

# ESSENTIAL MAINTENANCE MODULE

## UNDERSTANDING SAFETY



### LEARNING OUTCOMES

Check-in/Check-out

Emergency Response Plan

Pack Essentials

Job Hazard Analysis

PPE

In case of accident...

An obligation to walk away from anything deemed unsafe.

We all share the responsibility for keeping ourselves and fellow crew members safe.

Bringing an awareness for safety and a mind for situational awareness to each work day allows volunteers to continually consider risk and how to mitigate it while focusing on the task at hand. When you, as a volunteer or leader, model safety, you convey the importance and value of this as the foundation to all that A.T. volunteers do.

### SAFETY IS...

Combined layers of planning, communication, practices, and shared attitudes that create an atmosphere where risks and harms are better understood and reduced.

Safety matters because you matter!

*Your Essential Trail Maintenance Workshop Leader will bring the ERP, JHAs, PPE, and VIP/VIF injury packet the workshop. The lists below are for your use going forward.*

### Advanced Planning

- ☐ Advanced preparation and planning of an **Emergency Response Plan (ERP)**.
- ☐ Download and review **Job Hazard Analysis (JHAs)** applicable to planned work activities.
- ☐ As the day of planned activity draws near, **check weather forecasts**, adjust plan according to if conditions are safe for driving and the work activity.

### Day-of Preparation

- ☐ Follow your organization's protocols for **check-in/check-out** to convey your itinerary, planned return, and phone numbers for your point of contact to seek help if you don't return.
- ☐ **Pack:**
  - necessary **personal protective equipment (PPE)** for planned tasks, based on JHA
  - **10 Essentials** for a day hike, and include a **First Aid Kit** for yourself and others in your group.
  - **VIP/VIF injury packet**, if working on your own. Otherwise your trip leader will have it.

### Volunteer Rights:

- Be treated with respect.
- A workplace free of harassment, discrimination, or hostile conditions.
- Receive a suitable assignment.
- Receive training and support.
- Have qualified supervision.
- Safe working conditions.
- Have their time used effectively.

### Volunteer Responsibilities:

- Make safety the highest priority.
- Act in a professional manner.
- Follow Trail policies and guidelines.
- Participate in and learn from training sessions and meetings.
- Do high quality, professional work.
- Care for Trail resources.
- Seek and accept guidance and support.

Safety resources found at  
[appalachiantrail.org/volunteer/safety](http://appalachiantrail.org/volunteer/safety). 1

# ESSENTIAL MAINTENANCE MODULE

## UNDERSTANDING SAFETY



### Tailgate Safety Briefing

#### Check for:

- Appropriate footwear, clothing, gloves
- Water, snacks, rain gear, sunscreen, insect repellent
- Personal protective equipment

#### Discuss:

- Project, purpose, outcomes, & length of hike
- Emergency action plan and communications

#### Explain:

- Known work hazards, reference JHA
- Today's hazards: e.g.: weather, hunting season, biological hazards like poison ivy and yellow jackets
- First Aid Kit location
- Protocols for hikers and volunteers passing through work area

#### Ask:

- Disclosure of existing health concerns
- Medical and First Aid Training among crew
- Assign alternate crew leader in event of an emergency

#### Demonstrate:

- Proper lifting technique
- Proper tool usage (see Tool Talk)
- Safe working distance with tools

## WORK-DAY KICK-OFF SAFETY BRIEFING

Whether working alone or with others, review the topics of a **tailgate safety session**. By taking stock of the day with this overview of safety, you're better prepared for likely risks, prepared for contingencies, and able to help yourself or others.

Leaders of other volunteers should be sure all participants are signed on to the **workday roster** and carry **emergency contact information** for participants.

### Tips for Tools

Use the right tool, the right way, for the job at hand.

#### Carrying tools:

- Always wear gloves
- Carry tools in hands with arms at sides
- Never carry tools propped on your shoulder
- Carry tools on the downhill side of the trail
- Carry the heaviest or most dangerous tool on the downhill side of the trail
- Maintain a safe distance between people

#### Using tools:

- Always use PPE
- Check tools for damage
- Use proper stance for good ergonomics
- Have secure footing before using tools
- Maintain a safe working distance between people
- Use tools in a motion parallel to your body
- Lift with your legs
- Think about the consequences of every move.

#### Storing tools in the field:

Store all tools on the uphill side of the work area  
Never sink tools into the ground or stumps

## SAFETY IS ALSO...

Creating a culture of care where everyone is treated with dignity and respect.

## FOUNDATIONS OF SAFETY



Planning for safety begins well before the start of the work trip.  
Empower everyone on a work trip to act as a safety officer.  
It's okay to say "no" and walk away from anything deemed unsafe.  
ATC recommends volunteers do not work alone.

# ESSENTIAL MAINTENANCE MODULE

## TRAIL CONDITION & ASSESSMENT



### LEARNING OUTCOMES

Awareness for desired conditions for Trail

Awareness for federally designated Wilderness, if applicable

Performing a condition assessment

A.T. Fieldbook references for condition assessments

### WHAT IS THE DESIRED CONDITION?

The desired condition is what is desired by Trail managers for a section of Trail. The area's desired condition includes the core values of the Trail for a simple footpath, along with other criteria that includes: visitor use, how much development users encounter on or near the Trail, and any legal protections – such as Wilderness designation.

#### *Why is knowing the desired condition important?*

When the trail is cared for in ways that are compatible to its desired and intended experience, it helps to ensure visitor satisfaction and resource protection.

#### Learn about the local desired condition:

Refer to the local management plan for your area of the Appalachian Trail to understand the desired condition, and whether or not your section includes federally designated Wilderness.

### Know Your Role

If you are assigned responsibilities to monitor or maintain a section of the Appalachian Trail, understand the duties for your assignment.

You may be asked to simply monitor the condition and to send reports to others who address challenges, or, with training, you may be authorized to assess and then address identified trail issues.

### Assess the Area of Work:

With the desired condition in mind, walk the length of a project area before beginning any physical work to gain big-picture perspective on all trail conditions, which situations pose user-safety risks or resource damage, and how to prioritize work, needed tools, knowledge/skills.

Developing your “Trail Eyes” helps you see issues, examine the root cause, and think about possible remedies.

Walk the trail section in various seasons and weather conditions with an eye towards understanding the root causes, and making notes of work necessary in the near and long term.

Document findings to:

- Plan your work, or
- Report to your organization for a future work party to address.

### FROM THE A.T. COMPREHENSIVE PLAN

The Trail will lie lightly on the land, remaining a simple footpath. Care must be exercised, as the Trail is relocated or reconstructed, that its primitive quality is not lost. What are seen as Trail improvements may sometimes be steps in a progressive loss in simplicity for the footpath.





# ESSENTIAL MAINTENANCE MODULE

## TRAIL ALIGNMENT & ISSUES WITH WATER



### LEARNING OUTCOMES

Understanding what contributes to soil loss and muddiness.

Visually identify trail sections with and without issues with water (erosion or muddiness)

Assess function of, or need for, tread drainage features

Confidently debarm sidehill, open drains, and recommend future actions to mitigate water on Trail.

### WHY MANAGE WATER ON TRAIL?

Moving water erodes the surface of trails and degrades the walking surface by carrying away soil and leaving rocks.

Standing water or mud on trails tends to drive hikers off the footpath which damages the natural environment as people go off trail seeking dry footing.

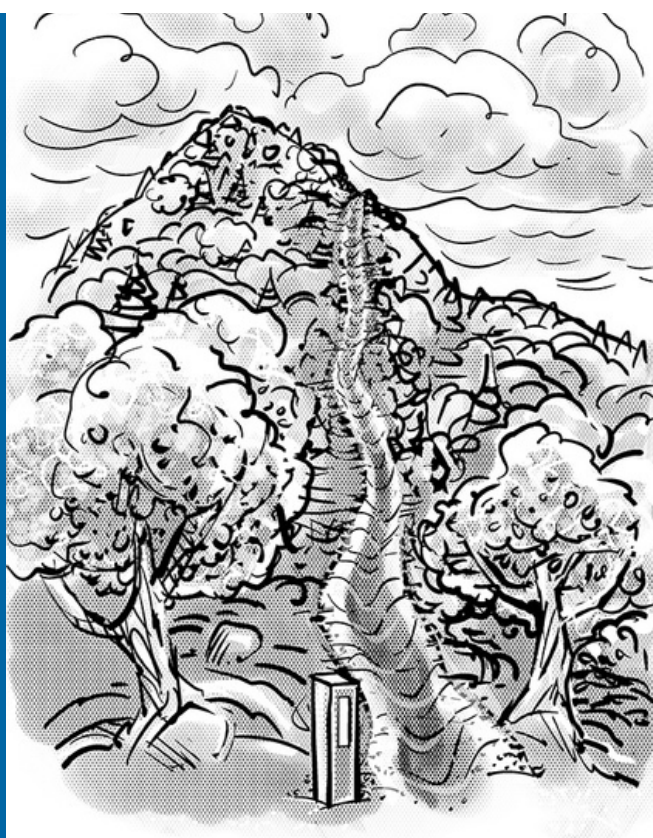
#### Trail Design:

Trail design impacts how water relates to the trail. The trail can either be designed before it is built so that it sheds water, or features must be added and maintained later to divert water off the treadway.

### Trail Design and Alignment



**Fall line trail alignment:** Tends to run perpendicular, or nearly so, to the contour lines. The trail becomes the most direct path for water to travel downhill. Water must be slowed and diverted to reduce soil loss on these sections of trail.



**Contour trail alignment:** Generally follows the landform's contour lines. Never very steep (ideally ~10% grade), the trail is sidehill construction with an outsloped tread so that water can flow across it in a sheet flow. Switchbacks and gentle turns help gain elevation.





# ESSENTIAL MAINTENANCE MODULE

## TRAIL ALIGNMENT & ISSUES WITH WATER



### WATER IS A POWERFUL FORCE

**The steeper the trail, the faster the water flows.**

Water moving faster causes more erosion because water with greater velocity removes more soil. When the trail's existing grade is steep, the erosive power of water can be reduced by slowing the water down with steps and/or diverting the water off the trail with drainage features.

#### Spotting Soil Loss

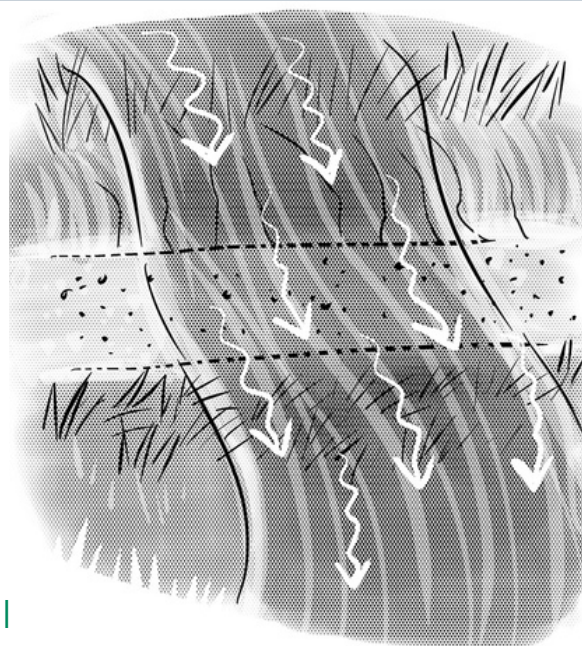
Good sections of Trail, with little erosion, have some leaf litter, with a mix of fine soil particles, pebbles, and gravel. Some cupping may be present (the center of the treadway is lower than its outer edge).

Sections with significant soil loss will be scoured to a hard mineral layer, roots, or rocks, with little or no leaf litter, pebbles, or sediment remaining. The treadway may be gullied.

#### Spotting Muddiness

The trail widening caused by muddiness can be spotted year round, whether the area is actively wet or not.

The goal of a well-designed trail is to have water flow down slope and across the trail in more of a sheet-flow, so that it picks up less sediment and is less damaging to the trail.



## ESSENTIAL MAINTENANCE TO MANAGE WATER

### Address Cupping with Berm Removal

A berm develops along the outside edge of sidehill trail when water flowing off the outer edge of the trail drops sediment as the center of the treadway compacts with use. This can happen even when the trail was built with the proper outslope. Berms prevent the trail from shedding water over the side of the trail. The trapped water either accelerates soil loss by flowing down the trail or creates muddy areas where water gets retained. Neither situation is desirable.

If water is getting stuck on trail, remove the outside berm and restore the tread outslope to 3-5% to allow for water to flow off the edge of the trail. The backslope may also need resetting if it has sloughed down onto the tread.

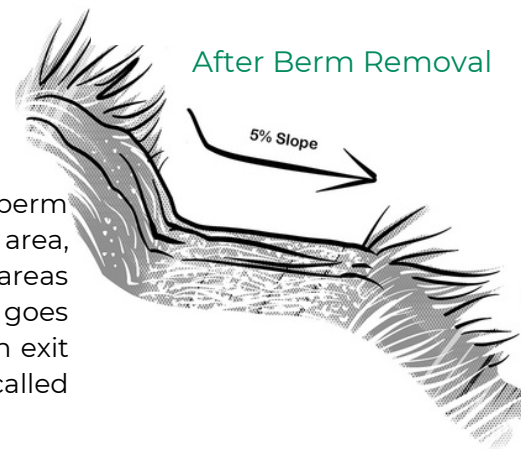
TIP: If time doesn't allow for berm removal over an extensive area, remove the berm along low areas of the trail (where the trail goes down then up) to provide an exit for trapped water. This is called "nicking the berm."

#### After Berm Removal

5% Slope



Before Berm Removal



# ESSENTIAL MAINTENANCE MODULE

## TRAIL ALIGNMENT & ISSUES WITH WATER



### ESSENTIAL MAINTENANCE TO MANAGE WATER

#### Maintain Tread Drainage Features

Drains separate water from the footpath. Tread drainage features fall into two main categories: ones designed and built into the trail, and those added to existing trails.



Well built drainage features have gently sloped sides to offer a smooth, sweeping exit for water. By promoting the water to leave at a controlled speed, it is less likely to drop as much sediment in the drain. However, if water slows down (or stops), then sediment in the water settles out and deposits into the drain.

Drains that are steep and narrow should be avoided because these "sudden stops" for water cause sediment to drop and drains to fill quickly, soon rendering them useless; also, they are more obtrusive to hikers.

All drains should be routinely maintained, and other drains may exist on a maintainer's section. Those features are not part of this training.

#### Grade Reversal

Grade reversals are a superior drain, especially when built as part of a relocation of the A.T.

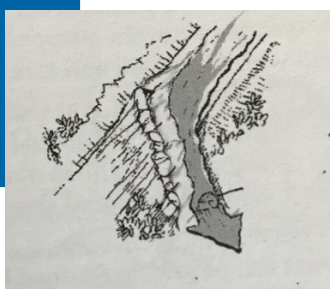


These subtle structures are smooth in their transition, offer ease of walking, and do not experience the decay or replacement needs of built structures like waterbars.

Grade reversals are structures of the trail where a descending portion of trail is followed by an ascending portion of trail. Since water doesn't flow up hill, the sag between the fall and the rise serves as the drain by preventing water from continuing down the trail. **Some maintenance is required to make sure that the outer edge of the grade reversal's drain does not develop a berm (see Cupping and Berm Removal above).**

#### Waterbars

Waterbars are the best option for legacy sections of the A.T. that are steep. Armored by wood or rocks set deeply enough to easily walk over, these drains on the uphill, down-slope side of the trail should offer a wide and sweeping path for the flow of water to continue down away from the footpath.



Several times each year, maintain the drain of waterbars by clearing a wide smooth apron above the waterbar and removing any sediment and material that is built up in the drain. **Discard the material where it won't return to the treadway.** Make sure not to dig too close to the waterbar itself since this increases the likelihood of erosion undercutting the structure. Be alert to waterbars being walked around, or ones that no longer offer a downsloped drain for exiting water; report these issues. Recommend replacement of decayed or damaged ones, or report identified areas for new ones to your trail supervisor.



# ESSENTIAL MAINTENANCE MODULE

## KEEPING HIKERS ON THE CENTERLINE



Jonathan Riley

### LEARNING OUTCOMES

Understand types of user-created impacts.

Resetting the backslope of sidehill trail when it is "creeping" downhill.

Closing use-created trails.

Reporting braided trail or features suffering with "walk around"

Addressing user-created firings.

The Appalachian Trail is a durable path intended for single-file foot travel. The width of the A.T. should be a minimum of 12" and a maximum of 18" in flat woodlands and 24" on side slopes. Trail maintainers help limit user-created impacts by monitoring for and addressing or reporting these items:

**Trail Widening:** When hikers walk outside of the treadway, they widen the area of impact by trampling trailside vegetation. Frequent trampling leads to soil compaction, and eventually a wider footpath. Trail widening is common in muddy areas.

**Trail Braiding:** When hikers walk outside of the footpath to navigate around trail features such as steps and waterbars to seek efficiency; this happens most often when the rise of the feature is too high and hikers are fatigued. Braiding also occurs when parallel paths are established in open areas when the original trail is too narrow or too difficult to see footing.

**Trail Creep:** This is the slow movement of the location of the trail to a slightly new alignment, generally on sidehill trail. It is most often seen where hikers avoid abundant vegetation growth on the uphill side of the trail and walk to the softer outside edge of the trail. Backslope that has sloughed into the treadway or excessive "root ladders" also pushes hikers toward the outside edge as they seek better footing. Trail creep can give sidehill trail an appearance of being convex.

**Social Trails and Shortcuts:** These paths, not planned by the A.T. club or the land manager, may offer more direct routes to vistas, campsites, or trailheads, and like shortcuts between the curve of a switchback, are almost always prone to swift erosion.

All of the use patterns above are driven by underlying causes that help inform appropriate solutions. These types of user created impacts tend to worsen when left unaddressed.

### PREVENTION AND EARLY RESPONSE

#### Remove Debris:

Remove debris or obstacles from the footpath since blockages on the treadway or ill-suited footing sends hikers off on their own path.

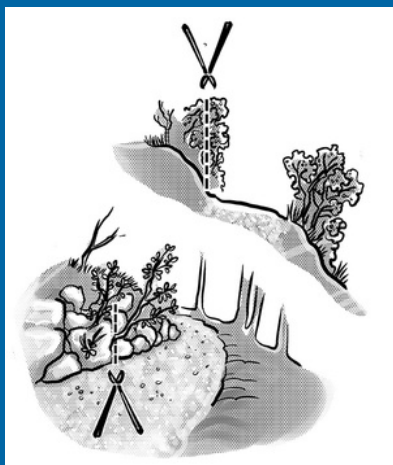
Cut out small roots before they become big roots.

#### Keeping tread clear of vegetation:

Brushing vegetation in growth seasons, especially uphill of the trail since it tends to push hikers to the outside edge.



Trail braiding is discouraged here with upturned rocks outside the feature and a low rise for steps.



### PREVENTION AND EARLY RESPONSE

#### Block Shortcutting

Block any shortcutting of switchbacks, steps, waterbars, or other tread features with items that are difficult to move or walk around. Things like large rocks or downed trees work well. When selecting tree debris, select brushy and branchy material since it presents more difficulty to step over than a log.

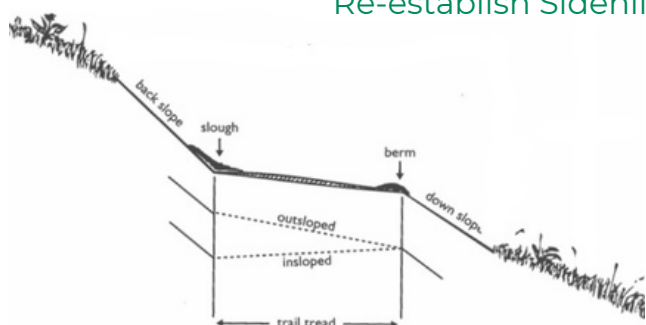
Shortcutting can be tricky to resolve and requires persistence by the maintainer.

If social trails and switchbacks continue to be cut, report it to trail supervisor for consideration of other longer-term solutions, such as signage, fencing, or revegetation.

#### Re-establish Sidehill Trail

Sections of sidehill trail are subject to narrowing as gravity and water begin to release sediment from the backslope into the inside edge of the trail. Hikers, seeking more stable footing, begin walking the outside edge of the trail. By resetting the backslope at a 45 degree angle and redefining the tread width to 18-24" with a 3-5% outslope, maintainers can bring hikers back toward the centerline.

Avoid adding logs to the outside edge of the trail to prevent trail creep since these help trap water on the trail, causing other issues.



Before Sidehill Re-Established

After Sidehill Re-Established

Maintainers may encounter sections with large roots (thicker than a wrist) or large rocks that could prevent them from redefining the tread on their own. These areas should be reported so that they can be addressed with a larger crew.



# ESSENTIAL MAINTENANCE MODULE

## BRUSHING



Jonathan Riley

### LEARNING OUTCOMES

Trail clearing specifications

Aesthetics and safety of brushing

Access to trainings and JHAs for brush cutting, string trimming, mowing, if applicable

Know-how for accessing information on sensitive plant populations.

### WHAT IS BRUSHING?

Brushing is cutting vegetation to allow the footpath to remain open.

#### *Why does brushing matter?*

It improves hiker safety and resource protection by making the trail more obvious, more comfortable to travel, and puts hikers on the center of the trail. Plus, it reduces exposure to ticks.



#### Trail Prism:

The standard prism for clearing vegetation, 4-feet wide by 8-feet high, provides a uniform character for the A.T. How many times a year the vegetation needs to be cleared will vary based on location.

### What to Brush, Where:

On sidehill trail, brush to prevent larger woody plants from slowly encroaching into the trail while encouraging users to hike away from the outer edge. To do this, clear both woody and annual growth on the uphill side of the trail. Clear all woody growth on the downhill side of the trail but leave sufficient annual growth on the downhill side to encourage hikers to stay clear of the downhill edge, reducing the likelihood the trail will “creep” downhill.

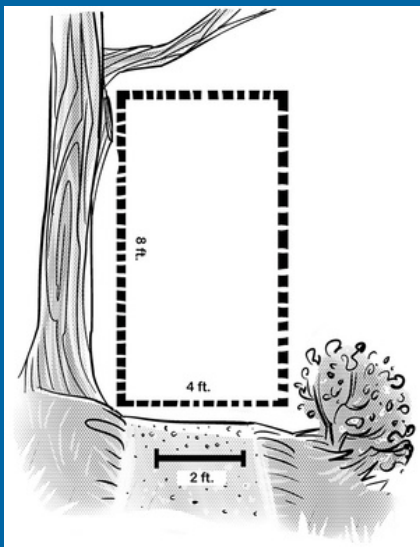
On a section of trail without significant elevation change on either side of the trail, grasses and fast-growing annual growth alongside trail should be cut back on both sides unless the area is prone to trail widening.

Cut any wood vegetation growth from log or rock cribs.

### Make it Look Natural

After making your cuttings, clean up by moving cut material out of sight over a large area to maintain the Trail's natural appearance and to keep the area free of obstacles for string trimmers and sling blades use. At a minimum, place cut ends of discard material facing away from the Trail so they are less noticeable to hikers.

### Trail Prism



### Brushing Annual Growth



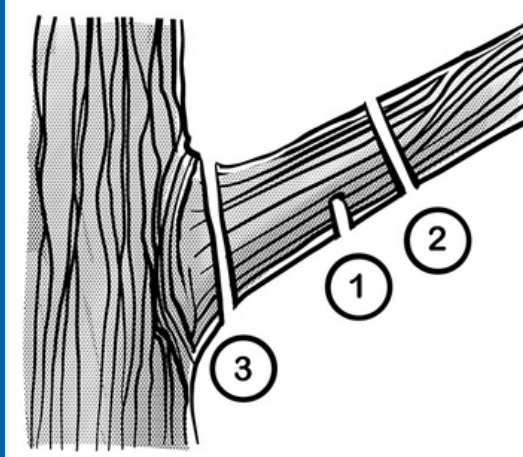
### FOUNDATIONS OF BRUSHING

As with most trail work, the goal is to make it seem as if you were never even there.

Follow good pruning techniques to maintain health of woody growth.



### PRACTICE GOOD PRUNING TECHNIQUES

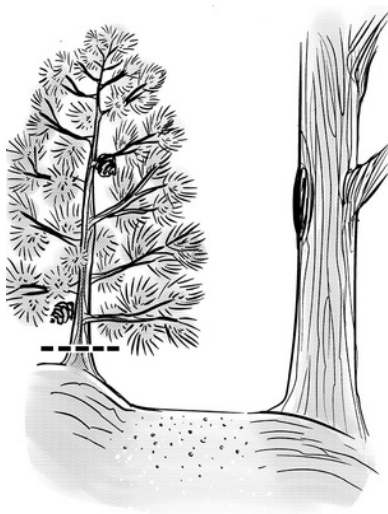


#### Make Clean Cuts

Reduce injury to you, the tree, and the tool by avoiding twisting your loppers and bypass pruners as they cut. Dirt dulls loppers—so keep brushing loopers pristine and designate an older pair for work in/around dirt when necessary to cut out roots for other trail work.

#### Do not leave any stobs

When removing limbs, cut the limb close to (but not on) the tree branch collar. This eliminates the danger posed by stobs (stubs of branches) as hooks and daggers, makes a nicer visual effect, and accelerates the tree healing.



Avoid removing all of the limbs from an entire single side of a tree that is too close to the trail anyway; instead, remove the whole tree.

#### Plan for the tree not the sapling

It is tempting to leave saplings because they are cute, but pulling them when they are small is far easier than needing to cut them or all their branches that encroach on the trail later.

When removing saplings, cut as flush to the ground as possible with a horizontal cut so they don't puncture footwear, surprise a sitting hiker, or pierce a falling hiker. This also makes it easier to use string trimmers or swing blades in the area.

#### Blowdowns

**Monitor:** If you come across a downed tree or downed branch that is blocking the trail but is too large to move (a blowdown), take a variety of photos with something placed for scale and showing the blowdown across the trail as well as any parts extending off the trail.

Include the location with your photos, such as GPS point, and report to a certified sawyer or to the trail supervisor for safe removal.

**Address, if possible:** Consider removing limbs and branches to make the blowdown easier to navigate for hikers, *but do so with care*. Clearing a blowdown can be dangerous, regardless of its size, due not only to the equipment used, but also how the wood moves when cut.

Branches under tension can whip when cut, causing injury. Only cut if the blowdown is stable. Carefully remove limbs and branches as close to the trunk as possible and do not remove any branches that are supporting the weight of the blowdown



# ESSENTIAL MAINTENANCE MODULE

## FIRE RING MANAGEMENT



### A SUPPLEMENTAL RESOURCE TO MANAGE USER-CREATED IMPACTS

Campfires, for many, are an essential part of an overnight outdoors. The Leave No Trace Center for Outdoor Ethics principle on minimizing campfire impacts emphasizes using existing fire rings, using wood smaller than your wrist that is already on the ground, dead, and found a good distance from the campsite.

#### Definitions

**Formal fire ring:** Located at a designated overnight site, and made of either steel or large rocks. The established location of this primary fire ring to an overnight area is determined by the A.T. club and land manager. Depending on the overnight site and/or rules/regulations of the management area, this may be the only permissible fire ring.

**User-created fire ring:** These crop up when a visitor takes it upon themselves to collect rocks to build a fire ring. These may be referred to as “illegal fire rings” in some locations where dispersed camping is not allowed. Even if their existence may be permitted when dispersed camping is possible, it may not be preferable to leave the fire ring because it creates an attractive nuisance for continued use of a campsite that may not be preferable from a resource management perspective.

**Designated overnight site:** A shelter or campsite that is sanctioned by A.T. Cooperative Managers and included in A.T. maps and guidebooks as an approved location to stay overnight.

**Dispersed camping:** When the land manager allows visitors to camp at locations other than at designated overnight sites (shelters and established campsites). The expectation is that visitors are following Leave No Trace practices for selecting and managing their campsite.

**Campsite:** Either formal or informal, a location where a visitor camps.

**Leave No Trace Principles Applied for Campsite Selection:** More than 200 feet from water or the Trail, on a durable surface.

#### Assessing Fire Rings

Because even well-intentioned and Leave No Trace-minded hikers may decide to have a fire, it's important for trail maintainers to not only clean formal fire rings at designated overnight sites, but managing fire rings for appropriate location and size elsewhere. By leaving a user-created fire ring in a location, maintainers signal to other visitors that this is a place to camp and have a fire. The decision to leave or dismantle a fire ring should be made based on the desired experience for the section of Trail as described in the area's local management plan, the impact to the resource from current/future use of the area, Leave No Trace principles, occurrences of rare, threatened, endangered plant and/or animal species, and proximity to other available/preferred campsites.

Each section maintainer should be aware of designated overnight site location(s), familiar rules/regulations of land management entity and the ANST Compendium, and be aware of Leave No Trace practices for campsite selection. Check with your ATC regional office to find out if a campsite impact survey has been done for your section of Trail; it may be a helpful resource in your continued management of the area.

# ESSENTIAL MAINTENANCE MODULE

## FIRE RING MANAGEMENT



### Assessing Fire Ring(s)

- Determine which are formal fire rings in need of cleaning.
- Determine user-created fire rings that would be acceptable to clean and leave in place, if any.
- Determine any user-created fire rings that need to be removed.

### Clean Fire Rings

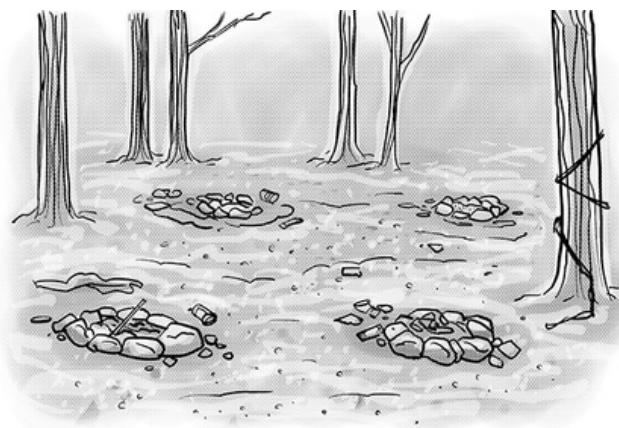
- Make sure it's cool to the touch before starting.
- Remove any unburned wood. Any long limbs that do not fit the size of the existing fire ring or that are partially burned should be moved several hundred feet away to discourage their use.
- Sort through the ash for any burned trash, and pack out (reference trash Job Hazard Analysis)
- Using a shovel or trowel, dig out and flatten the ash heap. Dispose of the ash in a distributed fashion far from the camping area.
  - Pro tip: Using a plastic grocery bag to convey ash materials to the location where they'll be scattered.

### Eliminating Fire Rings

- Throw/toss/carry the rocks for the fire ring a considerable distance from the camping area, preferably far downhill where they are out of sight.
- Sort through the ash for any burned trash, and pack out (reference trash JHA)
- Using a shovel or trowel, dig out and flatten the ash heap so it is flush with the ground. Dispose of the ash in a distributed fashion far from the camping area.
- Using leaf litter from surrounding forest, obscure the burned ground by scattering leaves over the area.
- Move any large logs or other items that people may have been sitting on that could invite future re-creation of the fire ring.

### Resizing Fire Rings

Rocks around fire rings can get built up if the ash heap has been unattended to for a long time. In other cases, user-created fire rings can be built too large which encourage fires that are too large. In these instances, resizing the fire ring that is in an acceptable location is one approach to help visitors meet Leave No Trace best practices with fire.



An obvious need to eliminate fire rings



# ESSENTIAL MAINTENANCE MODULE

## MARKING THE TRAIL



Jonathan Riley

### LEARNING OUTCOMES

Able to follow standards for blazing A.T. and side trails

Familiarity of the use and standards for posts and cairns to mark the Trail

Iconic to the Appalachian Trail, hikers follow white blazes from Maine to Georgia.

On the A.T. a blaze is a crisp white rectangle painted onto trees, primarily. Blazing refers both to the collection of blazes and the act of painting them.

Proper markings help make for an enjoyable experience. Too many blazes blight the primitive nature of the Trail, while too few blazes lead to lost hikers.

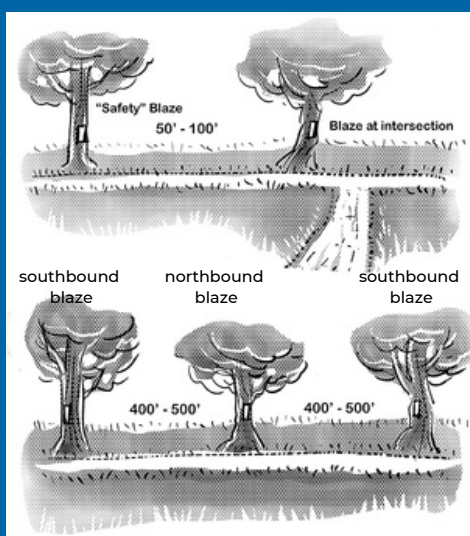
### BLAZING PLACEMENT AND FREQUENCY

Blazes should be uniform, tidy, and easy to see. Avoid over-blazing. However, areas that could be confusing should be sufficiently blazed to prevent hikers from losing their way.

#### Guidelines for Blazing:

- White painted blazes 2-inches wide by 6-inches tall should be placed at roughly eye height, generally on the right side of the Trail, optimizing the sightline from down the path.
- Blazes should be on an adequate diameter tree (6 inches or more at eye height) to ensure the blaze is visible against it; blazing of rocks is discouraged.
- Stagger northbound and southbound blazes.
- Blaze at regular intervals. If the Trail is obvious, blazing at 5-minute intervals (800-1,000') is standard.
- No more than one blaze is visible at any point in time, except at junctions so as to reassure hikers they have taken the right direction.
- Judge visibility during leaf-off season. Maintain blaze sightlines during the growing season by removing interfering vegetation and branches.
- Never add new blazes without considerable thought, however blazes lost due to blazed trees falling over may need replacement.
- Blazes are rectangles, not arrows, nor do they offer directional (n/s) instruction.
- At junctions, along roads, through open areas, more blazing may be required to limit confusion and lost hikers; a reassurance blaze might follow after a blaze at an intersection 50- to 100-feet further down the trail and be visible from the intersection.

### Blazing Standards



Upper Image: A.T. runs left to right. Due to the intersecting trail from the side, an additional reassurance blaze at the junction helps hikers identify the A.T.



A dollar is a close approximation to the size of a blaze.



### FOUNDATIONS OF BLAZING

Sharp corners and clean edges make blazes stand out.

Over-blazing diminishes the character of the Trail.

### MORE ON BLAZING

#### In-line and Offset Double Blazes

Double blazes are used to alert hikers to changes in direction, confusing intersections, etc. They are not intended for use with switchbacks.

In-line and offset double blazing are set two inches apart. For offset double blazes, the upper offset blaze indicates the direction of change. They should be used sparingly since when used too frequently they become meaningless. Know and follow your organization's guidance for in-line or offset double blazes.

#### Blazing Side Trails

Side trails to the A.T. are painted sky blue. Select a sky blue that contrasts from dark bark, avoids being too close to white, or too bright that it diminishes the character of the wild. There is no blazing on side trails in Wilderness. Only the A.T. itself has the federal legislative exemption for its white blazes in Wilderness.

#### Blazing on Posts

Used in areas lacking sufficient trees, posts can be used for blazes. Posts should be four-to-six inch diameter rot-resistant, native wood rather than metal t-posts which are un-natural. Sunk at least two feet into the ground, it should be tall enough to have the blaze on top rise above surrounding vegetation.

Pressure treated round or milled logs can be used when native wood is unavailable. New posts should not be added unless appropriate conditions exist and A.T. supervisor approves.

#### Cairns

Cairns mark the trail in the absence of trees across either stretches of bedrock or where weather frequently makes visibility poor to see posts, such as fog, mist and snow. If you feel a new cairn is necessary, report in the Trail Condition Assessment.

Along the length of the Trail, dismantle visitor-made cairns (stone stacking) to facilitate clear wayfinding by other hikers.

