

# FACT SHEET

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## Timber & Timber Harvesting in West Virginia

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### Timber Marking Before a Sale?

Timber marking is evaluating each tree in the stand before harvest and marking those to be cut with paint. The unmarked trees form the residual stand that will grow into future harvests.

Timber harvesting is the most demanding and at the same time one of the most satisfying jobs in all of forestry. A forester calls on all of his knowledge in marking timber, depending as it does on accurate species identification, knowledge of the biological (silvical) characteristics of each species, the stocking level of the stand by species and sizes, tree quality grades, characteristics of individual tree vigor, general stand health, commercial values of species, wildlife habitat necessities, riparian or streamside area sensitivity, tree directional felling, log grades, road layout and general logging practices, among others.

Before professional marking can begin, the tract must be cruised to ascertain volumes and basal areas and thoroughly scouted to locate seeps, ponds, wildlife shelters, and any other sensitive concerns, such as rare or endangered species. When possible, it's best to mark landings and skid trails before marking the harvest trees.

Once the best structure for the stand is professionally decided (how many trees of each size to be left), the marking can begin. The marking forester makes the best possible decision based upon current knowledge. Each tree to be removed is evaluated economically, environmentally and biologically before the paint is applied. For example, a small tree is not necessarily a young tree and genetic dwarfs should be removed. If well done, timber marking shapes stand structure, maintains stand health, salvages trees that may die, achieves species composition, selects crop trees, and removes all judged as having a poor chance of surviving until the next harvest.

Each selected tree is marked at about eye level, either with a ring around the tree or with two or three dots on different sides. A butt mark is also placed on the south side of the tree, close to the ground and in a seam if possible. This serves as a check on trees cut. The diameter (dbh), merchantable height, species and grade of each tree is recorded for use in preparing a sale prospectus and/or logging contractor contract. The marking and cruise statistics are both retained as the basis for future management decisions.

In marking, the forester also identifies potential hazard trees and culls, including trees that can not be cut safely, i. e., on a cliff, above a highway or leaning into a transmission line. Trees are also marked to avoid damage to the residual stand. If a tree can not be felled without hitting and ruining another good tree, both should be cut or if one is not of economic size both can be saved for a future harvest. The optimal harvest is when the rate of growth of the trees and the land equals the discount (rate of return) rate.

The forester marking the stand also continuously evaluates the reproductive capacity of the stand and the non-consumptive values such as outdoor recreation, wildlife habitat and aesthetics. He understands that understory regeneration is controlled by crown cover, that heavy shade reduces root growth and that it may take three or four cycles to get a tract to the desired regulated condition.

Timber is marked as a way of carrying out the management plan in all situations except clearcutting where it is not necessary. It is also the only way of closely estimating what you are selling because the cruise, usually only good to plus or minus five or six, or perhaps even ten percent, is much more inaccurate than is the 100% measurement that comes from marking. Thus, it is important that a representative of the landowner do the marking because the first duty is to carry out the prescriptions enumerated in the management plan to insure sustainable forestry.

Marking to or cutting to a diameter limit is simply an economic cut designed to maximize the current harvest. In such instances, small trees that should be removed because they are poor risks for future harvests seldom are. In addition, marginal cull trees or trees not selling well are often left standing. As an example, the large, hollow beech currently so prevalent on some properties is a result of beech not being economically valuable at the time of the last harvest; so it was left in the woods. The hollow condition probably started with a fire-caused or mechanical wound.

Tree marking, when correctly done, is one of the most specialized and demanding jobs in forestry. It is also one of the most important.

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