT — (a) An area in which a specific plant or animal can naturally live, grow, and reproduce. (b) For wildlife, habitat is the combination of food, water, cover, and space.

HARDWOODS (DECIDUOUS TREES) — Trees with broad, flat leaves as opposed to coniferous or needled trees. Wood hardness varies among the hardwood species, and some are actually softer than some softwoods.

HIGH-GRADING — A harvesting technique that removes only the biggest and most valuable trees from a stand and provides high returns at the expense of future growth potential. Poor quality, shade-loving trees tend to dominate in these continually high-graded sites.

I

IFDA — Acronym that stand for “*Illinois Forestry Development Act*”. 1983 the Illinois General Assembly passed into law the Illinois Forestry Development Act (FDA) (525 ILCS 15). This Act created the Illinois Forestry Development Council, the Forestry Development Cost Share Program (Cost Share Program), and the Forestry Development Fund (Fund). The Act also amended the Timber Buyers License Act regarding the collection of a 4% harvest fee, and the property tax code to provide for a tax incentive for those landowners with approved forest management plans.

IMPROVEMENT CUT — An intermediate cut made to improve the form, quality, health, or wildlife potential of the remaining stand.

INCENTIVE — A reward for improving forest management. Incentives include reimbursement of some expenses but can also take the form of an abatement of property or income tax.

INTERNAL RATE OF RETURN — The interest rate at which the net present value of all the cash flows (both positive and negative) from an investment equal zero. It is used as a guideline for evaluating the profitability of an investment. *See net present value.*

J

J-ROOT or L-ROOT — An improperly planted seedling that takes a J-shaped configuration in the planting hole. Such seedlings often die prematurely, grow poorly, and are susceptible to windthrow.

K

KG AND PILE — A site preparation method in which stumps are pushed up, sheared off, or split apart by a specially designed blade mounted on a bulldozer. Debris is then piled or placed in long rows (windrows) so that an area can be bedded or flat planted.

KG BLADE — A bulldozer-mounted blade used in forestry and land-clearing operations. A single spike splits and shears stumps at their base.

L

LAND EXPECTATION VALUE (LEV) — The value of a bare tract of land that would be used for growing timber in perpetuity. The LEV is the net present value of all revenues and costs associated with growing the timber in perpetuity. *See net present value.*

LAND USE — The human use of land for economic, social, environmental, or other purposes. Land use is often associated with urban development.

LANDING — An area designated during harvesting to which logs or trees are brought from where they are cut from the stump to be loaded onto trucks for transporting to the mill.

LEGUMES — Plants that produce organic nitrogen from nitrogen gas in the air. These plants, which typically form seeds in pods, include soybeans, peas, alfalfa, lespedeza, and locust.

LIFE CYCLE ASSESSMENT (LCA) — A process that examines the total environmental impact of a product from extraction of the raw materials to make the product, through production and sale of the product, to the use and disposal of the product.

LOADER — A machine, used in the harvesting process, with a grapple or tongs and supporting structure designed to pick up logs or trees from a landing for final processing and piling or loading for transportation to the mill.

LOGGER — An individual who often works for a company harvesting trees to produce wood products. Also known as a lumberjack. Loggers stay current in their profession by being certified under programs such as master logger.

LOG RULE or LOG SCALE — A table based on a diagram or mathematical formula used to estimate volume or product yield from logs and trees. Of the Three log rules are used in the Midwest, Doyle is by far the most common scale. The Scribner and the International 1/4" Rule are used less frequently than the Doyle scale.

M

MARGINAL LAND — Land that does not consistently produce a profitable crop because of infertility, drought, or other physical limitations such as shallow soils.

MARKETING — The selling of timber or other forest resources. Successful sellers seek a satisfactory price through competition, skillful negotiation, knowledge of timber markets, and the aid of a competent broker or consultant.

MARKING — (a) The physical process of selecting trees to be cut or left during a harvest. (b) delineating a boundary. Marking is usually done by spraying a spot of bright paint on a prominent part of the tree.

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

MATURE TREE — A tree that has reached a desired size or age for its intended use. Size, age, or economic maturity varies depending on the species and intended use.

MBF — Abbreviation denoting 1,000 board feet. MBF is a typical unit of trade for dimension lumber and sawtimber stumps. (It takes 11 MBF of wood to build an average 1,900-square-foot house.)

MENSURATION or BIOMETRICS — (a) The measurement and calculation of volume, growth, and development of individual trees or stands and their timber products. (b) A measurement of forestlands.

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

MIXED STAND — A timber stand in which less than 80 percent of the trees in the main canopy are of a single species.

MULTIPLE USE — The management of land or forest for more than one purpose, such as wood production, water quality, wildlife, recreation, aesthetics, or clean air.

N

NATURAL STAND (NATURAL REGENERATION) — A stand of trees grown from natural seed fall or sprouting.

NAVAL STORES — Products such as pitch, tar, and turpentine that are distilled from resin of live trees, mostly pines.

NET PRESENT VALUE — A criteria used in evaluating an investment or project. It is the difference between the present values of costs and revenues. A positive net present value indicates present values of revenues exceed the present values of costs.

NON-TIMBER FOREST PRODUCTS — Any product derived from the forest that is not timber — e.g., medicinal herbs, resins, mushrooms, berries, ferns, cones.

NUTRIENTS — Elements necessary for growth and reproduction. Primary plant nutrients are nitrogen, phosphorus, and potassium.

O

ON THE STUMP — Standing, uncut timber.

ORIENTED-STRAND BOARD (OSB) — A structural engineered panel formed by adding glue and then compressing three to five layers of thin wood flakes (strands) that are oriented at right angles to each other.

P

PALLETS — A flat structure, often made of wood, and used to stack, store, protect, and transport goods in a stable fashion.

PELLETS — A form of biofuel made from compressed organic matter or biomass. Wood pellets are the most common type of pellet fuel and are generally made from compacted sawdust.

PERENNIAL — Plants that live or grow for more than one year. Some resprout from a root system or reseed themselves every year.

PERENNIAL WILDLIFE MIXTURE — A mixture of perennial plants that are beneficial to wildlife.

PEST — Any organism that is out of place or causes stress to a desired organism.

PESTICIDE — Any chemical used to kill or control pests.

PHOSPHATE — A chemical compound that aids root growth and is essential in energy transfer. It is commonly incorporated into beds as triple super phosphate (TSP) at time of planting.

PLANT or HABITAT DIVERSITY — A variety of food or cover for wildlife. Variation may occur at one point in time or over a period of time such as during the course of a season. Seasonal diversity of food and cover is often critical to the survival of a species.

PLANTATION — Planted pines or hardwoods, typically in an ordered configuration such as equally spaced rows.

POLES or POLETIMBER — Trees from 5 to 7 inches in diameter at breast height.

PREDATOR — An animal that preys on and devours other animals.

PREDATOR GUARD — A physical barrier used to keep one animal from eating another. Usually refers to protection devices on nest boxes.

PRESCRIBED or CONTROLLED BURN — The use of fire under specific environmental conditions to achieve forest management objectives. Used to reduce hazardous fuel levels, control unwanted vegetation, favor desired vegetation, and improve visibility and wildlife habitat.

PRESENT USE VALUATION — Property tax relief classification based on the land's productivity for agriculture, horticulture, or forestry production, rather than for market value. Can result in substantial tax savings in areas where land values are high. Some restrictions and penalties apply, including a 3-year rollback provision with interest. Consult your county tax supervisor for details.

PRESERVATION — An attempt to keep forests in an undisturbed state through the control of internal and external influences.

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

PURE STAND — A timber stand in which at least 75 percent of the trees in the main crown canopy are of a single species.

R

RAPTOR — A bird of prey such as an owl, hawk, osprey, or eagle.

REAL ESTATE INVESTMENT TRUSTS (REITs) — A company that often trades on major stock exchanges that owns, and often operates, income producing real estate, such as timberland, on behalf of private investors. REITs buy, manage, and sell real estate or real estate related assets — e.g., mortgages.

REFORESTATION — Reestablishing a forest by planting or seeding an area from which forest vegetation has been removed.

REGENERATION CUT — A cutting strategy in which old trees are removed while favorable environmental conditions are maintained for the establishment of a new stand of seedlings.

REPRODUCTION — (a) The process by which young trees grow to become the older trees of the future forest. (b) The process of forest replacement or renewal through natural sprouting or seeding or by the planting of seedlings or direct seeding.

RESIDUAL STAND — Trees left in a stand to grow until the next harvest. This term can refer to crop trees or cull trees.

RIPARIAN BUFFER — A vegetative zone next to a perennial or intermittent water body, which help shade and protect the water body from the impact of adjacent land uses.

RIPARIAN BUFFER RULES — A series of rules that set additional limits on forest harvesting activities within the riparian buffer zone to protect water quality. The rules are often specific to designated river basins or watersheds.

ROOT COLLAR — The transition zone between stem and root at the ground line of a tree or seedling.

ROTATION — The number of years required to establish and grow trees to a specified size, product, or condition of maturity. A pine rotation may range from as short as 20 years for pulpwood to more than 60 years for sawtimber.

S

SALE, LUMP SUM (BOUNDARY) — The sale of specified timber on a specified area. The volume may or may not be estimated and published. The buyer is responsible for determining correct volume. The seller guarantees ownership and boundaries.

SALE, UNIT — A timber sales arrangement in which the buyer pays for forest products removed in units (measured in cords, MBF, or units of weight). Determination of units removed from the area is verified by mill tally, scale tickets, and buyer's or seller's tally.

SALVAGE CUT — The harvesting of dead or damaged trees or of trees in danger of being killed by insects, disease, flooding, or other factors to save their economic value.

SAPLING — A small tree, usually between 2 and 4 inches diameter at breast height.

SAWLOG or SAWTIMBER — A log or tree that is large enough (usually 10 to 12 inches in diameter) to be sawed into lumber. Minimum log length is typically 8 feet.

SCARIFYING — For soil: The removal of the top litter layer of an area (usually in strips) for site preparation. For seed: The abrasion or weakening of the seed coat to encourage germination.

SEDIMENTATION — The deposition or settling of soil particles suspended in water.

SEED TREE CUT — A harvesting method in which a few scattered trees are left in the area to provide seed for a new forest stand. Selection of seed trees should be based upon growth rate, form, seeding ability, wind firmness, and future marketability. This harvesting method produces an even-aged forest.

SEED YEAR — A year in which a given species produces a large seed crop over a sizable area. Some species of trees produce seeds irregularly.

SEEDLING — (a) A tree, usually less than 2 inches diameter at breast height, that has grown from a seed rather than from a sprout. (b) A nursery-grown tree that has not been transplanted in the nursery.

SELECTIVE CUTTING — The periodic removal of individual trees or groups of trees to improve or regenerate a stand.

SHADE-INTOLERANT TREES — Trees that cannot thrive in the shade of larger trees.

SHEARING — Slicing or cutting trees or stumps at the ground line. Shearing may be done at harvest or with a KG blade during site preparation.

SHELTERWOOD CUT — Removing trees on the harvest area in a series of two or more cuttings so new seedlings can grow from the seed of older trees. This method produces an even-aged forest.

SILVICULTURE — The art, science, and practice of establishing, tending, and reproducing forest stands of desired characteristics. It is based on knowledge of species characteristics and environmental requirements.

SITE INDEX — A relative measure of forest site quality based on the height (in feet) of the dominant trees at a specific age (usually 25 or 50 years, depending on rotation length). Site index information helps estimate future returns and land productivity for timber and wildlife.

SITE PREPARATION — Preparing an area of land for planting, direct seeding, or natural reproduction by burning, chemical vegetation control, or by mechanical operations such as disking, bedding, scarifying, windrowing, or raking.

SKIDDER — A machine that is often hinged in the middle and used in the harvesting process to pull logs or trees from the stump to a landing. Two common forms of skidders used are (a) a cable skidder that uses a cable winch and chokers to assemble and hold a load of logs to skid, or (b) a grapple skidder that uses a bottom opening set of jaws to assemble and hold a load of logs to skid.

SKIDDING — A harvesting function of pulling a log or tree from the stump to a landing by a skidder.

SLASH — (a) Tree tops, branches, bark, or other residue left on the ground after logging or other forestry operations. (b) Tree debris left after a natural catastrophe.

SLASHING — (a) A harvesting function of cutting felled trees into shorter lengths; also known as bucking. (b) a cleaning practice used in plantations to cut back less tough competing vegetation with a light cutting tool or machine.

SOFTWOOD (CONIFER) — A tree belonging to the order Coniferales. Softwood trees are usually evergreen, bear cones, and have needles or scale like leaves. They include pine, spruces, firs, and cedars.

SOIL TEXTURE — The feel or composition of the soil (sand, silt, or clay) as determined by the size of the soil particles.

SOIL TYPE — Soils that are alike in all characteristics, including texture of the topsoil. Soil maps and information on site index, erodibility, and other limiting properties are available in a soil survey, obtainable from the Natural Resources Conservation Service.

SPECIES — A group of related organisms having common characteristics and capable of interbreeding. Loblolly and Virginia pine are common species that can be interbred.

STAND — An easily defined area of the forest that is relatively uniform in species composition or age and can be managed as a single unit.

STOCKING — A description of the number of trees, basal area, or volume per acre in a forest stand compared with a desired level for balanced health and growth. Most often used in comparative expressions, such as well-stocked, poorly stocked, or overstocked.

STREAMSIDE MANAGEMENT ZONE (SMZ) — An area adjacent to a stream in which vegetation is maintained or managed to protect water quality. The width depends on slope, but 50 feet is the normal minimum. Trees may be removed from SMZs as long as the stream bed is not disrupted and sufficient vegetation is left to protect water quality.

STUMPPAGE — The value or volume of a tree or group of trees as they stand uncut in the woods (on the stump).

SUCCESSION — The natural sequence of plant community replacement beginning with bare ground and resulting in a final, stable community in which a climax forest is reached. Foresters, wildlife biologists, and farmers constantly battle ecological succession to try to maintain a particular vegetative cover.

SUCCESSIONAL DISKING or MOWING — A wildlife-enhancement practice in which a disk harrow or rotary mower is used to knock down existing vegetation every 1 to 3 years to promote the regrowth of annuals, legumes, forbs, and perennials.

SUSTAINABLE FOREST MANAGEMENT (SUSTAINABLE FORESTRY) — The practice of forestry in a way, and at a rate, that maintains the forest's biodiversity, productivity, regeneration capacity, and its health in such a way that it fulfills, now and in the future, relevant ecological, economic, and social functions.

SUSTAINED YIELD — Management of forestland to produce a relatively constant amount of wood products, revenue, or wildlife.

T

THINNING — A tree removal practice that reduces tree density and competition between trees in a stand. Thinning concentrates growth on fewer, high-quality trees, provides periodic income, and generally enhances tree vigor. Heavy thinning can benefit wildlife through the increased growth of ground vegetation.

TIMBERLAND — Land covered with forest suitable for producing commercial timber. A common standard in the classification of timberland is that the land can produce a minimum of 20 cubic feet of industrial wood per acre per year.

TIMBER INVESTMENT MANAGEMENT ORGANIZATION (TIMO) — A management group that buys, manages, and sells forestland and timber on behalf of institutional clients — e.g., insurance companies, pension funds, and endowments.

TIMBER STAND IMPROVEMENT (TSI) — Improving the quality of a forest stand by removing or deadening undesirable species to achieve desired stocking and species composition. TSI practices include applying herbicides, burning, girdling, or cutting.

TOLERANT SPECIES — A species of tree that has the ability to grow in the shade of other trees and in competition with them.

TREE FARM — A privately owned forest or woodland in which timber crop production is a major management goal. Many tree farms are officially recognized by the American Tree Farm System, an organization sponsored by the American Forestry Council.

TREE SPACING — The distance between trees, which is most often regulated at the time of planting or during a harvest or thinning operation. Spacing, like stand density, affects understory vegetation, seed production, growth rate, and wildlife habitat.

U

UNDERSTORY — (a) The layer formed by the crowns of smaller trees in a forest. (b) The trees beneath the forest canopy.

W

WATER BAR — A diagonal ditch or hump in a trail that diverts surface water runoff to minimize soil erosion.

WATER CONTROL — Management of water (both surface and subsurface) to maintain plant growth, water quality, wildlife habitat, and fire control.

WILDLIFE — A broad term that includes non-domesticated vertebrates, especially mammals, birds, and fish.

WINDROW — A long, narrow row of vegetation, debris, and some soil created during site preparation and clearing operations.

WINDTHROW — Trees uprooted by excessive wind. Shallow-rooted trees are almost always affected.

WOODLAND — A forested area.

Y

YARDING — A harvesting function of moving logs or trees to a landing.