

# *PA- Supplemental Guidance*

## 2011-1

### **ANM 15- High Level of Forest Stand Improvement for Wildlife**

#### Additional Guidance:

##### **Creation and Retention of Snags & Den Trees:**

Snags consist of **a tree with less than 10% live crown or standing dead trees** which provide habitat for a variety of forest wildlife, most commonly as nesting and roosting sites for cavity nesting birds. Snags are also an important food source, as a lot of wildlife depends on the insects which live and use dead or dying trees. Snags serve as one source of recruitment for eventual downed wood. **Maintaining a viable snag component to forest stands requires landowners to implement methods to replace snags as they deteriorate and fall over in time.**

##### Snag Management Guidelines:

- **Snags will be managed to achieve the density of 6 snags or den trees/acre. Snags must be a minimum 10" DBH or larger.**
- Distribution--snags at the recommended density levels will be represented across eligible forestland. Snags will be managed across forested landscapes, and can be expressed on all aspects and slope positions.
- Larger diameter snags (> 20" DBH) provide optimum wildlife habitat and longer snag persistence than smaller diameter snags.
- Snag replacement trees can come from standing cull or pulp trees left on site, or from trees that are nearly dead, spike top, damaged, in advanced decay, or poorly formed trees. Create snags by girdling live trees or otherwise inflicting damage which will lead to mortality. Living trees that are presently used by wildlife are also preferred as replacement candidates.
- Snag safety issues will be identified and addressed where snags pose a threat to life and property.
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##### **Creation and Retention of Den Cavity Trees**

Den trees are **live trees with cavities** that typically form in deciduous trees and coniferous trees. Den trees can be included in the count of 6 snags/den trees/acre to meet the qualifications for this enhancement. Tree size will be a minimum of 10" DBH.

How to Inventory Snags & Den trees:

Sampling can be difficult due to the relatively small target density of snags. Fixed-radius plots of 1 acre will be used to inventory snags (a 1 acre circular plot has a radius of 118 feet). Plots will be randomly pre-located and marked on a field map prior to making a field visit. Count the number of eligible snags within the plot.

. **\*\*\*It is recommended that you mark these plots as you will need to inventory each year to see if any replacement snags need to be made to maintain Snag and Course Woody Debris (CWD) requirement for CSP.**

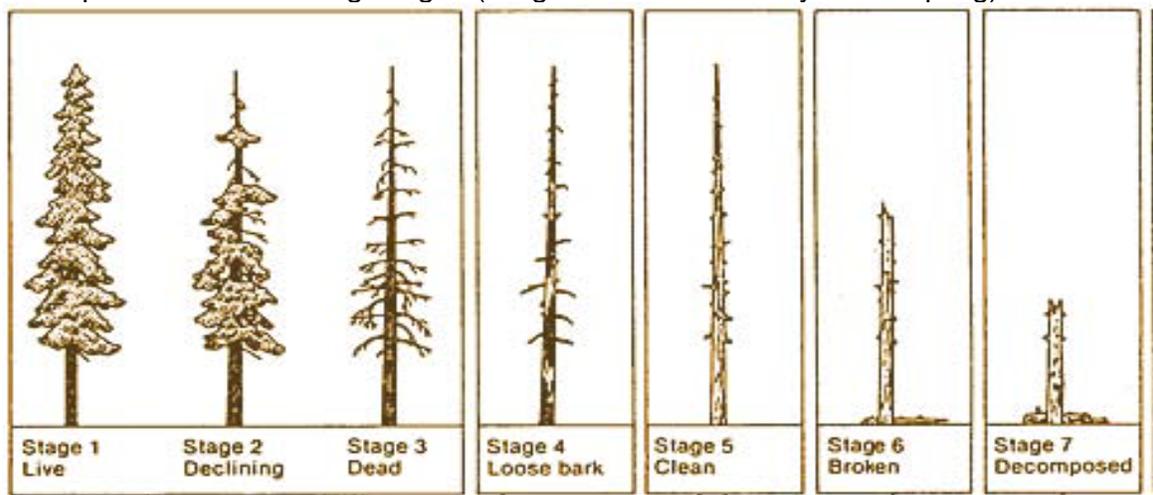
Please consult with PA Bureau of Forestry for species to target, if snag creation is needed.

**Tables on next page!**

**TABLE 1: Number of Sample Plots per Stand Size:**

Size of Forest Stand	Number of 1 Acre fixed plots needed:
0-25 acres	2
25-100 acres	4
100-200 acres	5
200+ acres	5+ one additional plot per each 100 additional acres

Examples of Various Snag Stages (Stage 2-7 can count in your sampling)



**Stage 2 must be 10% or less live crown (severe decline) to be counted as a snag.**

Hollow snags are unique structural features and should be noted as such. All hollow snags should be retained because of their value as nest and roost sites for pileated woodpeckers, and flickers. Hollow snags also are used as rest sites for flying squirrels weasels, other small mammals, reptiles and amphibians. Evidence that large-diameter trees have hollow interiors includes:

- A broken bole with a bayonet top formed over the break
- More than one pileated woodpecker entrance hole
- Fruiting bodies of Indian paint fungus
- An old injury or bend along the bole where a new leader formed a new trunk in many years ago

*Maser et al-1979-Snag stage diagram 1-9; General technical Report PNW-GTR-990, Marion 1997, US Forest Service*

### **Creation and Retention of Downed Wood:**

Downed wood is dead woody materials on the ground in various stages of decay. It is often referred to as “Coarse Woody Debris” (CWD).

**Structural class 1** for logs represents those trees that have just fallen over, retain their bark and branches, have little decay in the wood, and are resting largely above the ground . These logs are used primarily as cover by American martens, squirrels, black bears, deer, and other mammals.

**Structural class 2** represents those logs that are in contact with the ground, have lost some of their bark and branches, and have some decay in the wood. These logs are used extensively by pileated woodpeckers and black bears for foraging on carpenter ants and by American martens and small mammals for cover. These logs are also important for reptiles and amphibians for cover and a food source.

**Structural class 3** represents those logs that have begun decomposing into the forest floor, are not intact, are extensively decayed, and lack both limbs and bark. These logs are used for foraging by pileated woodpeckers and black bears, by small mammals for shelter and cone stashes and by amphibians and reptiles for cover.

Logs that are hollow are unique structural features and should be noted as such in inventories. All hollow logs should be retained because of their value as den sites for American martens, hibernation sites for black bears, and shelter for small mammals.

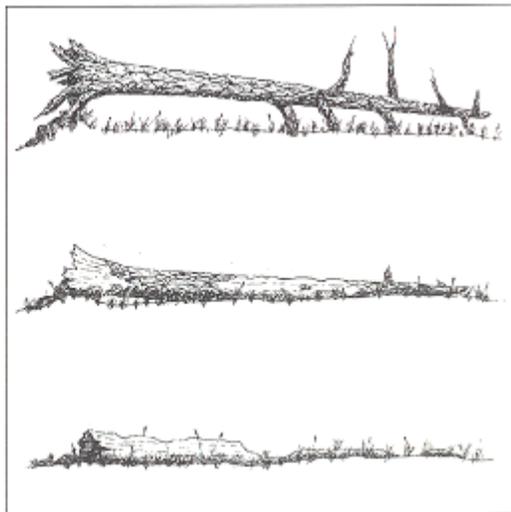


Figure 63—Three structural classes of logs.

*General technical Report PNW-GTR-990, Marion 1997, US Forest Service*

### **Course Woody Debris Management Guidelines:**

#### **How to Inventory Downed Wood:**

Directions: Survey the same 1 acre plot where snags and cavity trees are being counted. All of the following size classes and numbers of downed trees, as a minimum, must be created OR maintained to get credit for this enhancement.

15 trees, 4-10" DBH  
6 trees , 10-12" DBH  
4 trees , 12-14" DBH  
2 trees greater than 14" DBH

**What to do after you do you complete sampling:**

If you meet NRCS requirements, continue to maintain the habitat and make sure during any timber cutting, thinning, or any other manmade disturbance snags, den trees, and CWD are maintained at current level. Document any changes with pictures and notes. Each year for the life of the CSP contract reevaluate your sample plots and compare your snag or CWD numbers to see if snags or CWD need to be created to maintain CSP requirements for a viable snag and CWD component of your forest.

If you do not meet NRCS requirements at the time of 1<sup>st</sup> sampling, please consult with NRCS on the numbers of snags or CWD that need to be created to meet CSP requirements. We will work with you and your PA Bureau of Forestry Service Forester to come up with an appropriate plan to meet this enhancement.

Forestland – System/acre

Not compatible with ANM20, PLT01, \*\*ANM29, \*\*ANM30

Additional Guidance for 2011-1

\*\*Additional compatibility issue