Connecting People with Nature Since 1920

Trail Maintenance Manual

8th Edition

New York – New Jersey Trail Conference

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www.nynjtc.org/tmm

CONTENTS

INTRODUCTION 3
- **TRAIL MAINTENANCE ASSIGNMENTS** 3
- **TRAIL MAINTAINER RESPONSIBILITIES** 4
- **TRAIL MAINTENANCE ANNUAL CYCLE** 5

SAFETY 6
INSPECTION 7
- **HOW OFTEN AND WHEN** 7
- **SPECIAL SITUATIONS** 7

REPORTING 8
- **IMPORTANCE OF REPORTING** 8
- **REGULAR REPORTING** 8
- **PROBLEM REPORTING** 8

CLEARING 9
- **EQUIPMENT LIST** 9
- **STANDARDS AND METHODS** 11
- **TRAIL CLEANUP** 11

BLAZING 15
- **STANDARDS FOR ALL BLAZING** 15
- **BLAZING GUIDELINES** 15
- **HINTS FOR BLAZING TRIPS** 16
- **TAG BLAZING** 17
- **PAINT BLAZING** 17
- **SPECIAL TRAIL MARKINGS** 19

PROTECTING THE TRAIL AND ITS STRUCTURES 20
- **TREADWAY REHABILITATION** 20
- **INCOMPATIBLE USES** 23

EDUCATING TRAIL USERS 25
INJURY AND INSURANCE PROTOCOL 26
ENVIRONMENTAL MONITORING 28
WEB ACCESS AND YOUR DASHBOARD 29
VOLUNTEER SERVICE AGREEMENTS 30
CHECKLIST OF WHAT A MAINTAINER SHOULD KNOW 31

INTRODUCTION

The New York-New Jersey Trail Conference was formed in 1920 “to coordinate the efforts of walking organizations in the States of New York and New Jersey, and to build and maintain trails and shelters in these states.” The Trail Conference is dedicated to keeping each trail in its charge easily passable, clearly and consistently marked, in a safe condition, and harmonious with its surroundings.

As a trail maintainer, you have volunteered to assist the Trail Conference in its most important mission. We thank you for your very valuable service. The purpose of this manual is to define the role of a trail maintainer and serve as a reference document to supplement formal classroom instruction and on-the-job training. A primary goal of trail maintenance is making the trail safe for users; in performing that duty, make sure to put your safety first. Hopefully, you will find trail maintenance to be a fun and rewarding experience.

This document, as well as other key resources and forms (safety documentation, reporting form, other policies) may be found online using the Dashboard feature on the Trail Conference web site www.nynjtc.org/dashboard or at www.nynjtc.org/tmm. Instructions on how to use the Dashboard appear later in this document.

A greatly abbreviated version of this manual is available in “pocket” version on three 3x5 inch plastic cards or PDF for your smart phone. This abbreviated version is suitable for carrying with you whenever you visit your trail. The physical “pocket” version is available upon request from the Trail Conference by sending an email to volunteer@nynjtc.org. To download the PDF version of the “pocket” version go to www.nynjtc.org/tmm.

TRAIL MAINTENANCE ASSIGNMENTS

Trail Maintainers are part of a Local Trail Committee. The Local Trail Committee consists of three volunteer positions: Trail Maintainers who adopt segment(s) of trail to care for and report into a Trail Supervisor; Trail Supervisors who support a team of maintainers in a designated area and report into a Local Trail Chair; and one Local Trail Chair who supports a team of Trail Supervisors in a designated region and reports into a Trail Conference staff Program Coordinator.

Who is a maintainer? A Trail Conference maintainer may fall within one of three categories:

- Qualified individual volunteers who will be supervised by and report to the Trail Conference-designated regional supervisor.
- Qualified maintenance crews, which may have a designated crew leader but will report to the Trail Conference-designated regional supervisor.
- Trail Conference member clubs, which assign trails to their qualified members. Member club maintainers will be supervised by and report to the club’s trail maintenance coordinator, who, in turn, reports to the Trail Conference-designated regional supervisor.

Anyone can volunteer to be a trail maintainer. People under the age of 18 are encouraged to volunteer by accompanying a parent/guardian who is a maintainer. Throughout this manual, maintainers in all three categories will be referred to as “maintainers.”

Individual trail maintainers are usually assigned as much trail as can be comfortably cleared in a day. Depending on terrain and density of vegetation, this distance may vary. If the mileage you have been assigned is too much or too little, inform your supervisor.

Role of the trail supervisor: Your supervisor is responsible for assigning your trail segment, teaching you the basic skills, and supervising your work. Any problems or requests should be addressed to your supervisor, who may refer them to other Trail Conference officials if necessary. Under no conditions should a maintainer assume responsibility for any trail or part thereof that has not been explicitly assigned by a Trail Conference supervisor. The performance of all maintainers and supervisors is

monitored and evaluated by the area Trails Chair, an NYNJTC appointed person who oversees the maintenance of trails within a specified geographic region. Trail sections that are not reliably maintained in accordance with the standards prescribed in this manual will be reassigned. Changes in maintainer assignments and supervisory responsibilities are also reviewed and approved by the area Trails Chair.

Role of trail construction crews: To handle trail projects that require more labor and experience than an individual maintainer can provide, the Trail Conference has regional trail crews, each with a crew chief. These trail crews work year-round on trail rehabilitation/construction projects identified and targeted by the Local Trails Committees (the Trails Chair and supervisors within the region) through the input of the individual maintainers, supervisors, park employees, and the public. Individual maintainers are also invited to contact their regional trail crew through their supervisor to request help for major problems. Please recognize that there may be a waiting list, with priorities set by the Local Trails Committees. As a maintainer, you are encouraged to volunteer for such maintenance and construction crews. Doing so will enhance your trail knowledge and skill set, in addition to providing much appreciated extra hands.

If you cannot continue to maintain: If for any reason you find that you cannot continue proper maintenance of your trail, please notify your supervisor. We appreciate your efforts and understand that continuing as a maintainer may not be possible. We must know, however, when a trail is not being maintained so that we may assign another maintainer.

TRAIL MAINTAINER RESPONSIBILITIES

As a maintainer, you play a key role in the Trail Conference's mission. Besides maintaining your trail, you serve as the eyes and ears of the Trail Conference for your section. You are responsible for:

- Inspecting your trail section frequently enough to be familiar with its current condition in all seasons (a ***minimum*** of two times a year, but four times a year is preferable; more frequent inspections may be required if, for example, litter and vegetation growth are persistent problems, and after storms).
- Clearing your trail of natural obstructions and litter.
- Blazing your trail according to Trail Conference standards as described below and on the Dashboard.
- Helping protect the trail from erosion and helping to manage water runoff and wet areas.
- Knowing and following Trail Conference safety guidelines.
- Formal reporting of your work hours, accomplishments, and trail conditions as required by the Trail Conference.
- Timely reporting of major or acute problems such as trail obstructions (e.g. blowdowns, etc.), illegal use, trail damage, etc., as needed.
- Alerting your supervisor in a timely manner when you need additional assistance with your trail for any reason, or if you are unable to continue serving as a maintainer.
- Educating trail users (hikers, walkers, runners, or bikers where permitted) about trail use and preservation.

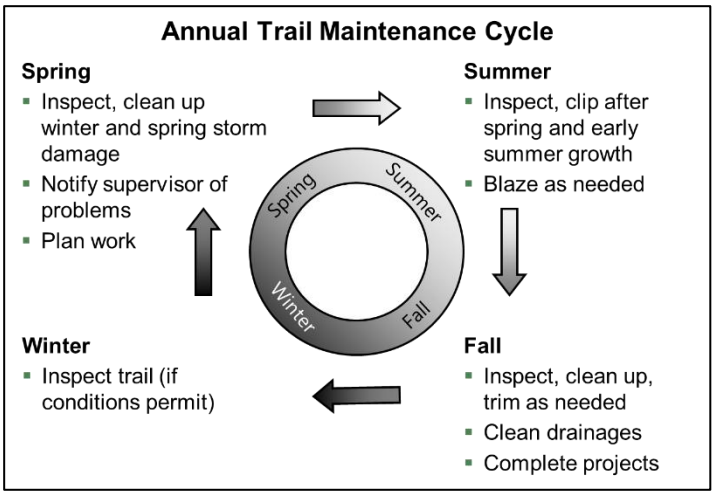
An individual maintainer is ***not*** responsible for:

- Using a chainsaw to clear blowdowns (report these blowdowns to your supervisor).
- Confronting illegal users of trails and parklands (NEVER confront other people. Report illegal use immediately either to your supervisor or the park manager).
- Construction projects requiring significant labor and/or special skills (these are the responsibility of the trail crew).
- Relocating your trail or constructing new trails (consult your supervisor if you feel this is needed).

Many maintainers find this volunteer work extremely rewarding, especially in knowing that a job well done allows others to share the pleasures of connecting with nature.

TRAIL MAINTENANCE ANNUAL CYCLE

The diagram below indicates the typical annual cycle of maintenance activities performed by a trail maintainer. our trips per year to your trail is preferable, with visits in the early spring, mid-summer, late fall, and winter (conditions permitting). You should report problems immediately to your trail supervisor. We also encourage you to report your activities to your supervisor soon after you visit your trail. The hours you work and information on the work done must be submitted to your trail supervisor at least twice a year, as described later in this document. Of course, more visits may be required, depending on the trail conditions. These activities will be discussed in more detail throughout this manual.



Return to Table of Contents

SAFETY

Always be careful and conscious of the safety of yourself and others. It is suggested that you wear long sleeves and pants and sturdy shoes. A hat, sunscreen, and insect repellent are also recommended. This will help protect you from poison ivy, sharp prickles, the sun and from ticks and other dangerous insects. When using tools, wear work gloves and eye protection. Follow all applicable Trail Conference Outdoor Safety Guidelines, which may be found at: www.nynjtc.org/document/outdoor-activity-safety-guidelines.

Note that in these guidelines, most trail maintainer activities that involve non-powered, hand-held tools (so-called “Level 2” activities, such as brush trimming, removal of small trees, waterbar clearing, and blazing) require gloves, long pants, and eye protection. Eye protection may be safety glasses, goggles, or ordinary eyeglasses.

If you, or anyone you are with, should become injured, promptly inform the Trail Conference (201-512-9348) and your supervisor following the Trail Conference Injury and Insurance Protocols, which are summarized below and may be found in more detail at www.nynjtc.org/incident.

If you are uncertain about whether you can safely accomplish any particular task on your trail section, contact your supervisor for guidance or help. If in doubt, don’t do it, REPORT IT.

Never confront persons engaged in unauthorized or illegal activity. Take down notes about the incident and report it to your supervisor or the park office.

If you are going out alone, it is recommended that you tell someone that you are on a maintenance trip. Let them know where you are going, how long you expect to be out, and check back in with them when you have returned to the trailhead.

INSPECTION

Every trip is an inspection trip, in addition to the clearing or blazing work you may have planned. Be prepared to take notes on anything that needs reporting, either on a smartphone or with paper, pencil, and a map. Document problems with a photo; smartphones are great for this. It is very helpful when photos are geotagged which can be enabled by turning on your GPS/location services on your device. If your photos are not geotagged, be sure to write down the location of the problem in your notes. Problems can also be noted and reported on digital Trail Conference maps through the Avenza Maps app for Apple and Android devices. (See the Reporting section below for more details on this.)

HOW OFTEN AND WHEN

As indicated in the Annual Cycle diagram:

- Inspect as soon as possible in the spring and after the leaves are down in the fall.
- Develop a plan and schedule to return to the trail to take care of problems that you are not able to resolve on your visit. If you are working alone, you may find that it is difficult to lop, clear blowdowns, blaze, and pick up litter all on one trip. Gradually, you will develop a method that suits you. For a start, carry your loppers, folding or bow saw, and litter bag on every trip.
- Inspect in mid-summer, when trimming of spring growth may be needed, especially if your trail has sections of high grass, brambles, or heavy undergrowth. Trails open to the sun will require more maintenance than those in mature forests with high canopies. Paths through open meadows and swamps need late summer clearing. Check for blazes obscured by foliage.
- Inspect more frequently if heavy use and litter are problems, or if the trail is on private land (see below). Shelters attract litter.
- Inspect as soon as possible after severe storms, fires, or periods of heavy use.

Even though you may find little or no clearing, blazing, or litter pick-up to perform on your regular inspection, you are still performing an invaluable service by monitoring trail conditions.

Take a fresh, objective look at the trail each time you venture out. Periodically inspect your trail section from the opposite direction to get a different perspective and to check on the condition of the blazes, which may be quite different in each direction. Use the standards given in this manual, as well as your common sense, to judge the physical condition and aesthetic appeal of your trail. Always be alert for ways to improve the trail.

SPECIAL SITUATIONS

Private land: If a trail crosses private land, it is especially important to preserve the good will of the owner. It may be necessary for you to make more frequent trips to keep the trail open and litter-free. Any special requests from the owner (e.g., to close the trail during hunting season) should be referred to your supervisor.

Co-aligned trails: Separate trails occasionally merge and follow the same route before diverging again. Through your supervisor, contact the other maintainer(s) of a joint trail to establish a mutually agreeable system for inspecting and maintaining such sections. The standards for blazing co-aligned trails are set forth in the Blazing Guidelines subsection of the Blazing section.

REPORTING

IMPORTANCE OF REPORTING

The Trail Conference must have current and reliable information for trail users and be able to speedily respond to dangerous trail conditions or blockages. Thus, accurate reporting is essential. Besides reporting work performed and any problems observed, accurately recording and reporting your hours spent both on the trail and those spent traveling to and from it is crucial. This allows supervisors to track the level of maintenance trails are receiving and to know which trails are in fact being maintained. In addition, aggregate volunteer hours are used to document the extent of our activities, which is particularly important for obtaining grants, public and private financial support, and insurance coverage.

REGULAR REPORTING

This refers to the current practice of filing formal reports. Currently these must be submitted twice per year: by June 30 and November 30. These reports include noting general trail conditions, problems encountered, the type of work you performed, the date when you performed it, the amount of time you spent volunteering (including travel), any pending work, and any potential longer term issues that may require attention. You should keep a trail maintenance diary or log in which you record dates, locations, conditions, work done, time spent, and work pending. Such a document will help refresh your memory when it comes time to complete your formal trail reports. Reporting forms will be provided to you by your supervisor. You may also find them online at www.nynjtc.org/volunteer-forms. Your supervisor will keep you updated if the reporting procedure changes.

While this section describes a formal reporting mechanism, more frequent communication with your supervisor is often advantageous. Discuss with your supervisor how frequently they want your reports; however, we encourage you to send a report shortly after each visit to your trail.

PROBLEM REPORTING

Assess the trail for possible user safety issues, such as blowdowns, hazardous trees, confusing or missing blazes, loose or broken components of bridges or other structures, persistent water drainage issues, etc. If you cannot resolve these problems yourself, report these issues to your supervisor as soon as possible after your trail visit. Take photos of safety issues and email them along with their location information to your supervisor. If GPS tracking is enabled on your smartphone, then the photo will include the exact location of the problem, but a description of where the problem is also helpful. You can also report issues by using the Avenza Maps app. Most Trail Conference maps are available digitally on mobile devices through the app. For instructions on Avenza Maps, see the Digital Trail Map link in the forms section of your Dashboard, or at www.nynjtc.org/view/maps.

CLEARING

EQUIPMENT LIST

Select the equipment you will need for a specific outing from this list (see illustrations below). You are expected to provide all equipment that you bring on a maintenance trip.

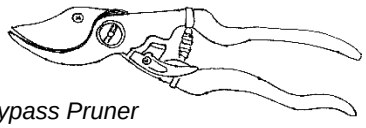
Basic hiking gear: Pack for carrying gear; lunch or snacks and water as appropriate; sunscreen and bug spray; appropriate footwear and clothing for the weather.

Work gloves: Should have at least a leather palm for comfort and durability.

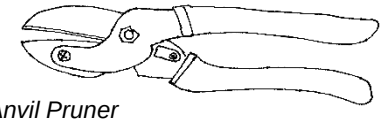
Eye protection: Safety glasses or goggles preferred; ordinary eyeglasses are acceptable.

Individual first-aid kit: See www.nynjtc.org/document/outdoor-activity-safety-guidelines for suggested contents. Additional safety equipment may be required for power tools as listed in that document.

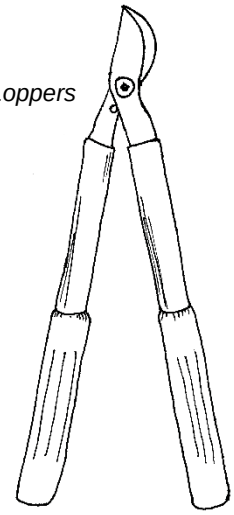
Hand pruning shears: Keep them handy for thin branches, stalks, and vines.



Bypass Pruner



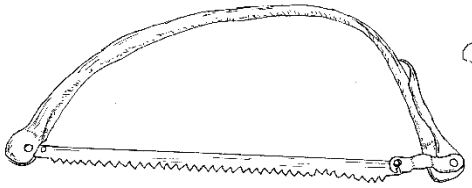
Anvil Pruner



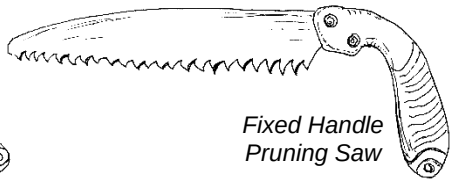
Loppers

Long-handled lopping shears: Pruning shears, or "loppers", for limbs over $^1/_2$ - inch diameter; 24-inch handles are lighter and suitable for most tasks; 30-inch handles provide more leverage and require less bending.

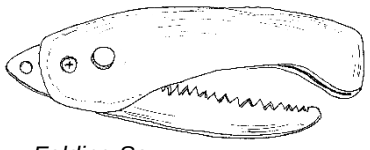
Hand saw: A hand saw is used for cutting away branches that intrude onto the trail or for small blowdowns. These come in a variety of forms. Folding saws, where the blade folds into the handle, are very popular because they are so compact. Fixed handle and bow saws may also be used. They can typically handle somewhat larger blowdowns than the folding saw, but if you use these be sure to have a guard for saw teeth to prevent injuries. Depending on the hand saw, you can generally handle branches or logs of up to 6 to 10 inches in diameter.



Bow Saw

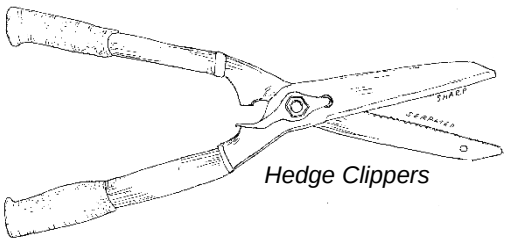


Fixed Handle Pruning Saw



Folding Saw

Hedge clippers: Hand-held hedge clippers are good for clearing away thick vegetation that is intruding onto the trail.

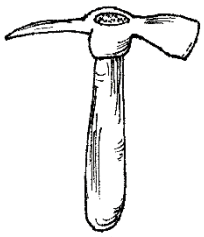


Hedge Clippers

Weed whip: Long-handled, scythe-like tool with 12-inch serrated blade, to be swung through vegetation at ground level; before using, replace nuts with locknuts, or use Loctite or a similar compound. You must always keep two hands firmly on the handle and swing rhythmically back and forth. Strong swings will prevent the blade from bouncing off springy growth. Leave plenty of space between yourself and other people while using this tool.

Weed Whip

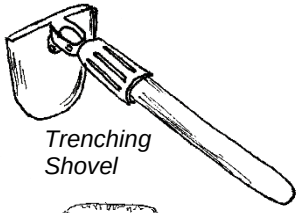
Trenching shovel or mini pick: These compact tools easily fit within a backpack and are used for cleaning waterbars.



Mini Pick

Wedge: A small plastic wedge is often useful for keeping the two sides of a trunk or branch apart while you are sawing through it, or for propping a branch up off the ground so you can saw under it.

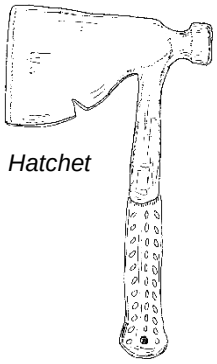
Hatchet: Good for starting or finishing saw cuts or for use where chainsaws are not permitted.



Trenching Shovel

Plastic bags: Used for litter; heavy duty is best.

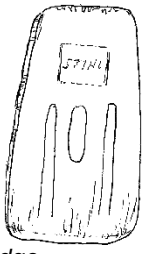
Surveyor's tape: This is plastic flagging tape commonly used by surveyors and used by maintainers for emergency, temporary blazes due to blowdowns.



Hatchet

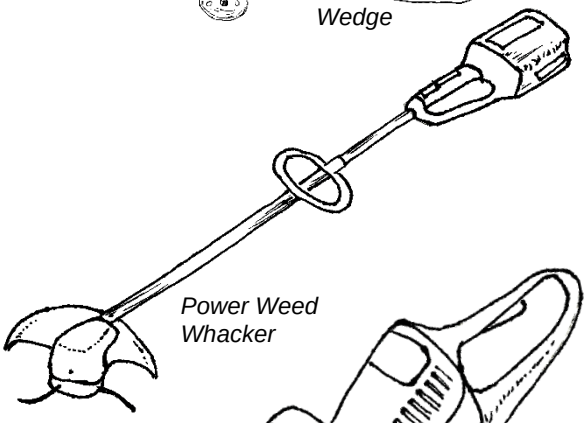
Axes are not generally recommended for routine trail maintenance; however, you may use one if you are experienced and skilled in its use. If you are unsure, consult your supervisor.

Keep your tools in good condition; cutting tools are more effective, less tiring, and much safer if they are kept sharp.

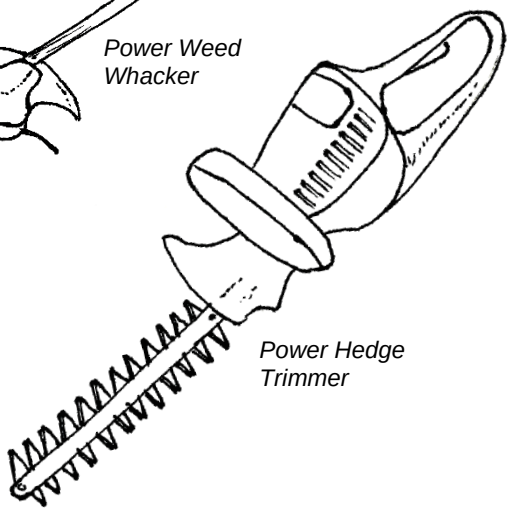


Wedge

Power Tools: You are encouraged to use primarily hand tools whenever possible. However, lightweight power tools such as weed whackers, power brush cutters, or battery-powered hedge trimmers (but NOT chainsaws, not even a battery-powered chainsaw) may be used by maintainers at their discretion **if the land manager permits their use**. For example, a power hedge trimmer may be appropriate to thin back larger areas of heavily overgrown vegetation intruding onto the trail. Leaf blowers should not be used except possibly on long boardwalks and flights of stairs. Power tools are most useful for trails through open meadows or with long stretches of bushes or shrubs. To cut down on noise pollution, try to limit the amount of time the tool is powered on. Do NOT operate these tools when other users are nearby. Your supervisor can help you understand whether a power tool is appropriate and permitted. **The maintainer is responsible for purchasing and maintaining these power tools and for knowing and adhering to associated Trail Conference and manufacturers safety guidelines** (see link below). If you use power tools, we encourage you not to work alone. When using battery-powered tools, it is useful to bring an extra, fully charged battery.



Power Weed Whacker



Power Hedge Trimmer

Chainsaws may NOT be used by individual maintainers. If you are interested in volunteering as a chainsawyer, consult with your supervisor about receiving the required additional training and certification.

When doing trail maintenance including use of hand or power tools, always use common sense and follow Trail Conference safety guidelines, which may be found on the Trail Conference website: www.nynjtc.org/document/outdoor-activity-safety-guidelines. When using power tools, be sure to wear gloves, eye protection, and long pants and bring along a personal first-aid kit. Ear protection should also be used if the power tool is very noisy, as is the case with most gas-powered tools.

STANDARDS AND METHODS

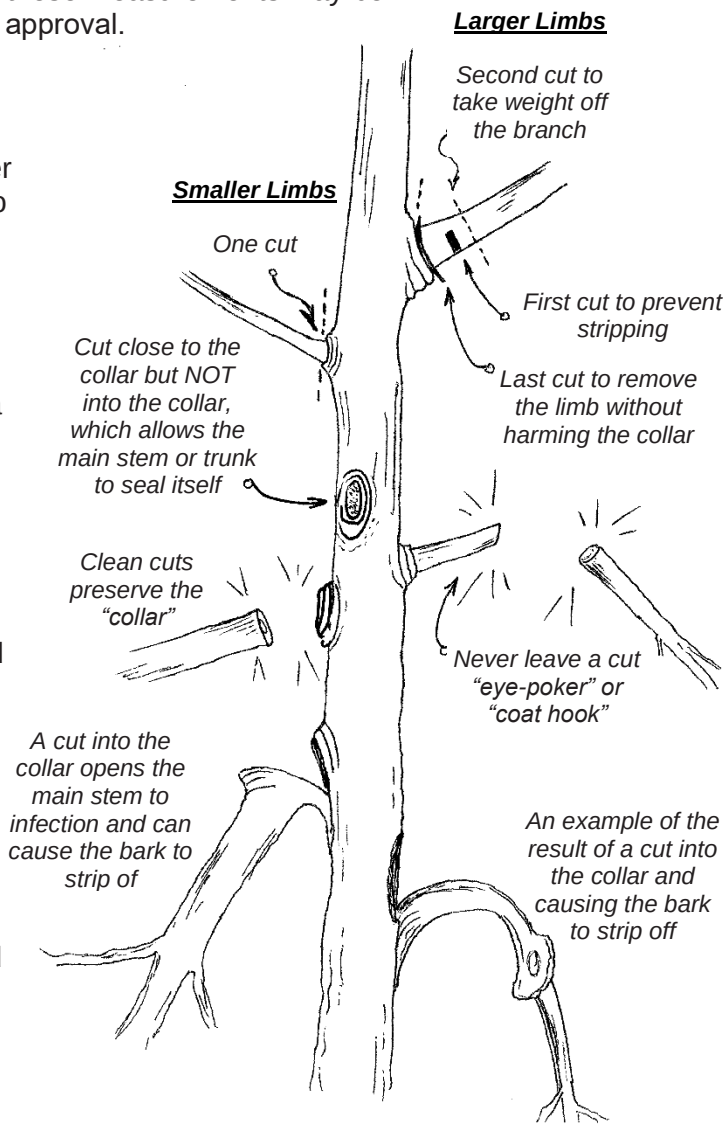
Ideally, maintainers should clear a path sufficiently wide and high enough so that users can easily walk the trail, with backpacks, without touching surrounding growth. The Appalachian Trail specifies a width of 4 feet and a height of 8 feet. This width allows side growth of approximately 1 foot on each side before needing re-cutting. While this 4-foot width is a good rule of thumb, it may not be appropriate in certain environmentally sensitive areas. Consult with your supervisor about the appropriate width for your trail.

Where a trail receives little use by backpackers, these measurements may be adjusted downward, with your supervisor's prior approval.

TRAIL CLEANUP

Vegetation: Typically leaves are not raked off the trail because leaves help prevent rain spatter erosion. Cut all branches as close as possible to the trunk. Cut all main stems, trunks and roots as close as possible to the ground. If possible, completely remove trunks from the treadway to eliminate tripping hazards. If a small sapling is growing at the immediate edge of the trail, cut it off at ground level so that no stub protrudes. If a branch originates from a tree a step or two off the trail, step off the trail and cut the branch off next to the trunk.

Proper Pruning: Branches cut some distance from the trunk, and trunks cut some distance above the ground, are safety hazards to the user. Branches that stick out can poke eyes and hook user's clothing or backpacks. Properly cut branches and trunks can limit the growth of suckers or side branches, which eventually multiply the maintainer's work. At first, it takes some steeling of the will to cut laurel, rhododendron, hemlock and other live growth, but if the trail is to exist, the clearing must be done. Throw all clippings and cuttings off the trail—with the cut ends away from the trail—and out of sight if possible.

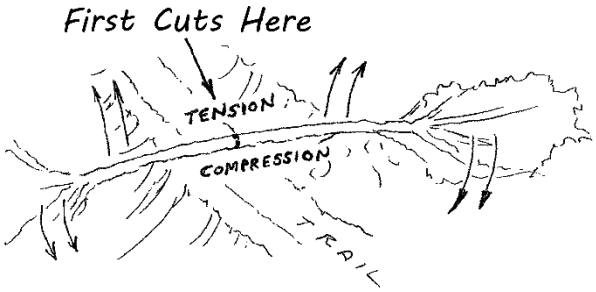


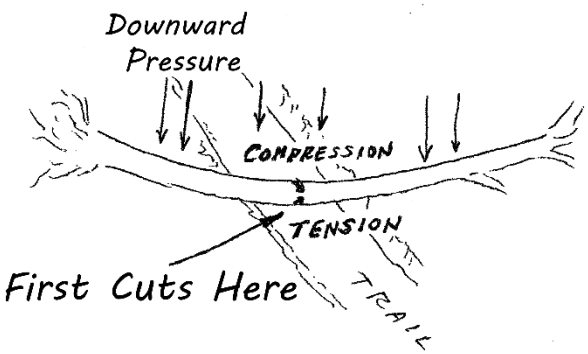
Blowdowns: Blowdowns are full trees or large branches that fall along or across the trail. Because they block the trail, they are a safety issue for both the user and the maintainer. They also provide a path for wildfire to jump across the trail. For both trail user safety and fire management reasons, blowdowns should be cleared from our trails. **Do NOT use a chainsaw to clear blowdowns unless you are a Trail Conference certified sawyer accompanied by a helper (called a swamper).**

The role of the trail maintainer in clearing blowdowns depends on the situation. A maintainer who discovers a blowdown should (1) note its location (GPS coordinates preferred, ideally using Avenza Maps app), and (2) determine who should address the blowdown. Some blowdowns can be cleared immediately by the maintainer, while others are too large or not safe to do so; in these latter instances, a certified chainsawyer and/or trail crew should be called in to do the clearing work.

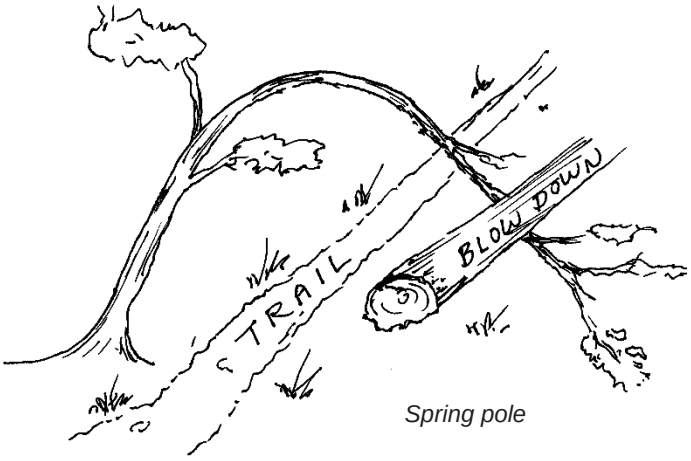
You should report to or seek help from your supervisor when you encounter the following problems:

- Too big: A maintainer carrying an approximately 14-inch pruning saw should be able to clear most blowdowns up to 4 to 8 inches in diameter, depending on your saw and ability level, provided there are no other safety issues. Anything too large to safely clear with hand tools should be reported to your trail supervisor.
- Saw binding: One side of a blowdown will be under tension and the other under compression (see illustrations). Cuts should be made on the tension side of the blowdown. If you are unsure which side is in tension or cannot safely access the tension side with your saw, you may find your saw beginning to bind. If your saw binds, try cutting on the other side. If that doesn't work, walk away and report the situation to your supervisor.



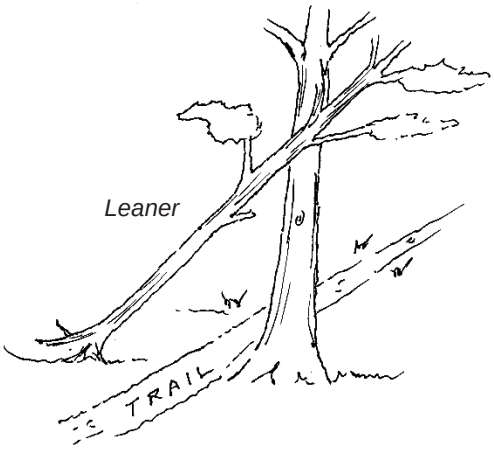


- Spring poles: In some cases, a tree or branch may be bent over severely yet retain its elasticity and be ready to "spring" back to an upright position; see illustration. These instances are dangerous and should only be handled with extreme caution. Gentle tugging from the top branches may release them if you can find a safe place to stand out of the path of the release. Otherwise, it is OK to walk away and report the situation to your supervisor.



Spring pole

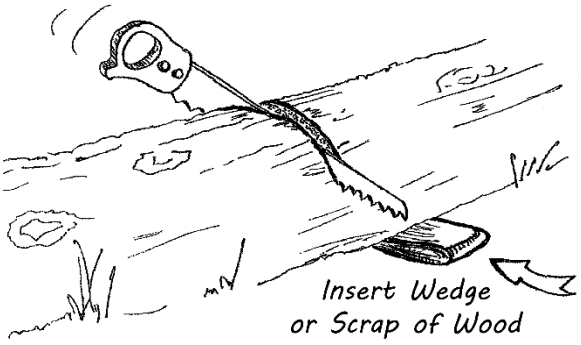
- Leaners: Trees that have partially fallen and are leaning on other trees (see illustration) are unsafe to remove. Leave these in place until they fall all the way to the ground.
- Overhanging branches (”widowmakers”): You may also encounter large dangling limbs over the trail that may fall at any time. Maintainers should make no attempt at removing these, i.e. don’t pull on them even if you can reach some of the branches. Report such hazards immediately so that they can be taken care of promptly.

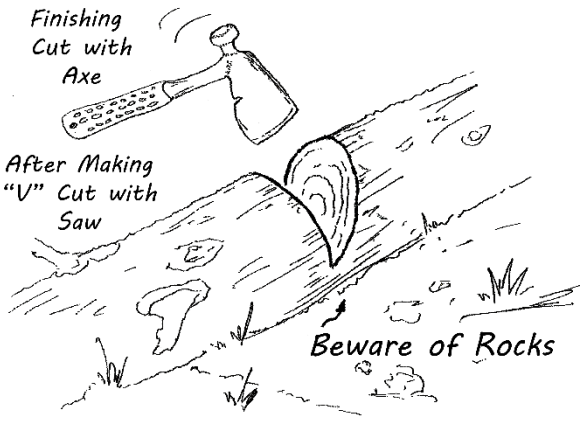


When you make the decision to report a blowdown to your supervisor, consider that it may be some weeks (or months) until a chainsawyer/crew can reach the site to clear the issue. Depending on how blocked the trail is, you may need to clear or flag a temporary alternate route around the blowdown to keep the trail open and safe for trail users.

If you decide to handle the blowdown on your own:

- Be sure to wear appropriate safety gear
- Check your work site for safety, including slope, escape route, ice, snow, or mud, and potential spring poles or widowmakers. Exercise your *walk away* option if you encounter safety issues.
- Be aware of other people. If you are with a group, please be sure your companions stay a safe distance away unless they are directly assisting you under your direction. Also be aware of trail users–do not continue working when people are passing by and be prepared to ask them to pause or direct them to a safe route around your work site.
- Study the tree and make a plan for cutting before beginning work:
    - Clear space around work area of tripping hazards and be sure you have good footing and an escape path.
    - Cut the limbs from the tree so the trunk can be moved when cut.
    - All fallen trees have compression and tension issues which will bind and trap your saw if not understood and handled properly. *Walk away* if you don’t understand where the compression and tension are. Whether the compression is on the top or bottom depends on where the ends are supported, e.g. if supported at both ends and you are cutting in the middle, the compression is on the top (see illustrations). If one end is free, the compression is on the bottom. Cuts should generally be made on the tension





side, clearance permitting, and if the saw cut (kerf) is opening up, keep going. If it is not opening, you may have guessed wrong and should start from the other side. Alternatively, you may be able place a wedge or small branch under the tree to the side of the cut to help keep the cut open as you continue cutting down. Wedges can also be placed in the cut to keep it open as you continue sawing. Another technique is to cut a V with your saw and then use a small hand axe to finish the cut.

- Cut logs are heavy. Squat and lift with your legs. Do not bend over and lift with your back. If too heavy to move, cut it into smaller pieces or come back another day with help.

Rocks: Over time, rocks in the treadway loosen or fall from the edges into the trail and become a tripping hazard. Move them out of the treadway, or request assistance if the rocks are larger than you can handle. If you remove a large buried rock, be sure to fill in the hole with dirt.

Broken branches: One form of natural litter is broken branches. These should be dragged into the woods at the first convenient place, butt end away from the trail. With a little practice, many of these can be kicked off the trail or flicked with a hiking pole without losing your pace.

Fire rings: Unauthorized circles of stone and ashes should be destroyed by heaving the stones into the woods in different directions and sweeping away the ashes. If possible, cover the area with leaves and sticks. Removing all traces of the fire ring discourages repeated use of the area. Make a special effort to discourage all fire rings in hemlock groves, where fire will travel quickly along the flammable surface and the underground roots.

Litter: In some areas, litter is the bane of the trail maintainer. You should be prepared to pick up some litter on every visit. The best time to do a major cleanup is in late summer, when litter is not yet obscured by fallen leaves. Pick up the litter using heavy work gloves and carry it out in plastic bags.

Do not leave litter at the trailhead. Place it where trash will be picked up or bring it home for neighborhood pickup. If you have an unusually large amount of litter or large items that you cannot handle alone, contact your supervisor about organizing a cleanup day or asking the land manager to pick it up.

BLAZING

It is important to have well-blazed trails in order to:

- Help prevent users from getting lost.
- Help keep users on the trail to minimize the environmental impact of users.

A rule of thumb is that on a well-blazed trail, the next blaze should always be clearly visible to the user. The trail should be blazed in both travel directions.

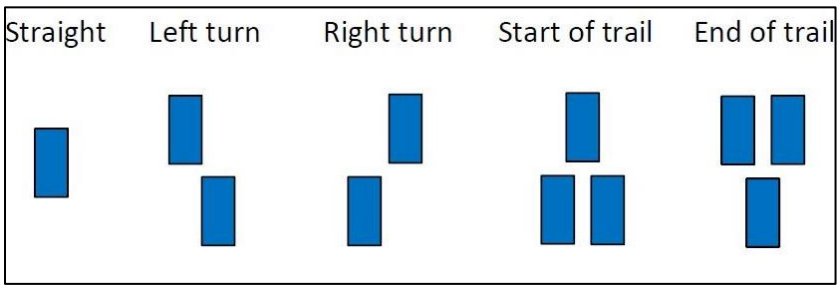
There are two primary types of blazes: painted blazes and tag blazes made of either plastic or metal. The type and color of blazing to be used is generally determined by the land manager, and your supervisor will tell you what type of blazes are to be used on your trail. This section will describe standards common to both types of blazes and then describe detailed standards and methods pertaining to each type of blaze.

STANDARDS FOR ALL BLAZING

Alert signals: Indicate abrupt changes of direction (45 degrees or more), or points where users should be especially alert. Use two standard blazes, one above the other and 2 inches apart; the upper blaze should be clearly offset, preferably 1 to 2 inches in the direction of the turn, but tighter spacing may be required on narrow trees.

Trailheads: The trail termini are marked to indicate the start or end of a trail. The symbol to indicate the start of a trail is two blazes side by side with a third blaze 2 inches above and midway between the first two. The end of a trail is indicated by locating the third blaze below the first two (see illustration). As mnemonics, the start of a trail pattern is like an A or arrow pointing into the trail and the end of a trail pattern is like a V signifying victory.

Side trails: Check with your supervisor to see if you are responsible for blazing side trails to views, shelters, etc. Side trails along the Appalachian Trail are blazed with blue paint.



BLAZING GUIDELINES

- Blazes should be at or near eye level whenever possible. Prune away obscuring foliage so that the blaze can easily be seen at a distance.
- Blazes should contrast with the tree. Dark-barked trees work better for lighter blaze colors and light-barked trees work better for darker blaze colors. Likewise, wide trunks are preferred to skinny trunks, for better visibility at distance.
- Do not under-blaze. You will be more familiar with your trail than will the first-time user. Do not assume others know the way! The user standing at or a few paces beyond a blaze should be able to easily see the next blaze ahead. On straight trails, blazes every 100 to 250 feet are sufficient; on road sections, blaze every other utility pole if present, otherwise blaze trees or other appropriate structures every 100 to 250 feet.
- Blaze more frequently in places where confusion may result if markers are absent.

- Be sure blazes are clearly visible on both sides of road crossings or utility right-of-way passages.
- Blaze trailheads clearly. Finding the beginning of a trail is often difficult for a user new to the area.
- Blaze field crossings along an edge adjacent to the woods, or at least be sure a blaze is visible from across the field. If necessary, use a post (see below).
- If possible, blaze turns just before the turn, not beyond it. Blaze on the side of the trail in which the trail turns. Place a confirmation blaze a short distance after the turn.
- Do not over-blaze. In general, the user standing at or a few paces beyond a blaze should not be able to see more than two blazes ahead.
- Be especially mindful that trails are well marked at intersections, as this is where many people get lost. Be sure that blazes for entering the crossing trail are easily visible from the trail you are on, and make sure that blazes for your trail are easily seen from the other intersecting trail. The goal in this situation would be to allow a user traveling in any direction through the intersection to see both trails and their blazes. Coordinate with the maintainer of the other crossing trail to make sure that both trails and blazes are visible from all directions. Blazes should be as near as possible to the intersection. Keep the intersection well cleared so that the crossing trail itself is easily visible. If possible, the intersection should form a funnel shape into the crossing trail. Walk the intersection in all directions to ensure that blazes for both trails are easily visible. This may require you to do additional trimming on both trails. Sometimes signs or cairns may be used to better mark intersections; see below. Confirmation blazes should be placed just after the intersection, similar to placing such a blaze just after a turn. All intersections are different, and some flexibility will be required.
- Whenever possible, avoid blazing rocks, especially flat rocks on the ground, since such blazes are not visible when there is snow cover. If there are no alternatives, blaze on the side of a large rock where it is easily visible and won't get covered by snow.
- Do not blaze dead or downed trees.
- Avoid placing blazes on highway signs. If you must, blaze the post on the back of the sign, never the front.
- Never blaze fences, walls, or other construction on private property without the owner's permission.
- Check the blazing past the point of your responsibility. For example, if your section ends at a roadway, cross the road and make sure the user can follow the continuation of the trail easily. Report any problems to your supervisor.
- On co-aligned trails, the blazes for the different trails should be one above the other, in the same order, on the same tree. Do not alternate placement. Long distance trails have their blazes on the top. The A.T. blaze has top priority, followed by the Long Path blaze, and then the others.

HINTS FOR BLAZING TRIPS

For best results, plan a separate outing just for blazing. If possible, go with at least two people so that one person can stay further back on the trail and direct the other person as to where best to place the next blaze.

Depending on your direction of travel, you will find that your trail looks very different. Plan to blaze in one direction at a time. By doing so, you can concentrate on the optimal interval and positioning of the blazes for that direction of travel. Be sure the trail is well blazed in both directions.

Do not simply keep replacing old blazes. Take a fresh, objective look at the trail each year; add or subtract blazes as the need arises.

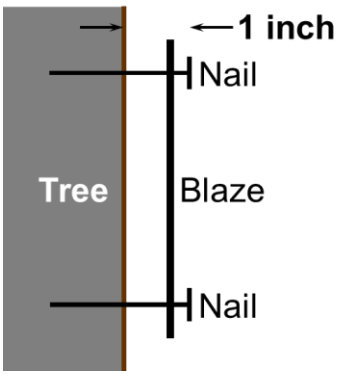
Always think of the safety and informational needs of the user when doing blazing.

TAG BLAZING

Equipment:

- Metal or plastic tags.
- Hammer with claws or specialized nail puller for removing nails.
- 2-inch galvanized steel roofing nails. Longer nails may be required on trees with particularly thick bark, or you can use a scraper to reduce the thickness of the bark before nailing.

Standards: If your trail uses tag blazes, your supervisor will tell you how to obtain the proper blazes. Maintainers must purchase the nails used for attaching blazes. The tags may be either metal or plastic and are often provided by the land manager. Some parks, especially in New Jersey, require tags but do not provide them. In such cases, maintainers fabricate them out of siding or flashing scraps and then paint them. If you need to make tags, consult with your supervisor. Recently, plastic tags with reflective paint have been used in some parklands to improve tag visibility and aid search and rescue teams following trails after dark with flashlights. Here is an example of a typical tag blaze (the one shown is round, but rectangular blazes are also common)



Tag blazes are installed using 2-inch galvanized steel roofing nails, one at the top and one at the bottom. Never place the nails at the sides of the tag. Do not drive the nails all the way in; leave 1inch of space between the tree and the tag to allow for growth. Some parks specify that aluminum nails should be used; your supervisor will tell you if aluminum nails are to be used. Replace blazes that are starting to embed in the tree, or for which the gap between the blaze and the tree is almost gone. Replace damaged blazes and old, faded blazes that are difficult to see at a distance.

PAINT BLAZING

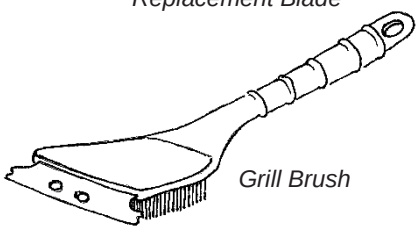
Equipment: Select the equipment you will need for blazing with paint from this list:

- Pack to carry equipment.
- A paint container such as the original paint can or a plastic jar.
- 2-inch foam brush or 1-inch bristle brush for main blaze.
- 1-inch foam brush or 1/4-inch bristle brush for smaller blazes within the main ones.
- Stencils cut to blaze size and shape—particularly useful for small, inner blazes.
- A lid remover tool or a broad screwdriver to open cans.
- Paint or wood scraper and wire brush for smoothing the surface before painting. Wood scrapers come in many designs and sizes, so use the one that you are most comfortable with. The larger scraper shown in the diagram may be more appropriate for larger trees with thick bark.
- Can(s) of appropriately colored paint for neutralizer (see Color section below). Spray paint is effective and easy to use.
- Rags.
- Small plastic bags for used equipment.

Cat's Paw Nail Puller

Combo Scraper and Nail Puller

Paint Scraper with Replacement Blade



Grill Brush

Return to Table of Contents

Standards: The standard Trail Conference paint blaze is an upright rectangle 2 inches wide by 3 inches high for all trails except the Long Path (2x4 inches), the Appalachian Trail (2x6 inches) and the Highlands Trail (3-inch diamond). Triangular-shaped blazes also occur in some parks. Some trails may have a smaller inner design in a contrasting color within the main rectangle, which is usually white. Your supervisor will inform you if your trail has a special blaze.

Appearance is extremely important! Blazes should be the proper size with squared-off corners, without gaps or drips. A blaze that has expanded as the tree has grown should be trimmed back to size with neutralizing paint or a scraper.

Painting blazes is best accomplished on relatively dry, warm days. Do not paint when the temperature is below 50 degrees or when the humidity is very high. If two-color blazes are required, be sure the base color is thoroughly dry before adding the inner design. You should try to apply both colors of a two-color blaze on the same day. Painting a number of trees with the base color, then coming back to paint the inner design, generally works well.

Type of paint: Latex-based exterior paint (or a paint with the primer already in it) should be used. Latex exterior enamel (high gloss or semi-gloss) is preferred. Besides the obvious advantages of easier handling and cleanup compared to oil-based paints, latex-based paints can be readily trimmed with a scraper and painted over. These characteristics are important because blazes sometimes have to be repositioned, reshaped, eliminated, or have their color changed.

Colors: Your supervisor will tell and show you what color paint to use when you assume responsibility for your trail. Do not change the color or blaze configuration for any reason without permission. Avoid darker or lighter color variations. The Long Path (LP) and the Highlands Trail (HT) have distinct, specially formulated colors. See www.nynjtc.org/document/recommended-blaze-colors for recommended paints.

In addition to the color of the main blaze, you will need neutralizing paint to eliminate some blazes and trim others. Select colors to match the tree bark. Almost all bark is a shade of gray or brown. Spray paint can be used as an effective neutralizer, as it allows blending and feathering to give a mottled appearance that is less visible than the sharp edges achieved with a brush. One can of gray and one can of brown make a good combination.

With your scraper, prepare the tree surface for blazing by smoothing an area just large enough for the blaze. Bark that is thicker or has deep ridges requires more forceful scraping. Be careful not to scrape too deeply. Do not over-scrape thin-skinned trees such as birch because they will bleed and destroy the blaze. A Scotch Brite green pad works well on thin-skinned trees without causing damage.

Once the surface is prepared, there are several painting methods that can be utilized as described below. Select the method that works best for you, keeping in mind that uniform appearance and neatness of the blazes is of primary importance.

Brush and can: This is the most widely used method. Use 1-inch-wide bristle or 2-inch-wide disposable foam brushes for painting the main blaze. Use smaller foam or bristle brushes for inner design. Always paint the last stroke in an upward direction to collect potential drips.

Squeeze bottle: Some people prefer using a squeeze bottle instead of an open paint can. Here you can use plastic squeeze bottles to apply paint to the brush in small amounts. This method is very neat, provided you squeeze carefully!

Stencil: A stencil, or template, cut to the exact dimensions of the blaze can be used to ensure uniform blazes. Use the template to gauge the proper size of a blaze. Do not paint through the template. A template can be made from cardboard or thin plastic, such as from the side of a Clorox bottle. For inner designs, the template can be used to trace the design onto the tree using a pencil. The outlined design can then be painted with a small brush.

Foam pad: Some people prefer using foam pads, especially for inner designs. Make the foam pad the

exact size of the blaze and dip it in a paint box constructed of wood or plastic. Smooth the paint on the pad by rubbing it on a small board or dowel attached to the inside of the paint box. Push (don't rub) the pad against the tree. Fill in any voids with the edge of the pad. Carry two or three extra pads, as the foam tends to lose its resiliency. This is a fast and sure method, with little cleanup needed.

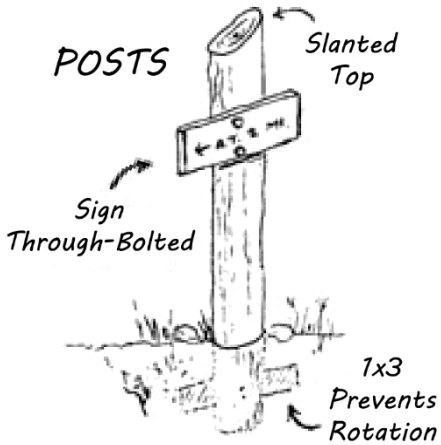
Keep rags or paper towels handy for drips and spills. Use plastic bags and twist-ties to pack out dirty rags, brushes and paint containers. You will need some handy method to carry and access your painting supplies as you are blazing. A sealable rectangular freezer container or a small pail with a handle are two good options.

SPECIAL TRAIL MARKINGS

Special markings for trailheads, trail crossings, views, water, shelters, and other purposes are sometimes helpful, but unfortunately are subject to vandalism. Use all of them sparingly. Keep them neat and in character with their surroundings.

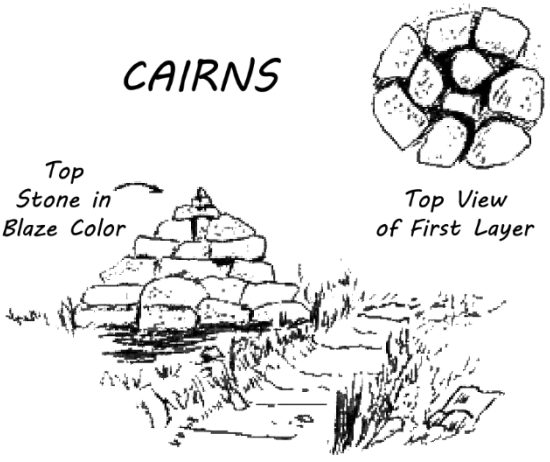
The upkeep of signs, posts, and cairns as discussed below is the responsibility of the maintainer. A maintainer may install or replace them if he or she has the physical strength and ability to do so. If not, contact your supervisor, who will arrange for the necessary work to be done.

Signs: Some land managers permit signs while others do not. Your supervisor will inform you of your land manager's policy. Particularly, to help prevent users from getting lost, some parks are now putting up signs with numbers on them at intersections, where the numbers correlate to those on a map. If signs are permitted, keep signage to a minimum. Discuss the necessity for and placement of any new signs with your supervisor before installing them. Maintain existing permanent signs and remove unauthorized signs. Mount signs where they will be seen easily, but high enough on a tree to discourage vandalism. Use galvanized roofing nails for mounting.



Posts: Use 4x4 pressure-treated lumber or locust or cedar posts whose bark has been stripped. Cut the top at an angle to prevent rapid rotting. A length of 1x3 nailed to the post near the bottom will prevent rotation or easy removal once the post is buried. Use posts for blazing treeless areas and for barring vehicular access.

Cairns: Cairns are small rock piles used to mark trails in treeless areas. They may also be used at trail crossings so users do not miss the cross trail. Place base rocks in a circle, fill in the center with smaller stones, and build to a point high enough to be seen above surrounding vegetation. Paint the top stone (6 inches or less) with blaze color. **Check with your supervisor if cairns are permitted or encouraged in your park.**



Return to Table of Contents

TREADWAY REHABILITATION

Ideally, the treadway should be 24 to 30 inches wide, firm, and dry. Treadway problems that maintainers frequently encounter include:

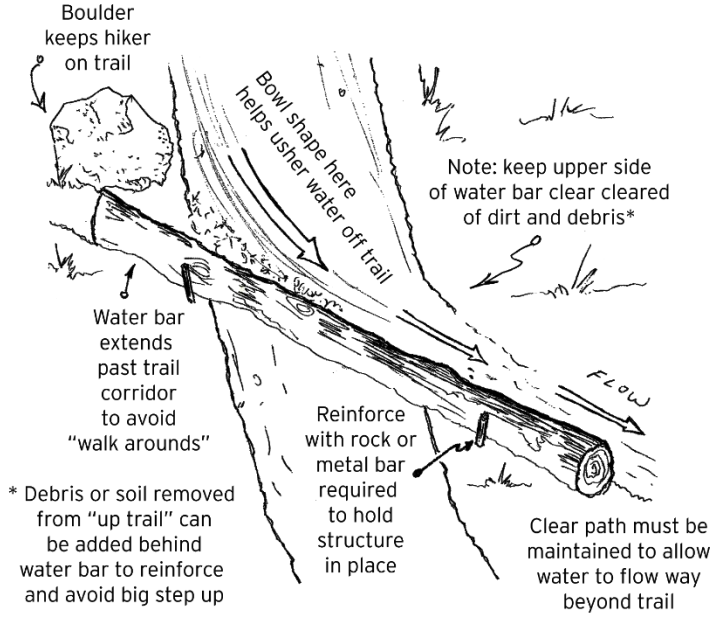
- Soil compaction from overuse, leading to cupping of the trail and consequent water erosion.
- Deterioration of sidehill trails from natural sliding and wearing of the outer edges.
- Widening of routes through swampy areas and around obstacles as users choose the path of least resistance.
- Shortcuts that cut through switchbacks
- Alternate “walk-around” paths that bypass trail structures such as waterbars, checkdams, or rock steps.
- Wet areas on the trail

If you observe such conditions on your trail and are unsure how to resolve them or are unable to do so, report them to your supervisor.

The structures and techniques described below are frequently used in constructing trails and addressing treadway problems. They are described here so you can recognize them, maintain them properly, and determine when they need repair. These structures are usually built by trail crews rather than individual maintainers. If you want to construct these structures, be sure you know how to construct them properly. Classes in trail construction may be located on the Trail Conference website at www.nynjtc.org/events.You are also encouraged to join a trail crew to learn these techniques or to seek advice from your supervisor.

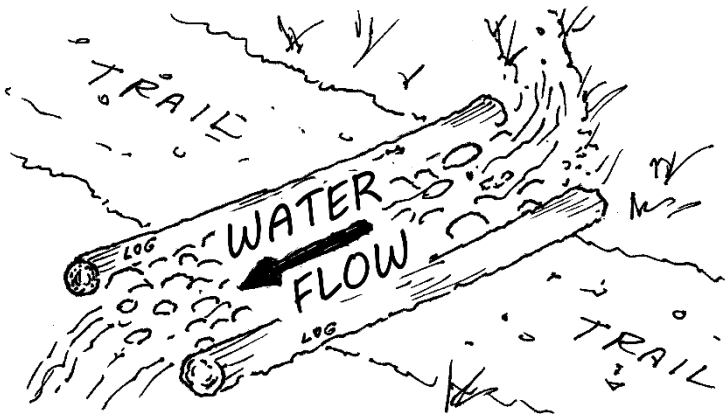
Waterbars: One choice for erosion control on steep, compacted slopes is a log with a minimum diameter of 6 to 8 inches, half of which is set below the surface, placed at a 45-degree angle across the trail. The downhill side of the log should extend completely off the treadway, so that water coursing down a cupped trail will flow off the route and not along it. The steeper the slope, the more waterbars are needed. An alternative to using a log is a tight line of stones embedded in the treadway at the proper angle.

Waterbars require maintenance on each trip if they are to be effective (see illustration). A waterbar that is not maintained for a length of time may become filled with sediment that will need to be excavated to restore proper function. When visiting your trail, check that waterbars are clear of debris on the uphill side. You can often use your boot, a small hand shovel, or a mini pickaxe to clear debris from behind the waterbar and restore the original trench depth. The outlet off the trail should be made clear to ensure free-flowing runoff. Check that the reinforcements below the waterbar, either rocks or metal stakes, are in good condition. Adjust or replace those if possible, otherwise report the damaged waterbar to your supervisor.



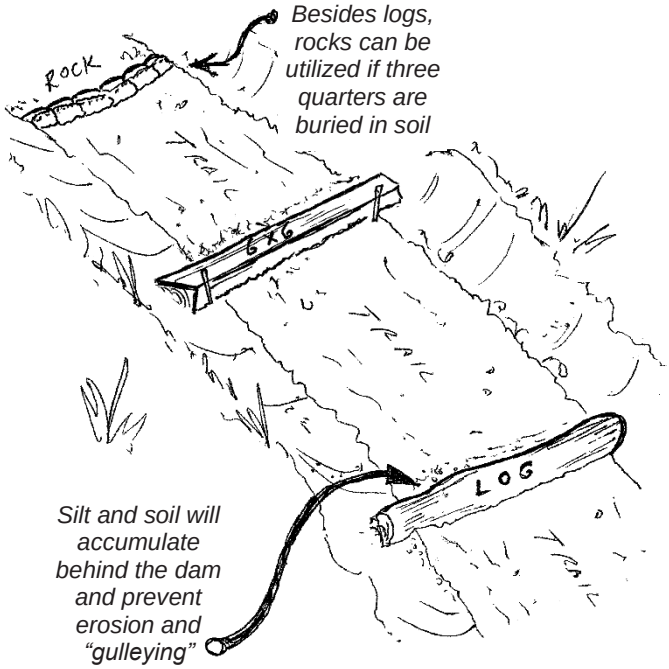
Return to Table of Contents

Look for a “walk-around” alternate trail that users may have made to avoid the waterbar. Such walk-arounds can lead to further water problems. Add rocks along the side of the trail to discourage the use of such walk-arounds.



Culverts: Culverts are similar to waterbars but are generally deeper and used when water flows across the trail rather than down it. Keep the culvert clear of debris so that water passes through the culvert rather than spilling onto the trail.

Checkdams: Right-angled waterbars are checkdams intended to hold back soil. These are used in areas which show severe gullying. Rocks or staked logs may be placed across the trail at right angles to slowly catch earth washing down the trail and rebuild the path back up to its original height. Do not clear checkdams. Take notes on the conditions of checkdams along your section. Report any problems, such as rotting or missing wood, on your trail report. Loose rocks should be placed to the side of the trail, so they are not a hazard to users, and possibly reinstalled later. As with waterbars, look for and discourage the use of walk-arounds.

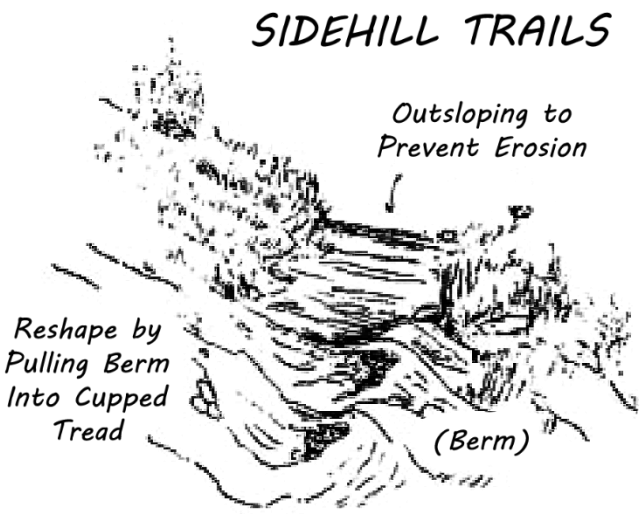


Waterbars and checkdams built with rock will last much longer than those built with timber, but they require specialized skills to construct. This work may be best suited for your local trail construction crew. Joining the local trail crew when repairing problems on your section is encouraged, and trail crews should notify maintainers and invite them along when working on a section.

Drainage dips: On shallow slopes, a 1-foot-wide ditch, 6 to 8 inches deep, with soil mounded and compacted on the downhill side, will direct water off the trail. This angled ditch should be cleared of anything blocking the flow of water off the trail.

Turnpiking: This is an elevated, hardened treadway which may have gaps cut into it where water flows. It is used in regions of poorly drained soil and may be an alternative to steppingstones. Check that the elevated portion does not become a like a bathtub, collecting water. As with waterbars and culverts, the gaps should be cleared of debris. Replace any rocks that may be missing around the elevated treadway.

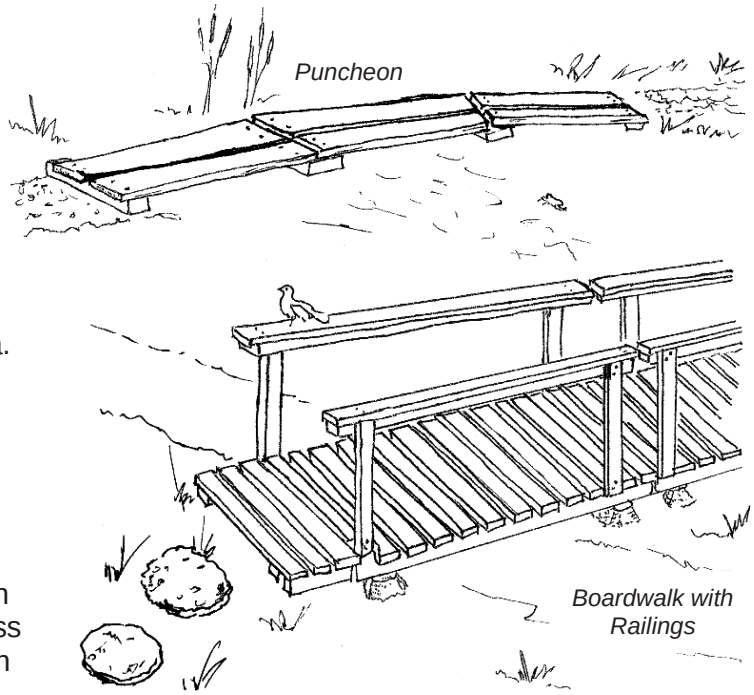
Sidehill restoration: If a sidehill trail gets compacted and cupped from overuse, erosion from water will accelerate, leaving an unsightly gully. Reshape the trail by pulling dirt from the outer edge back across the treadway. Rocks placed along the outer edges at intervals will direct users toward the center of the trail and discourage excessive wearing of the edge. The trail should be slightly out sloped so water runs off it and not along it.



Log crib: In places where water runs downhill across the trail and threatens to cause a washout, a length of log across the watercourse would be placed just off the trail on the uphill side. It is important to inspect these to ensure that they are continuing to function.

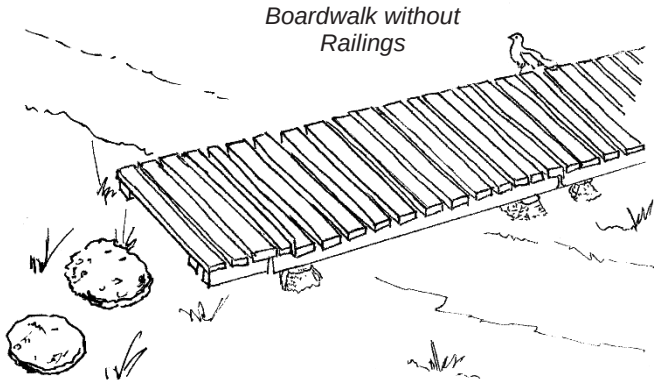
Switchback shortcuts: Users sometimes cut across switchbacks to shorten their route, which leads to severe erosion. Discourage shortcuts by blocking them with cuttings, logs, or rocks. Pay special attention to blazes in this area and make using the switchback the most attractive route. This applies similarly to any place where users are bypassing the trail and causing erosion, such as alongside steps.

Swampy areas: Users will naturally try to avoid mucky sections of trail by walking around them, resulting in ever-wider swamps. It may be possible to relieve wet conditions by digging a ditch 1 foot wide and 1 foot deep to direct water to another spot. If you bring along a simple hand mattock, or a small garden hoe, you can sometimes dig a sufficient ditch to alleviate minor issues and dry out the trail. If not, place flat- topped stepping stones in the boggy area. Larger spots will require construction of log walkways or stepping stones. Take notes and pictures of the area and report them to your supervisor.



Bridges: These are major construction jobs. Bridges should be checked on each trip for broken decking or other obvious problems. On your walk through with your supervisor, discuss what needs all the bridges on your trail section have. In most cases, you should notify your supervisor of problems and the trail crew will make repairs. You may make minor repairs if you are able to do so, but you should report them immediately to your supervisor since they may be indicative of more serious problems with the bridge.

Puncheon/Boardwalk: These are “bog” bridges over wetland and need the same checking as bridges (above). Puncheon are long boards parallel to the trail on top of support boards called sleepers. Boardwalks are short boards perpendicular to the trail, like planking on bridges, on stringers, which are sometimes on sleepers. The sleepers tend to sink into the wetland and may need rocks or scrap wood put under them to re-level. Boardwalks sometimes have a handrail.


Boardwalk without Railings

Shelters: If there is a shelter on your trail, keep it free of litter and be sure that any side trails to water and privies are well marked. Report any needed structural repairs to your supervisor. In some cases, shelters have a Trail Conference-designated caretaker who assumes these and other responsibilities.

Other construction: Check steps and other construction, such as stiles, for signs of deterioration or damage. On wooden structures, inspect wood for rot. On stone steps, check for loose or missing rocks. Repair what you can, and report problems to your supervisor. If possible, remove leaves and loose gravel from stone surfaces such as staircases to help prevent slipping. If you see water accumulating on a stone step, report it to your supervisor since the step may need resetting to make it more level.

Register boxes: These boxes that contain logbooks are found infrequently. They are used to record trail user comments and to compile trail use figures. Your supervisor will give you instructions if your trail has a register box.

Relocations: Sometimes trail problems are best solved by relocating a section of the trail. Options to improve the current trail, such as placing stepping stones in wet areas, should be considered before a relocation is considered. Nearly all relocations require approval by land managers and/or Trail Conference leaders. Maintainers should discuss proposed relocations with the supervisor to determine the approval process for a particular trail or park.

Trailhead and parking area: Report any problems noticed in parking areas to your supervisor. Examples include large litter problems, damage to trail kiosks and signage, and access issues.

INCOMPATIBLE USES

Encroachment: Trails on private land are most subject to this danger, usually in the form of building construction. Trails may also be affected by power and gas line construction, dumps, lumbering, and other incompatible activities. Should you discover that the trail is in danger of being obliterated (the appearance of surveyor’s stakes is an early clue), immediately notify your supervisor and the Trail Conference.

Vehicle use: Motorized, off-road vehicles are not permitted on Trail Conference-maintained trails in New York and New Jersey, except on sections where the trail is on a public road. Large rocks or posts at trailheads may discourage off-road vehicles. If you observe an off-road vehicle on the trail, do not confront the operator, but try to get a license number or other identifying feature and promptly report the incident to your supervisor and the land manager. Take notes on areas that motorized vehicles are approaching the trail. This information will help land managers and Trail Conference.

Bicycles and horses: Bikes and horses are allowed on some, but not all trails. Understand what the rules are for your trail; your supervisor can explain them to you. If you see uses that are not permitted on your trail, don't get into a confrontation with the user, but report it to your supervisor and/or the land manager.

Illegal wood cutting: Do not confront illegal wood-cutters, but try to get a license plate number and immediately report the incident to your supervisor and the local police.

Hunting: While hunting is permitted on some of the land covered by the Trail Conference, it is not allowed on many of the trails we maintain. Be aware of the hunting policy on your trail. Never confront a hunter. If you see an illegal hunter or signs of illegal hunting, such as arrows, hunting stands, or animals injured or killed by hunting, immediately report the incident to your supervisor and the local police. If your park does permit hunting, it is strongly advised to wear brightly colored clothing, such as "blaze" orange, during the hunting season to make yourself more visible to hunters.

Unauthorized trails: Should you discover a marked or unmarked trail that you suspect has not been authorized by the land manager, you should generally take no immediate action but report your findings to your supervisor as soon as possible. In certain cases, such as when a short alternate route leaves and then comes back to the trail, the maintainer may discourage its use by placing logs alongside the trail or to simply hide the alternate route by covering it with branches or other vegetation.

Graffiti and vandalism: These should be reported to your supervisor immediately. Take notes and pictures to document damage. Photographing identifying symbols, such as hashtags and account names (@ symbols), could possibly be used by authorities. Work with your supervisor and landowner to remove graffiti as soon as possible to discourage more graffiti.

EDUCATING TRAIL USERS

While you are out maintaining your section of trail, you can further aid the Trail Conference by encouraging users you meet to care for our natural environment. Consider carrying Trail Conference brochures to hand out and appropriate trail maps to show passers-by who may ask for guidance and wearing clothing with the Trail Conference logo when you are working on the trail. People will be naturally curious if they see you with your tools and gear. If they ask you questions, explain the work that you are doing, and educate them in a friendly manner how they can help.

Some ways to educate trail users:

- Encourage them to stay on the trail, especially in fragile areas.
- Discuss principles of Leave No Trace, such as not littering and packing out what they pack in.
- Explain the Trail Conference's mission. You can mention that the Trail Conference is a nonprofit organization with over 2,000 volunteers working with parks around the region to care for trails and natural areas. Our goal is to help people have great, safe experiences outdoors. Please point them to our website:www.nynjtc.org.

You might even suggest to other users that they get involved in the work of the New York-New Jersey Trail Conference by volunteering or donating to the Trail Conference. Above all, teach by example—by keeping your trail in superb condition.

INJURY AND INSURANCE PROTOCOL

While the Trail Conference makes every effort to emphasize and support safety, the nature of the work may result in accidents. Before starting work, each individual should know what steps to take in the case of an injury. All referenced forms can be found at nynjtc.org/incident.

A volunteer's primary insurance should be their personal medical insurance. Limited insurance coverage from the Trail Conference is available if needed. The Trail Conference insurance is secondary insurance and will cover any out-of-pocket costs that arise and are not covered by a volunteer's primary insurance. If a volunteer does not have insurance, the Trail Conference's policy provides limited medical expense benefits on a primary basis, up to the limit noted in the Volunteer Insurance Coverage Grid section of the Trail Conference Injury Protocol and Insurance Information PDF file located at https://www.nynjtc.org/incident. We encourage you to take a blank injury form with you.

Steps to Follow in the Case of an Injury

1. Assess the situation and risk. Call 911 if necessary.
2. Administer first aid and care within the scope of your ability and training. The person with the highest level of first-aid training should take charge of administering care.
3. If the injury is serious, seek professional medical attention.
4. Notify the injured person's emergency contact if necessary.
5. If the injured individual refuses care, they must sign a Refusal of Care Form after they are deemed to show no evidence of an altered state of consciousness that impairs judgment by completing the assessment on the Form. (See www.nynjtc.org/incident for the Refusal of Care Form.)
6. Volunteers: Limited insurance coverage is available if needed. If the injury is not serious, notify the Trail Conference before seeking medical help to sort out insurance. (See www.nynjtc.org/incident for the Volunteer Insurance Coverage Grid.)
7. Report the injury to the Trail Conference and file a Personal Incident Report within 24 hours or the next available business day, even if medical treatment is not sought.
    a. Phone calls should be made directly to the Trail Conference:
        i. If the involved parties are volunteers, contact the Volunteer Engagement Manager at **201-512-9348** ext. 841.
        ii. If the involved parties are paid full or part-time staff, contact the Finance and Operations Manager at **201-512-9348** ext. 823.
        iii. If the involved parties are Conservation Corps Members, contact the Conservation Corps Manger at **201-512-9348** ext. 819.
        iv. If the above contact is unavailable, make sure to leave a message, then call the office at **201-512-9348** and select 0 to be connected to the general line.
    b. Document the injury via a Personal Incident Report, even if medical treatment is not sought (See www.nynjtc.org/incident for the Personal Incident Report):
    c. Email reports to volunteer@nynjtc.org for any volunteer or staff-related incidents; or drop off at Headquarters.
    d. If a volunteer-related injury occurs while working on the Appalachian Trail, fill out the Appalachian Trail Conservancy's incident report and send it to both the Trail Conference and ATC. This report can be done in place of the Trail Conference Personal Incident Report.
    e. If a volunteer-related injury occurs while working on New York State Office of Parks, Recreation and Historic Preservation (OPRHP) land, fill out the OPRHP incident report and send it to the Trail Conference. This report should be done in addition to the Trail

Conference's Personal Incident Report.

f. If a volunteer-related injury occurs on National Park (NPS), Palisades Interstate Park Commission (PIPC), New Jersey Department of Environmental Protection (NJDEP), New York Department of Environmental Protection (NYDEP), or New York Department of Environmental Conservation (NYDEC) lands (etc.), the Trail Conference office or elsewhere, additional paperwork may need to be filed. Complete the Trail Conference Personal Incident Report first, and then the Trail Conference will determine if additional reports need to be filed.

8. The Trail Conference staff will notify all appropriate entities.

ENVIRONMENTAL MONITORING

Maintainers need to be aware that maintenance activities can have positive and negative impacts on the environment and cultural sites. Well-designed and maintained trails avoid sensitive habitat, reduce erosion, and limit any other user impacts to the treadway and immediate surroundings. Becoming informed about these issues will enhance your trail maintenance experience.

You may be able to reduce impact by:

- Taking every opportunity to provide a dry, stable treadway that prevents erosion and encourages users to stay on the trail
- Being extra sensitive to trail routing and maintenance in vulnerable areas, such as streams, wetlands, and steep slopes
- Minimizing disturbance of wildlife (e.g., nesting birds, basking rattlesnakes, rare plants, etc.) and reporting all sightings of rare species to park personnel
- Avoiding removal of stones from foundations, walls, and other historical structures
- Reporting all illegal use (motorized vehicles, poaching and collecting, etc.) to the land manager (e.g., park agency) or your supervisor as soon as possible. Also notify the Trail Conference using the Contact Us link at the very bottom of most web pages for less urgent issues.
- Becoming better informed through Trail Conference environmental programs. Check the Trail Walker and the Trail Conference web site www.nynjtc.org for more information.
- Invasive, or non-native, species have a strong presence on many of our trails. We encourage you to become more knowledgeable about invasives and how to control them. If you want to learn more about invasive plants and insects, including how to identify and properly remove them, the Trail Conference offers courses on invasives and has documentation about them at www.nynjtc.org/invasives.

WEB ACCESS AND YOUR DASHBOARD

This document, as well as other key resources and forms (safety documentation, reporting form, other policies) may be found online at the Trail Conference website www.nynjtc.org. As part of signing up to be a maintainer, you should be a registered user of the website and know your username and password. If you aren't already registered, go to www.nynjtc.org and click on the Menu item, which is currently in the upper right, and then select Login, which will give you an option to create an account. After doing so, notify your supervisor, who will then advise the Trail Conference staff that you are a maintainer. This will give you access to the appropriate information on the website's "Dashboard." If you are not registered, all the instructions in this document that talk about information on the web will not be available to you and you will have to contact your supervisor for such information.

To access these documents, you will need to log into the website; click on the Menu item and then click on Dashboard (top right column) or going directly to, www.nynjtc.org/dashboard. All appropriate forms and documents should be available to you there. Scroll down and most of what you want is either in Common Resources or Maintainer Resources. If you have any problems with web issues, send an email to volunteer@nynjtc.org so that the issue can be promptly addressed by the appropriate staff person.

VOLUNTEER SERVICE AGREEMENTS

Many land managers require volunteers to complete a Volunteer Service Agreement (VSA) so that they will be covered by the park's insurance/workers comp policies should an injury occur. These include:

- All volunteers who work in parks managed by the New York State Office of Parks Recreation and Historic Preservation (OPRHP) must complete an annual Volunteer Service Agreement (VSA). This form may be found at www.nynjtc.org/document/volunteer-service-agreement-oprhp.
- The New York State DEC also requires a VSA when working on DEC lands in the Catskills or along the Shawangunk Ridge Trail. This form may be found at www.nynjtc.org/document/dec-volunteer-service-agreement.
- The Appalachian Trail (A.T.) currently does not require a maintainer to sign a separate service agreement. This may change in the future and your supervisor will notify you if it does. If you bring friends along you need to notify your supervisor.
- Other parks may have similar forms; check with your supervisor.

Contact your supervisor if you are unsure which VSA(s) you need to fill out. Your supervisor will advise you if there are any additional requirements for the park in which you are working.

CHECKLIST OF WHAT A MAINTAINER SHOULD KNOW

Generally, the supervisor will walk the trail with a new maintainer to describe what needs to be done and how best to do it. This checklist can help ensure that you know the information necessary to carry out your responsibility as a volunteer trail maintainer. Do not hesitate to ask your supervisor if you have any questions. Thank you for volunteering!

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	Background about the NY-NJ Trail Conference and how it organizes trail maintenance
	Exact trail or part of a trail which is to be maintained and how to get to it
	Known trail problems when the maintainer takes on the trail and how to address them
	How often and when during the year you should walk the trail
	How frequently and how to record and report your trail maintenance work
	Safety precautions for trail maintenance work
	Appropriate trail maintenance tools for your trail section, including whether or not light power tools are permitted
	Proper methods of clearing vegetation, including cutting blowdowns
	How to report blowdowns too big for you to handle or other trail problems
	How to properly blaze the trail
	How to get tags or paint for blazing and proper paint color for paint blazes
	How to inspect and maintain trail structures such as waterbars
	How to address wet areas, proposed trail relocations, and other trail problems
	Knowing whether activities such as biking or horseback riding are permitted on your trail
	What to do if you see motorized vehicles on the trail or other improper activities
	How you can educate trail users you meet and promote the Trail Conference
	How to minimize the environmental impact of the trail and report problems
	Necessary precautions if there are endangered or threatened species near your trail
	Reporting injuries; insurance available for maintainers
	Get contact information for maintainers at both ends of your section and crossing trails to help better coordinate blazing and maintenance
	What Volunteer Service Agreements need to be signed
	Where is the nearest hospital

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