

## SLA Trail Adopter's Report - 2005

Trail: \_\_\_\_\_  Level I  Level II

Adopter(s): \_\_\_\_\_

Date(s) checked/maintained: \_\_\_\_\_

Total number of hours: \_\_\_\_\_

What type of trail work have you done *(for example: cleaning waterbars, removing blowdowns)*?

Identify any problems along your trail that should be corrected immediately *(for example: large blowdowns that obliterate the treadway, loose waterbars or difficulty following the trail because of logging)*.

Identify any sections which should be improved within the next year *(for example: treadway getting muddy or overgrown)*.

What is the general condition of your trail?

Is the blazing adequate?

Make a list of any missing or dilapidated signs.

*Please return this report as early as possible to SLA, PO Box 204, Holderness, NH 03245., or enter the report from the trails section of the SLA website: [www.squamlakes.org](http://www.squamlakes.org).*

## Responsibilities

### Level I Trail Maintenance

This involves clearing dead and live vegetation from the trail. On less popular routes it is a never ending task. A properly cleared trail is one that you can hike after a storm and not get wet from hitting branches. Once a trail is thoroughly cleared or 'standardized,' it should not need further trimming for several years; but we live in the Northeast, folks, and everything out there is growing all summer long. If regular maintenance is deferred for too many years, you will discover that your assignment has turned into a chore and that it will take you or a trail crew days, not hours, to complete.

### Level II Trail Maintenance

Nearly every popular trail on sloping terrain is a candidate for erosion. It is characterized by bare, compacted soil in a narrow ditch which channels the water for long distances. Runoff during a thunderstorm can be substantial, and inevitably the ditch widens and deepens. Drainage ditches which divert the water off the trail do more to prevent that from happening than anything else. They protect the both trail and the land over which it leads. To prevent the sides of the ditch from being broken down by foot traffic, log or stone waterbars are placed on the downhill side of the ditch.

A two-person trail crew can build two to four waterbars a day, depending upon the availability of suitable materials. Over a ten-year period, SLA has installed drainage on all its major or heavily used trails, and that adds up to a substantial investment. As an adopter, your job is to make sure that those waterbars continue to divert water off the trail as intended.

- 1) You should hike your trail in May or June to clean out accumulated silt and leaves from waterbars and ditches. ***This is your most important assignment.*** It is always helpful if you can complete any needed work outlined in #2, #3 and #4 early in the season, but #1 is a job that must be done by someone before the first heavy summer downpour. The goal is to prevent water from running down the trail.
- 2) Winter blowdowns must be removed, but this assignment is usually of secondary importance. Often it does not matter when they are cleared away, but it is best if this work can be done by the middle of summer. Take with you a bow saw to cut up small trees. Leave the mighty oak to SLA's chain saw.
- 3) At almost any time of year, vegetation that has grown in from the sides can be cleared back. Ideally, it should be possible to hike a trail after a rain without getting wet from brushing against branches that have grown into the trail corridor. Major clearing is presently not needed on Level II trails.
- 4) The lowest maintenance priority for a Level II trail is usually reblazing. If hikers appear to be wandering off the trail at one or two locations, it is often possible to direct them by piling rocks, logs and fallen limbs.

### Equipment

Adopters are asked to provide as many of the following tools as possible: an axe, a pruning saw, a pair of clippers and, as necessary, a garden rake or adze hoe for cleaning drainage. SLA will supply all paint, scrapers, brushes and rags when needed.

You may wish to use a chain saw, and in some cases a brush cutter is very useful. These power tools, while indispensable in certain situations, sometimes have wills of their own. Do not use them if you are not familiar with them.

## Trail Adopters in 2005

### Rattlesnakes

Old Bridle Path •	Dave Eastman (UNH)
Ramsey Trail •	Sarah Sherrill
Pasture Trail •	Sarah Sherrill
Col Trail	Betsy Whitmore
East Rattlesnake Trail •	Sharon Boreggaard
Butterworth Trail	Betsy Whitmore
Ridge Trail	Sharon Boreggaard
Five Finger Point Trail	Dave Eastman (UNH)

### Red Hill

Eagle Cliff Trail:	
below Eagle Cliff •	Bryant & Carolyn Tolles
above Eagle Cliff	Don Mayer
Teedee Trail	Bilodeau family

### Sandwich Range

Algonquin Trail •	Friends of the Sandwich Range
Black Mountain Pond Trail:	
To Black Mountain Pond •	
From pond to Black Mountain •	Chuck Braxton
Mead Trail •	Bob Shultz
Wentworth Trail •	Boy Scout Troop 23

### Squam Range

Cotton Mountain Trail	Rick Fabian
Crawford-Ridgepole Trail:	
Cotton to Prescott Trail	Rick Fabian
Prescott Trail to Old Mtn Road	Earl Jenkins, Tony Wagner & Jim Sanford
Old Mtn Rd to Mt. Morgan	Camp Deerwood
Morgan to Percival	Ben Farmer
Percival to Doublehead	David Engels
Doublehead to Sandwich Notch •	Mark Tuckerman
Old Highway	
Old Mountain Road	Tony Wagner & PJ Blankenhorn
Prescott Trail	Earl Jenkins, Tony Wagner & Jim Sanford
Mount Morgan Trail •	Frank & Gillian Aguilar
Mount Percival Trail •	Amy Morse & Alisoun Hodges
Doublehead Trail •	Charles Rand

### Belknap Woods

Beaver Pond Loop	Charlie Seymour
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### Chamberlain-Reynolds Memorial Forest

Chamberlain-Reynolds Trails	Jim Colthart
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- Trails or sections which require Level II maintenance (see page 3 for explanations)

## Trail Clearing

Without a regular clearing, all but the most heavily used trails can become overgrown in just four to five years. The proper width for a cleared trail varies with terrain and vegetation. A four to six foot clearance suffices in most situations. Normally a trail is cleared to a height of eight feet or as high as one can reach.

Low shrubs and young trees should be cut close to the ground for aesthetic reasons to prevent tripping and to keep stumps from sprouting. Avoid leaving potentially dangerous, pointed stumps. Low growth should be removed back to the outside edge of the cleared trail. Annual growth such as ferns can be left to die later in the summer and fall, unless it is particularly thick and aggravating.

Special attention should be paid to small softwoods and to the lateral branches of larger softwoods. Their needles become wet on a misty mountain day, and if brushed they get hikers wet quickly. Limbs on these trees should be cut flush with the trunk or stem. Stubs are ugly and they can create annoying snags for packs and clothing. Lateral branches growing toward the trail should be cut back to the limb growing parallel to the trail. If trees are pruned in this way rather than being indiscriminately chopped, 'sucker growth' will be reduced. Sucker growth occurs when a root system geared to provide nutrients to a tree of a certain size causes increased growth in the remainder of the tree when a large part is removed. By leaving growth directed away from the trail, future maintenance requirements can be reduced.

If a short treetop has to be removed, it is generally better to remove the whole tree, since removal of the terminal bud will accelerate lateral growth into the trail and leave an unsightly tree. Cutting all lateral branches on the trail side is the second best option — still better than cutting off the top of the tree only. Note that selective clearing along a trail can be a means of directing hikers or keeping them from following certain routes — such as short-cutting across the end of a switchback.

Care should be used when clearing trails on ledges along high ridges or on tops of mountains where the climate is severe and growth rates are very slow. Trees three to four feet tall can be sixty to seventy years old. Small trees and shrubs at such locations grow in interdependent communities called 'krummholz.' Removal of one tree in a patch of krummholz can jeopardize the other ones which join roots and branches in protection against wind and cold. In these areas, the cleared width of the trail should be reduced to three or four feet. Prune limbs rather than completely cut trees or ground vegetation.

A good clearing job can be completely nullified if branches and debris are not removed from the trail. (In certain areas, flat brush may be utilized to make a small, muddy area passable.) Brush left in the trail can obscure roots, rocks and holes in the trail. Pick up all branches, trees and debris and scatter them off the trail. Piles should be avoided because they are unsightly and can create a fire hazard. Downed trees are best dragged butt first until the top is completely off the trail. This will also serve to conceal the tree from hikers. Large limbs and small trees can be thrown clear of the trail, provided they do not hang in the branches of shrubs and trees next to the trail or stick out butt first.

Long-handled clippers (loppers) and bow saws are the most commonly used tools for this work.

## Scree Wall Maintenance

Scree (small rocks and brush) is placed alongside most rock and log steps to contain hiker travel in the middle of the trail and on the steps. Without it, hikers will sometimes avoid steps, no matter how well placed, and walk along the sides, eventually causing steps to be undermined. Scree is also placed alongside waterbars and some stretches of exposed trail to define the treadway and to contain traffic.

Maintenance of these small walls or bands of scree simply involves removing scree that has fallen into the trail or onto steps and replacing it along the sides. If evidence exists of people stepping over existing scree walls, make them higher.

In areas where rock or log steps do not have scree and it appears that some is needed to keep people on the trail, you can gather various-sized stones and place them on both sides of the steps. Use only loose rock already in the trail or gather it off the trail and out-of-sight. Large rotten or gnarled logs will do the trick also. Only a few are necessary. A pile of brush or rock three feet high is not needed to persuade a tired hiker that it is easier to stay on the trail. However, do not use small pieces of dry brush because they are too easily removed.

## Shortcuts and Bootleg Campsites

Should you come across shortcuts or places where hikers have been cutting corners or switchbacks, first look to see if you can figure out why it is happening. Sometimes a blowdown will force people to take a different route, or a blaze or cairn in the wrong place is incorrectly directing people. Correct the problem, if one exists, and then brush over the reroute or shortcut. Use large rotten or gnarled brush and logs gathered off the trail and out-of-sight.

Tentsites beside the trail should be brushed in to discourage further use and to encourage revegetation. Most SLA trails are on private property where camping is not allowed anyway. Camping is permitted within the national forest, but some locations, such as Black Mountain Pond, are suffering from excessive overnight use. At such places, camping should be discouraged. One way to do this is to break up and disperse fire-rings and ashes (make sure the ashes are cold). Pick up litter and brush over the site with large rotten and gnarled logs and brush gathered away from the trail.

## Maintaining Trails in a Wilderness Area

Part of two SLA trails are in the Sandwich Range Wilderness: the Algonquin Trail and the Black Mountain Pond Trail. Maintenance standards are different on those portions that lie within the wilderness. For example, trails should be cleared only four to five feet wide, and blazes should be less frequent than suggested on page 9. The use of power equipment is not allowed.

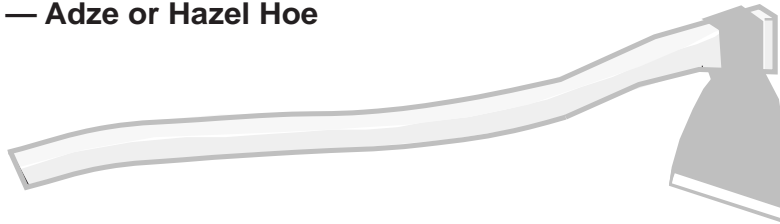
## Maintenance of Trail Drainage

As hiker traffic increases on any trail, the soil gets compacted and becomes more susceptible to erosion, especially during heavy or prolonged rain. Throughout the White Mountains, trail crews have spent hundreds of days reconstructing trails and installing drainage structures. Unfortunately, one does not have to hike a lot to discover that much of their work has not been receiving proper, annual maintenance. Each waterbar, for instance, takes two people from two to three hours to construct; yet it takes only a few minutes during a drenching summer cloudburst to overwhelm a clogged one, possibly causing damage to the waterbar itself and almost certainly to the trail below. It also takes only a few minutes to clean accumulated debris from each ditch. Annual maintenance is as necessary for a trail system as it is for many other things on which we have invested time and money in the past.

The most important trail maintenance task is the proper cleaning of drainage. This includes log and rock waterbars, drainage dips ('dirt waterbars') and ditches. Occasionally, it even includes cleaning of debris from small streams.

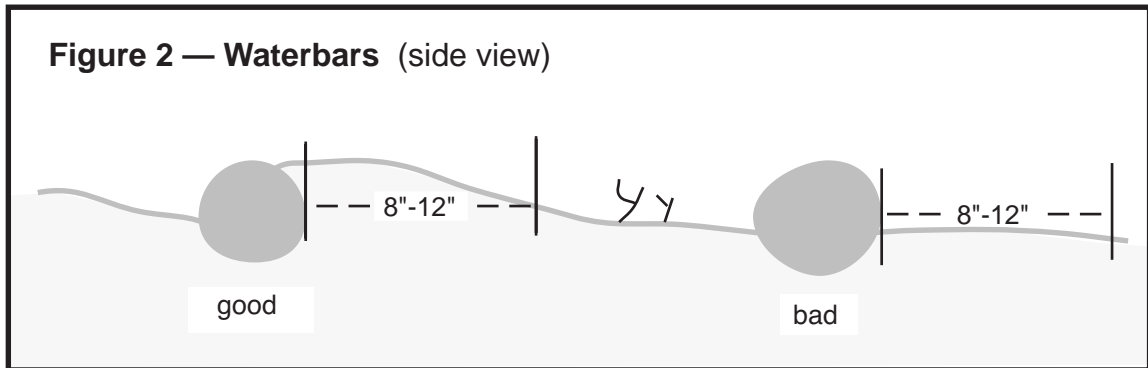
If drainage is not cleaned at least once annually, severe trail erosion may result; and existing trail work (rock steps, cribbing, etc.) may become undermined. The spring or early summer is the best time for this work. If time permits, it would also be good to clean drainage after the leaves have dropped in the fall. This would ensure good drainage in the late fall/early winter when the ground is frozen and seeps appear just about everywhere, as well as in the late winter/early spring during snow melt and spring rains.

**Figure 1 — Adze or Hazel Hoe**

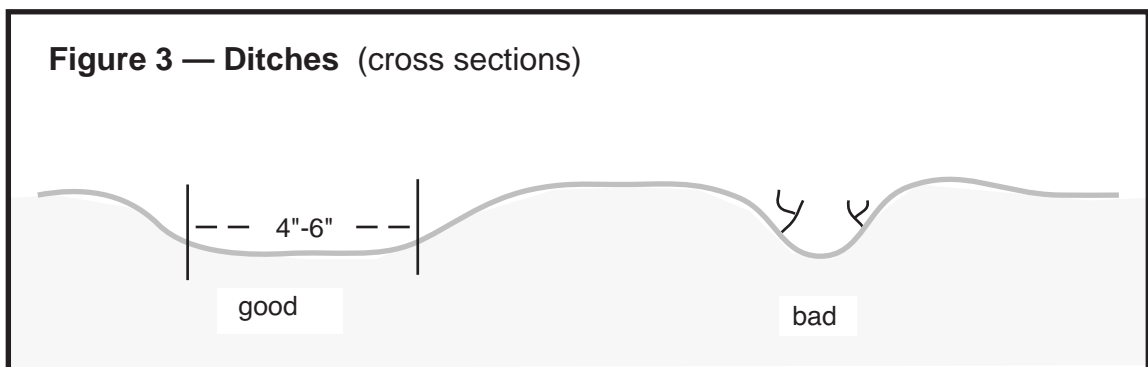


The most versatile and effective tool for cleaning drainage is the adze or hazel hoe, which has a 6-8" wide blade and a long bent handle. A fire rake or garden rake is good. A shovel works well also. A pick mattock or cutter mattock will do the trick, but each takes extra work as the blade is narrow and the tool is heavier.

When cleaning drainage, pull all soil and debris in waterbars and drainage dips *up over* the waterbar or dip and deposit it on the downhill side, in the trail. This backfills the waterbar and rebuilds the dip. Do not shovel or hoe the soil out the end and off the trail. Waterbars that do not have sufficient backfill on the downhill side are apt to be undermined, and dips that are allowed to wear down too much may allow



water to flow right over them. In addition, grade the uphill side of the ditch in the trail. Do not leave it steep-sided as traffic and water will only collapse it, and the soil will relog the waterbar or dip. Cut out loose roots as they collect debris. Clean log waterbars down to approximately 1-2" above the bottom of the log.



Any drainage ditch off the end of a waterbar or dip should be straight, wide, deep and root-free, with side slopes graded and long enough to ensure that the water will be taken well off the treadway and not come back onto the trail below. Curved ditches slow the water down, causing the formation of silt deposits which clog the drainage. If too narrow and rooty, the ditch will plug up; if too shallow, water may overflow. Steep sides are apt to collapse and clog the ditch. They also heal more slowly and may be an eyesore.

In some areas of wet, saturated soils, long drainage ditches are located along one or both sides of the trail to provide drainage for ground seep and to create a high, dry trail tread. These ditches need to be checked each year and cleaned — otherwise they begin to silt in, and vegetation grows back. The same cleaning principles apply to these as to the ditch of a waterbar or dip. Do not leave huge unsightly mounds of dredged mud and debris along the side of the ditch — spread them around. Soil can be thrown onto the trail to build up the tread. Though the soil may be wet, it will soon dry out.

Streams with shallow channels that cross a trail should be kept clear of debris, particularly brush which may clog the stream, forcing it to jump the channel and run down the trail.

