

Landowner 101-Forest Terminology

General Terms

- Environment- the interaction of air, sunlight, soil, topography and other plants and animals influencing an organism's form, behavior, and survival.
- Forest Certification-a means of protecting forests by promoting environmentally responsible forestry practices. Evaluated by independent auditor. Wood products may be labeled certified so consumers can identify them
- Incentive-a reward for improving forest management. Includes reimbursement of some expenses but may take the form of an abatement of property or income tax
- 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
- Preservation- practice of preserving natural resources in their current/natural state. (Ex: Dept Interior-National Parks).
- Conservation- practice of conserving and protecting natural resources but allowing for multiple use(s) while also preventing exploitation of the resources. (Ex: USDA-National Forests)
- Present Use Valuation- a tax relief based on the land's productivity for agriculture, forest products or coastal access rather than market value.
- Aspect- the compass direction (north, south, east or west) toward which a slope faces.
- Management Plan- a written document based on a landowner's objectives and the resources on the ground. It guides future activities to care for the land and accomplish landowner's objectives over the long term.
- Blazed Tree- a tree marked with an axe and painted to delineate a boundary line.
- Invasive- non-native plants and animals that cause economic, environmental, and health problems when introduced to an area.
- Deciduous- trees that lose their leaves annually. Ex: maples, ash, and larch.

- Evergreen- trees that retain their leaves year-round. Ex: white pine and spruce(s)
- Conifer- belong to the group of plants known as the gymnosperms. Cone bearing trees.
- Broadleaf- belong to the group of plants known as the angiosperms or flowering plants. Most of Maine's broadleaf trees are deciduous.
- Softwood- a general term referring to cone bearing trees, that have needles, and retain their foliage in the winter.
- Hardwood- a general term referring to deciduous trees with broad leaves and seeds enclosed in fruit.
- Site- The combination of biotic, climatic, topographic, and soil conditions of an area. It largely determines the character and productivity of a forest stand.
- Riparian Area- areas directly adjacent to waterbodies and wetlands. Very important for wildlife.

Harvesting & Equipment Terms

- Stumpage- the income landowners receive from selling timber. The value of standing trees in a forest.
- 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
- 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
- Separation Zone-a harvesting zone left between clearcuts so as not to violate Maine's clearcut law. Separation zones must be at least 250' wide and might need to equal the area of the clearcut, depending on category. They may be partially harvested.
- Shoreland Area- an area adjacent to a stream in which vegetation is maintained or managed to protect water quality. No more than 40% of trees may be removed in the first 75', and no openings may be created. In the 76'-250' zone, no more than 40% of trees may be removed but openings up to 14,000 ft² are allowed

- Skidder- Machine used to move cut timber or alter land features (create trails and yards using its blade). Skidders may have wheels or tracks and usually have a blade. They may also be outfitted with a grapple, cable, or an added attachment such as a masticating head.
- Forwarder- are a type of extraction equipment used to remove timber from the forest. Usually used with cut to length systems.
- Harvester- used to cut and process timber. They come with either wheels or tracks and a head that cuts, delimits, and bucks.
- Baler- a piece of equipment that compresses cut Christmas trees and bundles them in netting for easier shipping.
- Mulchers- used to grind up slash and other organic materials associated with a harvest. Usually on tracks.
- Masticating Heads- attachment for a skid steer that may be either a vertical or horizontal head. Vertical heads shoot chips allowing for greater light to reach the soil and less areas with a 'line' of mulch being the better option for grassy/highlight plant areas. Horizontal drums drag a line of mulched material behind them and may be an option for trail building.
- Feller Buncher- a machine used in the harvesting of timber with a single cutting head and either wheels or tracks. Is capable of holding more than one stem at a time. Feller bunchers usually have one of three types of heads-bunching heads, processing heads, and straight felling heads.
- Cut to Length System- uses harvester and forwarder. Harvester cuts and processed timber to a desired length and forwarder moves the processed timber.
- Low-Impact Timber Harvesting Method- any technique or combination of techniques that reduces the negative impact of timber harvesting on soil, water, residual trees, and wildlife habitat.

Measurement Terms

- **Diameter at Breast Height (DBH)**- diameter of a tree measured 4.5' above ground. This can vary depending on where the tree is located or irregularities in tree diameter
- **Basal Area (BA)**-the cross-sectional area of a trunk at DBH OR the cross-sectional area of all stems expressed per unit of land area (ft²/acre)
 $BA \text{ (sq ft)} = (\pi / (4 * 144)) * DBH^2$ where $\pi = 3.14$

$$= 0.005454 * DBH^2$$

0.005454 is called the “foresters constant” and converts measured inches into square feet.

A 14” diameter tree equals about 1 sq. ft. BA

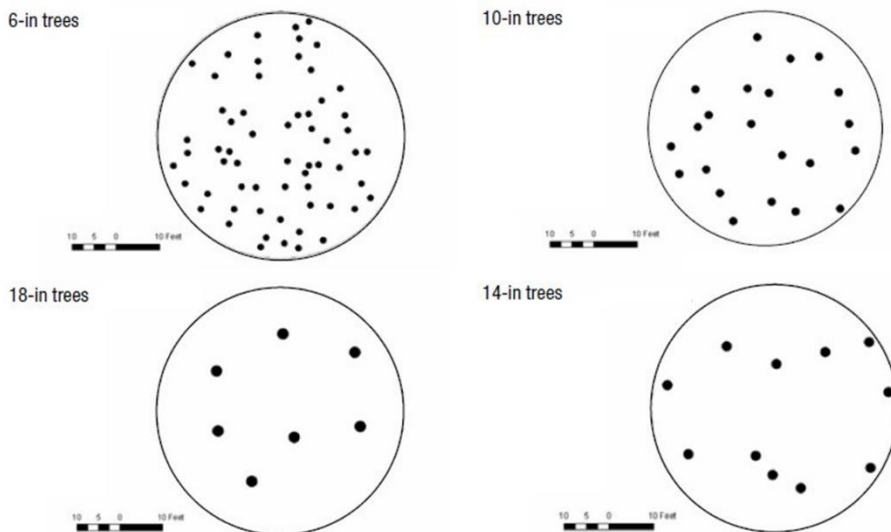
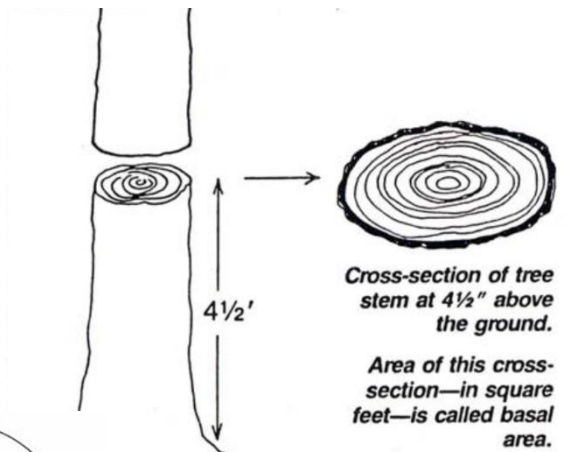
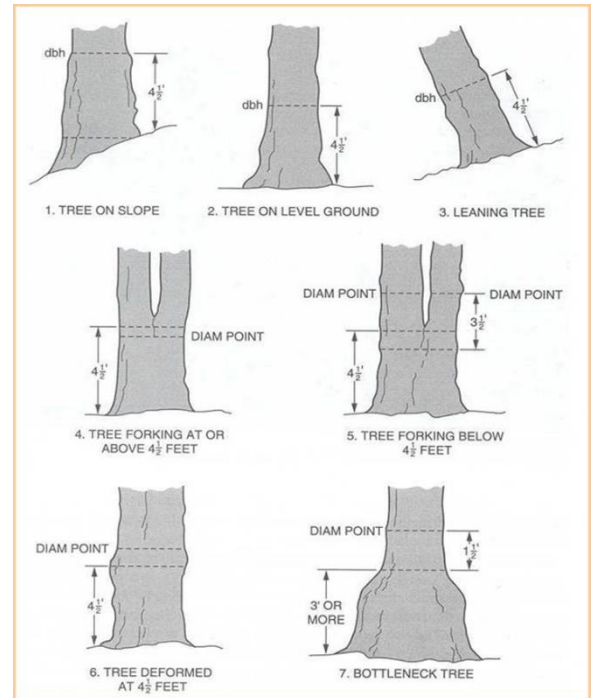
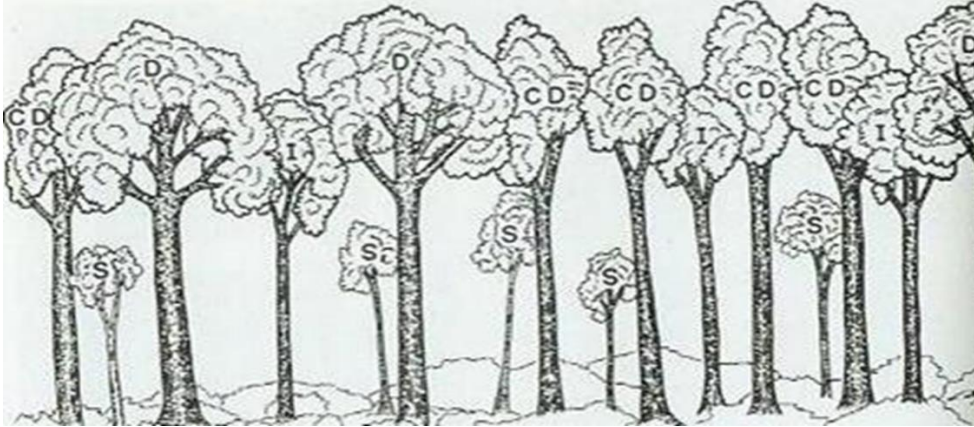


Figure 2. Representation of a 1/5-acre plot and the number of trees at 6, 10, 14, and 18 inches DBH that are needed to make 60 square feet of basal area per acre. (Graphic courtesy John Gilbert, Longleaf Pine Stand Dynamics Lab, School of Forestry and Wildlife Sciences, Auburn University)

- Cord-stack of wood 4'x4'x8', containing about 85 ft³ of wood, with the rest being air space. It is the legal measure of fuelwood volume in Maine
- MBF-1000 board feet, used in measuring dimension lumber. It takes about 11 MBF of wood to build an average 1,900 ft² house. Most wood in Maine is now sold on the basis of weight rather than cords or MBF

Tree Sizes & Strata

- Seedling- a tree less than 3' tall
- Sapling- a small tree between 1" and 4" in diameter
- Pole- medium sized trees between 4" and 10" diameter
- Pulp-trees larger than 4" that are either poor quality or have not yet reached sawlog size
- Sawlog- tree of sufficient size (generally >8" for softwoods and >10" for hardwoods) to be processed economically on a sawmill
- Mature Tree- a tree that has reached the desired size or age for its intended use. Economic maturity varies depending on species and use
- Canopy- the more or less continuous cover formed by tree crowns in a forest
- 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.
- Dominant Trees- larger than average trees with broad, well-developed crowns, that receive direct sunlight from all sides and above
- Codominant Trees-average to fairly large trees with medium-sized crowns that form the forest canopy. They 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. They 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



- Succession- replacement of one plant community with another over time.
- Shade tolerance-a species ability to compete for survival in shade conditions. Ex: shade-tolerant or shade-intolerant
- Pioneer species- (usually) the first plants to occupy a site after a disturbance
- Understory- the lower layers of vegetation in the forest (1-6' high)
- Midstory- the layer of vegetation in a forest that consists of those trees whose height is in between the heights of the smallest and tallest trees. (6-30' high)
- Overstory- the part of the forest canopy formed by the crowns of the largest trees. The uppermost canopy layer (30'+ high)

General Maine Cover Types

- Forest Cover Type- an association of tree species that have similar ecological requirements.
- Aspen-Birch Cover Type- wooded area composed of quaking aspen and paper birch. Both are pioneer species.
- Northern Hardwood Cover Type- made up mostly of deciduous trees/hardwoods. Yellow birch, sugar maple, and beech are common in this cover type.
- Pine-Oak Cover Type- common to the southern part of the state, this cover type is primarily white pine and red oak (but may also include red pine and other oaks).
- Spruce-Fire Cover Type- primarily consists of red spruce and balsam fir. It is the most common cover type in northern and eastern Maine.

Basic Silviculture Terms

- Silviculture- the art and science of controlling forest vegetation for desired outcomes. Desired outcomes could include: cutting your own firewood, obtaining building materials, increasing future value of the timber, maintaining/encouraging certain types of wildlife habitat or plant communities, creating particular visual or scenic qualities, etc. Silviculture is geared toward managing the forest for the future, not just getting what you need now.
- Stand- a group of forest trees of sufficiently uniform species, age, and condition to be considered a homogenous unit for management purposes.
- Pure Stand- a stand comprised almost entirely of one tree species. They can occur naturally, or as a result of thinning or planting. Pure stands of red pine, white pine, hemlock, and beech are common in some parts of the state.
- Uneven-Aged- a forested area with trees of three or more distinct age/size classes.
- Even-Aged- a stand in which most of the trees originated at roughly the same time. Even-aged stands can result from clearcutting, planting, catastrophic wildfires, or field abandonment.
- Monoculture- forest stands composed of one species and often established by planting.
- Disturbance-a natural or man-made event that causes changes in the forest cover. Common disturbances in New England include: clearing for agriculture, windstorms, ice storms, fires, floods, logging, mining, and development.
- Gap- a canopy opening generally less than two acres in size.
- Open Woods- forested areas with numerous openings in the canopy.
- Edge- boundary between two ecological communities. Ex: transitional zone from field to a forest. Edges usually provide valuable habitat for certain wildlife species
- Thinning – a forestry treatment in which some trees are cut or removed from a stand to provide more room for existing/residual trees to grow. This treatment creates space within the current forest, to be used by *existing* trees. (Ex: crop tree release & other intermediate cuts)

- Regeneration – a forestry treatment in which larger openings are created. This type of treatment creates space at the forest floor for *new* seedlings/sprouts
- Crop Tree- trees favored by the landowner to enhance a stand's future value

Soil Terms

- Mineral Soil- the non-organic component of soil composed of sand, silt, and clay.
- Top Soil (A Horizon)- a nutrient rich soil layer below the O Horizon and above the B Horizon.
- Nutrients-elements necessary for growth & reproduction, including nitrogen, phosphorus, and potassium
- Soil Texture-the feel or composition of the soil as determined by the size of the soil particles (sand, silt or clay)
- Soil Type- soils that are alike in all characteristics, including topsoil texture. Soil maps and information on site index, erodibility and other properties are available from county Soil Conservation offices
- Loam- soil with a fairly even ratio of sand, silt, and clay mixed with organic matter. Preferred soil type for many agricultural practices.
- Leaf Litter- Decaying wood and leaves on the forest floor. Home to many insects and microscopic organisms that recycle rotting materials into nutrient rich soils.
- Windthrow-trees uprooted by excessive wind, usually shallow rooted
- Soil Map- a map that depicts the different kinds of soils in an area. (can find on WebSoil Survey)

Forest Wildlife Terms

- Cover- protected places where animals can feel safe. Ex: red fox den in a rocky hillside or a porcupine in an old stonewall.
- Habitat- the food, water, cover, and space required by wildlife.
- Space- the entire area that an animal requires to find food, water, and cover. Space needs vary from one species to the next and can also vary seasonally.
- Forage-vegetation such as leaves, stems, buds, and some types of bark that can be eaten for food and energy

- Forest Floor- the home to small woodland flowers, and bushes, tree seedlings, small mammals, ground nesting birds, insects, amphibians, and many other kinds of life.
- Mast Trees/Shrubs- woody plants that produce fruits, nuts, or seeds eaten by wildlife.
- Snag- dead standing trees. Provide food and habitat for wildlife.
- Vernal Pool- an ephemeral body of water that fills in spring and holds water for at least 10 days. The dries up in the fall. Does not contain fish. They are extremely important for a variety of amphibians, reptiles, and other wildlife.
- Edge- boundary between two ecological communities. Ex: transitional zone from field to a forest. Edges usually provide valuable habitat for certain wildlife species

Urban/Community Forestry Terms

- Arboriculture- The science and art of caring for trees, shrubs, and other woody plants in landscape settings.
- Arborist- a licensed prof who works with clients to assess the health and safety of shade and ornamental trees
- Branch collar-the swollen area of a trunk tissue that forms around the base of a branch. (Must be careful not to remove during pruning practices).
- Basal Flare - The rapid increase in diameter that occurs at the confluence of trunk and root crown, associated with both stem and root tissue. (Must be careful not to bury when planting).
- Pruning- selectively removing branches from a plant/tree to encourage proper health, form, or attachment, and to protect structures or people.
- Topping- harmful pruning practice where the vertical stem and primary upper branches on larger trees are cut back to stub.
- Rain Garden- low-laying areas landscaped with perennial flowers and native vegetation to soak up water and manage storm runoff.
- Pollinator Garden- area with plants that encourage pollinators by providing nectar or pollen for a variety of species. (UMaine Extension, Pollinator Friendly Garden Certification also Waldo, Knox-Lincoln SWCD, Conservation Landscape Certification).

