

Chapter 2—The Ax in the Forest Service

At one time, the Forest Service required every vehicle entering the forest to have a shovel, an ax, and a bucket (figure 2-1). Forest Service policy no longer requires these tools, but they still play a valuable role. Many field-going personnel and forest visitors still carry these vital tools.

Relevance of the Ax in the Forest Service Today

The ax is a primary tool for accomplishing the Forest Service mission. It is especially useful for those going into designated wilderness areas where the law (Wilderness Act of 1964) prohibits chain saws and other motorized equipment.

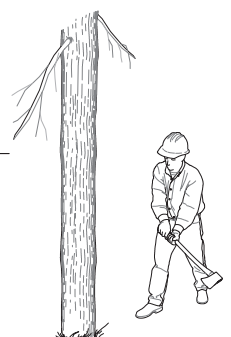
Typical ax users include:

- Crews maintaining our Nation's forest trail systems
- Wilderness rangers, packers, stock users, and others traveling into our national forests
- Historic preservation teams restoring log cabins and fire lookout towers
- Firefighters using the pulaski (an ax/hoe combination tool) as a primary wildland firefighting tool

Whether people use the ax for felling, limbing and bucking (cutting into sections) trees, splitting firewood, restoring historic cabins, splitting fence rails, clearing trails, or fighting fires, this multipurpose tool is invaluable for a wide variety of tasks. In many cases, it is the only tool for the job. For the average forest visitor, the ax is a cost-effective tool that is easy to transport. Removing a downed tree across a forest road with a chain saw is easy, but chain saws can be expensive and they require gas and oil. Chain saws and fuel can be hazardous to transport in an enclosed vehicle, while an ax is easy to transport and requires no fuel. The ax takes up little room and, with training, is a safe and effective tool. Do not overlook or rule out the ax as part of your vehicle's standard equipment. Although people do not use the ax as often as they once did, it is still as useful a tool as it was in the past.



Figure 2-1—A vintage “Shovel, Ax, and Bucket” sign.



Prelude to Safety

Read this section; it is short, it is important, and it could save your life.

Safety is a constant theme throughout this manual. This section contains a few key points to always keep in mind.

Before you start to chop, honestly assess your personal health. Chopping is an aerobic activity that can quickly raise your heart rate. Be honest with yourself about your cardiovascular health and your ability to do strenuous ax work.

Along with your physical health, there are natural factors to consider. Whether felling trees or bucking downed logs, chopping involves moving wood. For your safety and the safety of those around you, you must understand that for every action there is an equal but opposite reaction. The effects of gravity are easy for most people to understand, but other pertinent forces, such as tree lean, tension, compression, and a variety of binds, are not as easy to identify. If

you correctly identify the forces in the log or tree you cut, you may be able to mitigate these forces by the type of cut you make or the placement of the cut. If you do these things correctly, you can move the log or tree in the direction that you want. Learn the correct way to do the job so that you do not get hurt.

Your experience, technique, style, and the condition of your ax are irrelevant if you do not understand the mechanics of what you do. If you look at a complex cutting scenario and cannot envision the aftereffects of each cut, it is best to walk away and seek the help of someone with more experience. Unfortunately, good experience is often the result of bad experience. Learn from somebody else's mistakes, not from your own. Felling trees can be extremely dangerous and bucking logs can be even more dangerous, especially if a log intertwines with other downed logs on a hillside, creating multiple binds.

Obtain training and take it seriously; your life depends on it. The laws of physics are nonnegotiable.

