



Volunteer Vacations

Introduction to Trail Maintenance

Are you unfamiliar with some of the technical jargon in your project description? Although trail maintenance is often best explained with a hands-on approach, the following document will clarify what your project could entail. See below for a **Glossary** of common trail maintenance terms, a commonly used **Tools List**, and a brief run-down on **Tool Safety**. More in-depth information and training will be provided on your Volunteer Vacation prior to starting work.

Glossary of Common Terms

Backfill or fill: mineral soil used to support a drainage structure.

Basic trail maintenance: upkeep involving annual drainage cleaning, clearing of **blowdowns**, **brushing**, and **blazing**.

Berm: the raised outside edge of the trail. This is often undesirable because it cause water to pool in **tread**, thereby causing erosion since water can't escape downhill.

Blazes: signs used to mark the route of the trail, usually painted at regular intervals on trees and rocks along the way.

Blowdowns: trees that have been toppled by the wind.

Brushing: clearing the trail.

Buffer zone is the land area on each side of the trail. **Buffer zone** is included in the **trail corridor**.

Cribbing refers to retaining walls, usually constructed with rocks or notched logs.

De-berming: Removing the **berm** from the trail, often using a **McLeod**.

Deadfall: A tangled mass of fallen trees or branches.

Drainage is facilitated by devices or structures such as **water bars**, **drainage dips**, and **ditches** that remove water from the trail to limit or eliminate the effects of erosion.

Drainage dips are gently shaped depressions constructed in an existing trail to catch and divert water off to the side.

Flagging refers to the action of tagging trees and shrubs to indicate where the mid-line of future tread will go.

Grade is the measurement of the rate of rise of the trail, often expressed as a percentage or ratio of vertical rise to horizontal run.

McLeod: see “Commonly Used Tools” section.

Outflow is the ditch portion of a drainage structure located off the treadway to remove water from the trail.

Outslope is a tilt in the surface of the trail tread created to promote drainage and prevent erosion.

Pulaski: See “Commonly Used Tools” section.

Puncheons are simple wooden walkways constructed through wet, boggy areas to provide a hardened surface for hikers.

Reinforced dips: drainage structures consisting of a **water bar** buried under a layer of compacted soil.

Stabilizers are used to hold the soil in place and prevent erosion. **Stabilizers** include rock steps and **cribbing**.

Trail corridor: all the lands that make up the environment of the trail, including the **tread**, **right-of-way**, and **buffer zones**.

Trail right-of-way is the area around the tread that is cleared for the passage of the hiker.



Tread: the actual travel surface of the trail.

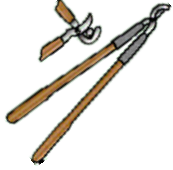





Turnpike: a trail segment with raised tread built by placing rocky or mineral soil fill between logs or large rocks, most often used in boggy situations.

Water bars: drainage structures made of rocks or logs embedded at an angle across the trail to divert water and prevent erosion.

SECTION 2: Commonly Used Tools

Special thanks to the [South Carolina State Trails Program](#) for use of selected text and graphics. See their website for more information and tools.

Weed Whip (Swizzle Stick)		The weed whip is used to clear trail corridors of succulent vegetation (grass, light brush, briars, and tree seedlings). It is meant to be swung back and forth with both hands.
Machete		Machetes are best used to clear the way when surveying new trails routes through dense vegetation.

Lopping Shears (Clippers, Loppers)		Loppers are designed for clearing heavy vegetation from trails. With their long handles a sturdy pair has the mechanical advantage to cut cleanly through all sorts of brush and branches (most cut limbs of 1 to 1¾ inches in diameter).
Ax		Axes can be used to chop deadfall from trails, shape stakes for turnpikes and water bars, and cut notches for structures made of timber. Most trail crews use the single bit axe (one sharp side) versus the double bit ax (two sharp sides) feeling that one sharp blade is safer than two.
Bow Saw		A bow saw with a blade 16 to 21 inches in length is handy for cutting brush out of the trail and trimming small branches.
Pulaski		Developed to grub and chop duff during forest fires, the Pulaski combines an ax bit with an adz-shaped grub hoe. It is preferred by many trail crews for loosening dirt, cutting through roots, or grubbing brush.
McLeod		The McLeod is useful for removing berm from a trail and smoothing tread.
Mattock		A mattock is a sturdy grubbing tool with an adz blade that can be used as a hoe for digging in hard ground. The other blade of a mattock may be a pick (pick mattock) for breaking or prying small rocks or a cutting edge (cutter mattock) for chopping roots.

SECTION 2: Tool Safety

1. Get a grip.

Make sure you have a strong grasp on your tool. Wet or muddy gloves may cause a tool to slip from your hands, striking you or someone near you. Clear limbs, loose rocks, or other debris from your footing area to ensure you have a firm, balanced and comfortable stance before starting your work.

TIP: You should never need to swing your tool over your head.

2. Be aware of your surroundings.

While chopping or brushing, be aware of other people nearby—not only fellow crew members, but also trail users. The combined length of your arm and tool is longer than you or others may think. Be especially careful of others stepping into the area of your backswing.

TIP: Always carry tools in your hands and down at your sides—not slung over your shoulder. Use blade guards when possible!

3. Choose the right tool for the job.

The wrong tool can force you to work in an awkward stance which will wear you out.

TIP: Sharper is safer! A dull tool that bounces off of what it was attempting to cut can be dangerous. A sharp tool will cut faster and be less tiring.