



Adopter's Handbook

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General Information

The Ozark Highlands Trail relies on volunteer maintainers to keep the trail in condition for all to enjoy. First and foremost, thank you for your time and efforts to help maintain the trail by adopting a section. Next, **your safety is of utmost importance.** Do not undertake any activities that you do not feel comfortable doing. It is preferable for maintainers to go out with one or more other individuals for safety reasons. At a minimum, let someone know where you are going and when you expect to return. Also make sure they know how to get in touch with someone from OHTA who is familiar with your section of trail so we can assist in locating you should something happen.

As an adopter, OHTA expects you to work your section of trail a minimum of twice per year: preferably in the fall at the beginning of hiking season and again in late spring/early summer before the growth of vegetation. You are not responsible for every issue you may encounter. The following are typical duties for adopters:

- a. Walk your section and remove fallen branches, rocks and other items in the trail.
- b. Cut back branches and other vegetation growing into the trail corridor using loppers or a small handsaw.
- c. Identify and locate trees in or across the trail that need to be removed by a saw crew. Report them to the Maintenance Coordinator.
- d. Identify and locate trail tread that may need to be re-worked or re-routed.
- e. Ensure your section is properly blazed.

- f. Ensure your section is properly signed and report any issues that need to be addressed to the Maintenance Coordinator.
- g. Remove trash and debris left on the trail.
- h. Complete a Maintenance Report, either online (preferred) or by printing it off, filling it out and mailing it in. Make sure any non-OHTA members complete a temporary membership application, in order that they may be covered by insurance in case of injury. Also, complete the demographic information and hours worked (including drive time to and from your destination). This information is important for us to report to the USFS and helps us obtain funding for tools and equipment. The form may be found on the maintenance tab of the webpage.

You are expected to provide your own tools and equipment for maintaining your section. OHTA does have several tool lockers along the trail that are stocked with the following:

- 2 Loppers
- 1 Weed Hook
- 1 Bow Saw
- 1 Pulaski
- 1 McLeod
- 1 Fire Rake
- 2 Pair of gloves
- 2 Pair of safety glasses

The lockers are locked with a combination lock and all of them have the combination 1004. Lockers are located:

- Behind the Pack Rat Outdoor Center in Fayetteville

- At White Rock Mountain near the office
- At Turner Bend in Cass (under the basketball goal)
- Behind the Ozone Fire Station
- Behind the Pelsor Post Office

Please notify the Maintenance Coordinator if you find any tools and equipment missing from the tool lockers.

OHTA also has some power tools available for maintainers to borrow in special circumstances. Tools include string trimmers, brush cutters and hedge trimmers. Maintainers must be trained prior to borrowing power equipment for use. Contact the Maintenance Coordinator to use any of the power equipment.

Clearing the Trail Corridor

The trail corridor refers to the area through which the trail passes. The trail tread refers to the actual path on which one walks. The tread should be approximately 18” wide. The trail corridor should be 6 feet wide (centered on the tread) and 8 feet tall. The following guidance comes from the USFS Trail Construction and Maintenance Notebook.

Trail Corridor

The trail corridor includes the trail's tread and the area above and to the sides of the tread. Trail standards typically define the edges of the trail corridor as the **clearing limits** (Figure 1). Vegetation is trimmed back and obstacles, such as boulders and fallen trees, are removed from the trail corridor to make it possible to ride or walk on the tread.

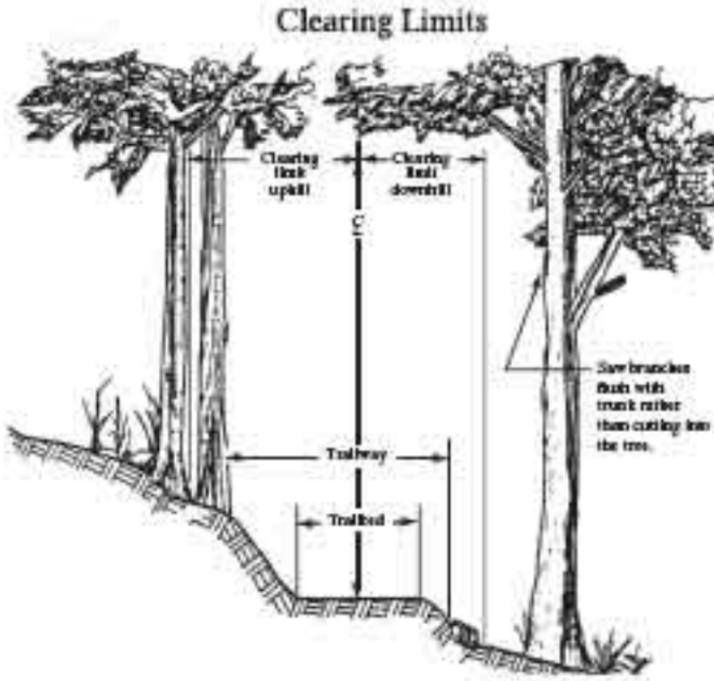


Figure 1 - Terms describing the trail corridor clearing limits. You need to understand these terms to clear a trail to specifications.

Clearing and Brushing

Working to wipe out your trail is no less than that great nuclear furnace in the sky--Old Sol, the sun. Old Sol and the mad scientist, Dr. Photosynthesis, convert dirt and water into a gravity-defying artifice called a plant. Seasoned trail workers will attest to the singular will and incredible power of plants. No sooner is a trail corridor cleared of plants than new ones rush toward this avenue of sunlight.

Plants growing into trail corridors or trees falling across them are a significant threat to a trail's integrity. Brush is a major culprit. Other encroaching plants such as thistles or dense ferns may make travel unpleasant or even hide the trail completely. If people have trouble traveling the trail tread,

they'll move over, usually along the lower edge, or make their own trail. Cut this veggie stuff out ([Figure 2](#))!

In level terrain, the corridor is cleared an equal distance on either side of the tread's centerline. For a hiking trail, this means that the corridor is cleared for a distance of 1 meter (3 feet) either side of center. Within 300 millimeters (1 foot) of the edge of the tread, plant material and debris should be cleared all the way to the ground. Farther than 500 millimeters (1.5 feet) from the trail edge, plants do not have to be cleared unless they are taller than 500 millimeters (1.5 feet) or so. Fallen logs usually are removed to the clearing limit.



Figure 2 - This trail needs to be brushed. Cut the veggie stuff out.

On moderate to steep sideslopes, a different strategy may be useful. Travel along the lower (outer) edge of the tread is a common cause of tread failure. You can use trailside material to help hold traffic to the center of the tread. A downed log cut nearly flush with the downhill edge of the trail will encourage travelers to move up to avoid it. Rocks, limbed trees, and the like can all be left near the lower edge of the tread to guide traffic back to the center so long as the guide material doesn't prevent water from draining off the trail (Figure 3).



Figure 3 - Rocks and logs help to keep the trail in place. Remember, this is a path through nature, not a monument to Attila the Hun.

The key is to make sure that this guide material does not interfere with travel on the center of the tread and does not block drainage.

Something's Gotta Go

If time and budgets are tight, consider brushing only the uphill side of the trail. This approach keeps users off the trail's downhill edge and keeps the trail in place.

On the uphill side of the trail, cut and remove material farther from the centerline. For instance, on slopes steeper than 50 percent you may want to cut fallen logs or protruding branches within 2 meters (6½ feet) or more from the centerline (horizontal distance).

Clearing a ***movable corridor*** rather than clearing to a fixed height and width takes some thought. Doing so may be difficult for inexperienced crews.

Finally, remember that the scorched earth look created by a corridor with straight edges is not very pleasing to the eye. Work with natural vegetation patterns to feather or meander the edges of your clearing work so you don't leave straight lines. Cut intruding brush back at the base of the plant rather than in midair at the clearing limit boundary. Cut all plant stems close to the ground. Scatter the resulting debris as far as practical. Toss stems and branches so the cut ends lie away from the trail (they'll sail farther through brush as well).

Rubbing the cut ends of trailside logs or stumps with soil reduces the brightness of a fresh saw cut. In especially sensitive areas, cut stumps flush with the ground and cover

them with dirt, pine needles, or moss. Rub dirt on stobs or bury them. Here's where you can use your creativity. A carefully trimmed corridor can give a trail a special look, one that encourages users to return.

Some trails may have to be brushed several times a year, some once every few years. Doing a little corridor maintenance when it is needed is a lot easier than waiting until plant growth causes expensive problems.

Removing Trees

Usually, trees growing within the corridor should be removed. Remember that those cute little seedlings eventually grow into pack-snagging adolescent trees. They are a lot easier to pull up by the roots when they are small than they are to lop when they grow up.

Prune limbs close to the tree trunk. For a clean cut, make a shallow undercut first, then follow with the top cut. This prevents the limb from peeling bark off the tree as it falls. Do not use an ax for pruning.

If more than half of the tree needs pruning, it is usually better to cut it down ([Figure 4](#)). Cut trees off at ground level and do not leave pointed stobs.



Figure 4 - Something's wrong with these trees! Cut trees out when they need excessive pruning.

Releasing Seedlings

The forest canopy along the OHT has been devastated in recent years by the 2009 ice storm and the Red Oak Borer and other insect pests. Maintainers should take efforts to encourage the regrowth of shade trees along the trail. When a tree is cut off, the root system often remains viable and the tree will send up numerous shoots from the root stem (Figure 5). By cutting off all of these shoots but one vigorous seedling (Figure 6), a replacement tree will grow much faster than one having to establish a new root system. This will eventually restore the canopy to its prior condition. This is called “releasing seedlings.” It may not be appropriate everywhere,

but maintainers should utilize this practice to help restore canopy where the existing canopy has disappeared. It is preferable to do this to trees a short distance off the trail to avoid a new tree growing right alongside or in the trail tread. Remember the trail corridor!



Figure 5 Before



Figure 6 After

Trip Hazards

Rocks, branches and viney vegetation all contribute to trip hazards along the trail. We want hikers to be able to look around them at the beauty of the Ozarks and not constantly be looking down at their feet, trying not to fall. Remove rocks (not pebbles...rocks), fallen limbs and viney vegetation from the tread to reduce trip hazards. In general, it is best to throw them to the downhill side of the trail, so that gravity doesn't eventually bring them back down to the trail. In some cases, you want to place them on the uphill side in order to help control water running onto the trail and erosion. Use your best judgment.

Trail Reconstruction and Drainage

As mentioned earlier, the trail tread itself should be approximately 18” wide. Adopters are asked to do minor, routine maintenance to keep the tread in good condition. This may include some side-hilling (cutting the tread into the hill to level it out) and controlling drainage to reduce erosion. While getting into the specifics of trail construction standards is beyond the scope of this handbook; a few areas are important. Generally, the trail should slope gently downhill, to allow water to flow off the trail. Where possible, the trail should not travel steeply uphill or downhill for any significant distance. It is better for the trail to travel with the contours of the hillside and utilize switchbacks when traversing significant grades. In areas where water appears to be pooling or standing, look to see if you can cut drainage pathways away from the trail to allow water to drain. In some areas, a short re-route may be in order or you may find that placing large rocks or bog bridges is necessary. If you have an issue that you feel is beyond your ability to address, let the Maintenance Coordinator know. In addition, sometimes erosion may be undermining the trail integrity or a tree may have uprooted next to the trail, creating dangerous conditions. Report these to the Maintenance Coordinator.

Trail Signage

Signage along the OHT falls into three main categories: kiosks and other informational signage at trailheads; routine trailside signage, such as road crossings, trail junctions and mile markers; and trail blazes.

Trailhead Signage

The Forest Service, in conjunction with OHTA, maintains informational trail kiosks at the major trailheads. Adopters whose trail sections end or begin at trailheads where there is a

kiosk should note the condition of the kiosk and the information posted and report any issues to the Maintenance Coordinator. Adopters are not responsible for the kiosks.

Trailside Signage

Carsonite posts are used to provide trailside signage, including mile markers, trail junctions and road crossings. Adopters are asked to note the presence, absence and condition of trailside signage and report any issues to the Maintenance Coordinator.

Mile Markers

The OHT has mile markers showing the trail distance from Lake Fort Smith State Park eastward. These mile markers consist of short sections of Carsonite posts with the mileage noted on them using stick-on numbers. They are nailed to trees parallel with the trail about head high. A blaze should be placed on either side of the same tree, to bring a hiker's attention to the tree. Adopters should note the presence or absence of a mile marker and report missing mile markers to the Maintenance Coordinator.

Trail Junctions and Road Crossings

Signage should be placed at trail junctions directing hikers in the proper direction. These trail junction signs are typically Carsonite posts. Red cedar signs have been utilized where the OHT passes through the Hurricane Creek Wilderness Area. Posts should be placed approximately 10 feet down the trail and labeled with the trail name.

The OHT crosses and travels along two types of "roads." In some places, the trail follows old, abandoned roadways. These

do not need to be marked. Where the trail crosses roads utilized by vehicular traffic, Carsonite posts should be used on either side of the road. The Carsonite posts should be placed 10-15' back from the edge of the road, perpendicular to the trail and parallel with the road. It is important to set them back from the edge of the road. Road departments using brush hogs on tractors will clear roadside vegetation and destroy the posts otherwise. The side facing the road should have the OHT National Recreation Trail sticker at the top of the post, with a painted blaze below and the USFS "Hiker Trail" sticker below that. In areas where traffic from ATVs, horses, bicycles or other inappropriate trail users is apparent, we can also include prohibited user stickers. The back-side of the sign should have stick-on letters identifying the road being crossed and the direction of the trail (turning right or left down the road or crossing straight across). The adopter is not responsible for these signs, but should report damaged or missing signs to the Maintenance Coordinator.

Trail Blazes

The OHT utilizes white, aluminum blazes 2" x 6" attached vertically with aluminum nails. Blazes should be placed approximately 6' off the ground on a tree clearly visible from a fair distance down the trail. Blazes should be attached with the head of the upper nail aimed downward and the lower nail aimed upward. This keeps the blaze held away from the tree trunk. It is also acceptable to attach the blaze with both nails aimed downward. It is not acceptable to have both nails aimed upwards, as this encourages the blaze to 'walk' its way down toward the trunk; and it is never acceptable to attach a blaze flush against the trunk (see Figures 7-10 for examples).



Figure 7 - Properly Installed Blaze



Figure 8 - Acceptably Installed Blaze



Figure 9 - Improperly Installed Blaze



Figure 10 - Oh, Hell No!

Trails around the country have differing standards when it comes to blazes. Blazes are a “reassurance” sign; they are meant to reassure the hiker they are following the correct path. They ARE NOT meant to be something followed through the woods, like bread crumbs. In order to provide for a more wilderness experience, blazes should be spaced approximately 375’ apart (about 150 steps) for a blaze count of approximately 14 per mile. This is meant to be a rough guideline and is not a strict and fast rule. It is not important (and not encouraged) to be able to see the next blaze when you reach a blaze (again...not breadcrumbs). It is acceptable and encouraged to use a more frequent spacing where the trail crosses a creek or a road; or where the trail may be confusing and difficult to follow (for example, in a very rocky area where there may not be much of a visible tread).

At road crossings, a blaze should be placed approximately 50’ (20 steps) down the trail from the edge of the road (where there should be a Carsonite post) to reassure the hiker they are on the right track. Likewise, at creek crossings, it is okay to have a blaze fairly close to each edge of the creek, and again about 50’ (20 steps) down the trail.

Where the trail makes an unexpected turn or joins/leaves a road at an angle, a warning blaze should be placed just prior to the turn. A warning blaze is placed at an angle to the right or left, indicating the direction the trail is heading. Where the OHT follows a roadway and then leaves the road, a blaze should be placed on both sides of the trail where it leaves the road.

The OHT is far from being a straight line. It is not acceptable to place warning blazes where the trail is making a normal

curve. It is also not necessary to utilize a warning blaze at every switchback. Be judicious in blaze placement. Use them when necessary to properly direct hikers (where you have a “false trail” developing because hikers are confused; that’s a good time to use some extra blazes). Arkansas is the Natural State, and we want our hikers to be able to appreciate the OHT in its natural state, and not be constantly bombarded with the sight of white aluminum blazes.

Litter and Other Issues

Maintainers should pick up and remove any litter they find along the trail. Occasionally, hikers will abandon an entire camp. If there is too much for you to get yourself, ask for help. Also, if you notice that hikers have started to create a new campsite (e.g. new fire rings, etc.) feel free to destroy the evidence, tossing charred rocks into the woods and spreading ashes. The OHTA promotes Leave No Trace philosophy. Established camping sites may be maintained and their use is encouraged. However, the proliferation of additional sites is not acceptable. Help preserve the wilderness experience hikers have come to expect from the OHT.

If you notice that non-acceptable use is taking place along your section of trail, such as horse traffic, ATVs, or mountain bikes, try and determine how they are accessing the trail and report to the Maintenance Coordinator.

Using Technology to Help

Modern smartphones are one of the most powerful tools you can take with you into the woods to help with trail maintenance. There are numerous apps available that can utilize the GPS feature of your phone to show you your exact location on a map and will allow you to save waypoints, often including a photo, that will identify the exact location of trail issues, such as trees needing to be cut or trail damage that needs repair. AlpineQuest for Android phones is one of the best and the “lite” version is free. Motion X for iPhones is very similar as is Backcountry Navigator available for both systems. In addition, Garmin, Magellan and DeLorme all make apps that allow you to save waypoints. All work without the need for cell signal. Once you get back to civilization, you can email your waypoints to the Maintenance Coordinator, along with photos (very helpful). This will allow them to see the issue and pinpoint its location.

Summary

First, a big THANK YOU for agreeing to volunteer your time to help keep the Ozark Highlands Trail one of the premier long-distance hiking trails in the United States. We cannot do this without your help. Do what you can; but don't try to work above your skill level and comfort zone. Take your time, don't get in a rush, and enjoy the scenery around you. You're in one of the best work environments imaginable. Your safety is paramount. If you want to help but you just find you aren't able to do what is needed, please let the Maintenance Coordinator know. Perhaps we can find a different section, or just assign a new adopter. It really doesn't help anyone to adopt a section and then not keep it properly maintained. Remember that others are relying on you.

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