



## Forest Inventory Tools

### Recommended tools for forest landowners and managers

#### Before you begin...

Managing forestland is a big job. Understanding the health of one's overall forest means knowing something about individual trees and how they are impacted by the conditions they grow in. Taking data on individual trees can be extrapolated out to give an assessment of the health of the stand. Is it too crowded? Is it fire safe? How will it be affected by drought?

Foresters use a forest inventory system to quantify what is on the landscape. By conducting an inventory, landowners and managers can perform simple measurements to gather relevant information about the forest that can then provide a quantitative snapshot of the forest and answer some of these questions.

It is important to note, if you are a landowner or manager who will be applying for state or federal cost-share funding, a Registered Professional Forester (RPF) is required to conduct an inventory of your forest.

#### Six common inventory tools

(Pricing guide: \$ = \$100 or under, \$\$ = \$101 to \$150, \$\$\$ = \$151 or more)

##### Diameter Tape (D-tape) \$



Used to measure the diameter of a tree at breast height (DBH = 4.5 feet up trunk from the ground) this tape has inches and feet on one side (which measures circumference), and on the other side measurements have been divided by pi to give you diameter.

#### Additional Resources

1. There are many brick and mortar shops, as well as online retailers that specialize in forestry inventory tools. Including (not an official endorsement):
  - a. Forestry Suppliers  
<https://www.forestry-suppliers.com>
  - b. Pacforest Supply Company  
<https://www.pacforest.com>
  - c. Sheldon Hill Arborist & Forestry Supply  
<https://shforestrysupplies.com>
2. The Forest Stewardship Education Program has a 4-part Forest Inventory video series that details how to use forest inventory tools and how to lay out an inventory plot. [View here.](#)

##### Spencer Logger's Tape \$

Ranging from 50, 75, or 100 feet long, Spencer Logger's tapes are used to measure the distance from trees when calculating tree height, and for laying out inventory plots and measuring the plot radius. Some Logger tapes are calibrated on one side to measure tree diameter (circumference/Pi).



##### Biltmore Stick (CA Tree Stick) \$ - \$\$

Used to measure the diameter and height of a tree. Less accurate than other inventory tools, but is less work, and appropriate for private



forest landowners to use for general measurements. Held 25 inches from ones eye when reading scales.

### **Clinometer \$\$ - \$\$\$**

The clinometer uses trigonometry to measure the height of a tree while standing at a known distance from the tree. The instrument has scales that read tree height at 66 feet (1 chain) 100 feet.



### **Fiberglass Measuring Tape with Reel \$**

Useful for laying out inventory plots and measuring radius of a plot. Can be used to measure distance from trees and between plots when more accuracy is needed.



### **Compass \$**

In addition to helping you navigate through the forest, a compass helps you lay out inventory plots along a consistent heading and identifies North when starting your plot inventory circle.



### **Laser Range Finder \$\$\$**

The laser range finder uses a laser beam to determine the distance to a tree and can be used to measure the height of the tree when pointed at the base and the top of the tree. It can be used to measure height at any distance from the tree, saving a lot of time and effort when doing inventory.



### **Increment borer \$\$\$**

Used to extract a core of tree tissue to identify the tree's age or measure the annual growth of rings.

## **What do I carry all these tools in?**

### **Cruise Vest \$\$**

Multi-pocket, lightweight vest that is highly visible and water-repellent.

### **Other items to carry in your vest:**

- A map of the landscape you are inventorying, or an app that can help you track your GPS location such as Avenza or OnX
- 6" English/metric ruler
- Pens/pencils, Paper/inventory sheet
- Flagging tape, tree tags
- Bug repellent and sunscreen
- Water and snacks!