Brush Hook

The brush hook is an excellent tool for cutting brush and small trees on wildland fires. It is important to you as a firefighter to know the capabilities of this tool and the safe method in which to use this dangerous tool.

Brush Hook Types

- Strap Brush Hook
- Blood Brush Hook

Brush Hook Parts

- Handle
  - Butt
  - Shoulder
- Head
  - Cutting edge
    - Heel
    - Throat
    - Point or toe
- Eye
- Strap and Bolts
- Rivets

Basic Brush Hook Use

- Used with a Downward Pulling Motion or a Low Horizontal Swing with a Sharp Hooking Motion at the end of each stroke.
- Cut at 45° angles.
- Used to Cut Heavy Brush and Small trees.

The brush hook, as with all wildland tools, should be swung with a motion across the body and not into the legs to prevent injury.

Larger diameter fuels should be cut with a chainsaw, ax or the cutting blade of the Pulaski.
Pulaski

The Pulaski is one of the most versatile wildland fire suppression hand tools. It can be used for cutting, trenching, digging, grubbing. The cutting edge of the Pulaski is used to cut small limbs and trees. When cutting large diameter material, the preferred method is to create a pie cut rather than attempt to cut completely through with a single stroke. The Pulaski cutting edge is sharpened to a fine edge and can cause serious injuries if used improperly. Safety when swinging the tool is a primary consideration. The grubbing edge is used to remove roots and stobs that are in the area of the hand line. The cutting edge is not swung into the ground, as the sharpened edge must be preserved for difficult cutting jobs. Other uses of the Pulaski include digging, loosening dirt, breaking up grass clumps, and creating trenches to catch rolling material.

Pulaski Parts

- Handle
  - Shoulder
  - Butt
- Head
- Cutting edge
- Grubbing edge
- Eye

— Wedges
  - Wood
  - Steel

Basic Pulaski Uses

— Chopping Brush
— Grubbing
— Trenching and Digging

When used as a cutting tool, the tool is swung into the limb at a 45° angle and not into the body, especially the legs. Foot position is critical as leg and foot injuries are common when the tool is swung improperly. The tool should not be used above shoulder height when limbing trees.
**McLeod**

The McLeod has a metal head designed to provide the user with the maximum mechanical advantage during scraping, grubbing, light cutting and digging operations. The tool may be used...
to scrape grass, leaves, and medium vegetation down to mineral soil. Whether on emergency incidents or in routine station maintenance assignments, the tool is of less value if it is not properly maintained and cared for.

**McLeod Parts**

- Wooden Handle
- Metal Shank
- Metal Head
  - Hoe on one side
  - Rake on other side
- Rivet

**Basic McLeod Uses**

- **Scraping**
  - Obtain secure footing
  - Extend head of McLeod outward from the body to full arm’s length with scraping edge down.
  - Pull head of the tool back toward the feet of the user while exerting sufficient downward force to remove the vegetation.

- **Cutting**
  - The McLeod may be utilized to cut and clear Light Brush. (Less Than 1" in Diameter)

  - Obtain secure footing with feet approximately shoulder width apart.
  - With the cutting edge down, locate the striking point on the target limb.
  - Take a practice swing to insure an unobstructed striking arc is available.
  - Repeat the swing in short sharp downward motions until the limb is removed.
    - The highest point in the downward arc should be approximately eye level.
  - **Raking** - The McLeod rake edge may be used to remove cut material or to remove leaves and duff.
    - Obtain secure footing.
    - Extend head of McLeod outward from the body to full arm’s length rake side down.
    - Pull head of the tool back toward the feet of the user while exerting sufficient downward force to move the debris or the vegetation.

- **Digging or Grubbing** - The McLeod may be used to dig or grub in the dirt, when a Pulaski is not available.

  - Obtain firm footing with feet approximately shoulder width apart. With the cutting/grubbing edge downward, locate a striking point in the dirt. Take a practice swing to ensure an unobstructed
striking arc is available. Tilt blade slightly to concentrate force of swing at corner of McLeod head. Repeat the swing in a sharp downward motion until the trench or hole is complete.

The tool is used primarily in a scraping motion. Extend the tool out at arm’s length and pull the head along the ground. The longer the full contact with the ground, the more work accomplished with the same effort. Pull the tool across the line and the body and not into the legs. Pulling the tool across the line will reduce the piles of material that must be removed. The end of the scrape includes a flick of the head to scatter the material a distance off the line. Do not create windrows, (the piled material along the edge of the line), as this increases the chances of spotting across the constructed line. Pulling into the legs will pile the material on the feet and require additional strokes to clean the material off the line.

Shovel
The primary type of shovel for Wildland Firefighting is the short-handled-round-point shovel, commonly known as the “Lady Shovel”. This shovel has a sharper point, steeper angled face, and a shorter-than-normal handle. These features are more accommodating for various aspects of line construction, than common gardening shovels. One of the most versatile tools used by wildland firefighters, the shovel is an excellent scraping tool. The difficulty experienced by firefighters when scraping with the shovel is low back pain. When using the torso as the fulcrum for scraping, low back pain is a common occurrence. However, proper use of the legs and anchoring the elbow into the knee allows the use of the large muscles of the legs and reduces fatigue on the arms and back. The assignment of the proper individual is also important. Taller individuals require more bending at the waist, which increases back discomfort. The proper scraping position requires a flattening of the head of the tool, which increases surface contact area.

### Shovel Types
- Round Point
- Square Point
- Scoop

All Types can be either
- Long handle
- Short handle

### Shovel Parts
The head is curved into more of a bowl than a standard construction shovel and comes to a sharp point. This design increases the surface contact area and holds more dirt for throwing on the fire.

- Handle
- Shank
- Rivet
- Head or blade
  - Heel
  - Face
  - Shoulder
  - Cutting edge
  - Point
ROUND POINT SHOVEL

- Butt
- Handle
- Rivet
- Shank
- Heel
- Shoulder 4"
- Face (Other side)
- Cutting Edge
- Point
Basic Shovel Uses

- Digging
- Scraping
- Throwing dirt
  - Overhead
  - Side arm
  - Underhand
- Chopping
  - Light brush
  - Small limbs

When used as a scraping tool, the firefighter must bend at the lower body and anchor the elbow lightly into the knee. A fulcrum is created in the lower legs instead of the lower back of an erect firefighter. The head is flattened out placing the most surface area in contact with the ground. Little arm movement is required with the exception of a flip at the end of the turning motion to reduce piled material along the fire line’s edge. When used as a throwing tool, separate techniques are required which will be described later in this section.