**2008 National FFA Forestry CDE**

Forest Management Evaluation - Timber Stand Improvements (TSI) and/or Thinning Practicum

Mr. Walker has a wooded property that he his managing primarily for high quality hardwood timber production. His secondary objective is to improve the white-tailed deer hunting on the property.

The stand in question is currently overstocked. As Mr. Walker’s forester, you need to determine whether the marked trees should be:

- harvested (Harvest – utilize the tree)

- left to grow (Leave – the tree should remain for good reason)

- deadened (Deaden – Undesirable trees, not merchantable or beneficial to wildlife, should be deadened or cut down and left in the woods)

Merchantable heights in this region are estimated to the upper point on a tree where it becomes 10 inches in diameter, OR, where a major fork in a tree stem occurs, OR, where a limb or cluster of limbs have a combined diameter equal to ½ of the diameter of the tree at that point.

These upper limit rules are called “stoppers”. If there is at least one eightfoot log above a fork without a “stopper”, continue measuring the main fork above the first stopper until the next stopper. Merchantable heights should be measured in 16 foot logs, ½ logs (8 foot logs) are acceptable.

 The minimum diameter at breast height (dbh) of merchantable trees is 18 inches. Any trees with a dbh less than 18 inches cannot be harvested.

**Markets Available**

 The markets available in this region include hardwood veneer and saw logs. There are also markets for lower quality pallet and crate lumber. There is no pine or pulpwood market in this area.

 Black walnut and white oak have the have the highest timber value. Red oak, maple, ash, hickory and yellow poplar have medium timber value. Elm, cottonwood, white pine and sycamore have little to no timber value.

**Wildlife considerations**

 Tree species that produce hard mast (nuts) are very important to white-tailed deer and other wildlife. The nuts (acorns, hickory nuts, walnuts) provide an excellent food source for many animals in the forest.

**Management plan**

 The final goal of the management plan for this stand is to improve timber production and increase the quality of the wildlife habitat.

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| --- | --- | --- |
| Tree Number  | Species | Category |
| 1 | Black Walnut | Harvest |
| 2 | Maple | Deaden |
| 3 | Black Walnut | Harvest |
| 4 | Maple | Leave |
| 5 | Maple | Leave |
| 6 | Maple | Deaden |
| 7 | Yellow-Poplar | Harvest |
| 8 | Hickory | Leave |
| 9 | Yellow-Poplar | Harvest |
| 10 | Maple | Leave |
| 11 | Black Walnut | Leave |
| 12 | Sycamore | Harvest |
| 13 | Maple | Leave |
| 14 | Maple | Deaden |
| 15 | Maple | Deaden |
| 16 | Maple | Harvest |
| 17 | Maple | Deaden |
| 18 | Ash | Leave |
| 19 | Elm | Deaden |
| 20 | Maple | Leave |

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**KEY**