

**FINGER LAKES TRAIL
CONFERENCE, Inc.**

Safety Handbook



Prepared by Peter R. Wybron
York, New York

Published by the
Finger Lakes Trail Conference, Inc.
6111 Visitor Center Road
Mt. Morris, New York 14510

May 2003

Revised – May 2009

Revised – October 2012
Committee:

Matt Branneman, Co-chair
Steve Catherman
Marty Howden, Co-chair
Lynda Rummel

CONTENTS

Section 1 - Safety Considerations for Trail Workers.....	4
Safety Rules.....	5
The Work Outing.....	6
Special Considerations When Working with Youth.....	8
Using the Right Tool for the Job.....	8
Working With Tools.....	9
First Aid.....	10
Poisonous Pests.....	10
Simple Precautions.....	13
Section 2 – Selecting the Right Tool.....	14
Hand Tools.....	15
Rigging Safety.....	23
Power tools.....	25
Closing.....	30
Acknowledgements.....	31
Appendices.....	32
1A FLTC Chain Saw and Crosscut Saw Training and Certification Policy	
1B USDA, US Forest Service’s Health and Safety Code Handbook, Section 22.48, Chain Saw Operations	
2A Hazard Analysis for Chain Saw Operation	
2B Hazard Analysis for Chainsaw Maintenance	
2C Hazard Analysis for General Trail Maintenance	
2D Hazard Analysis for Side Hilling (Benching-In Trail)	
3 FLTC Trail Maintainer Registration Form	
4 NYS OPRHP park worker registration form	

Section 1

SAFETY CONSIDERATIONS FOR TRAIL WORKERS

The Finger Lakes Trail Conference has had an impressive safety record over the years. With so many volunteers contributing thousands of hours each year, under arduous conditions, this is remarkable. But then, in 2012, a volunteer was killed by a falling limb while working on a trail clearing crew. Most volunteers and crew leaders understand the importance of being safe and are mindful about protecting themselves and others. Still, it is easy to become lax and forget basic safety rules; and genuine accidents do happen. It is impossible to cover all aspects of safety in this handbook – there are entire books written on the subject. Individual volunteers and crew leaders are encouraged to investigate more detailed sources of information such as agency specific safety handbooks, manufacturer’s instructions accompanying individual tools, and on-the-job training from more experienced workers. The purpose of this handbook is to remind trail workers of some basic common-sense rules and offer brief insights for a continued safe work record.

Above all else is ATTITUDE! Individual trail workers should put safety first and take responsibility for their own safety. Crew leaders should not make the assumption that everyone thinks the way they do or knows what they know. Considerable time should be spent going over safety rules before **each and every** work outing. Club Trail Chairs and FLTC Regional Trail Coordinators are expected to meet with their trail workers to review the *Safety Handbook* before workers begin their assignments and from time to time thereafter. Workers volunteering for construction crews will be asked to read the Safety Handbook ahead of time.

To assure that best practices for safely working in the back country are understood, the Finger Lakes Trail Conference now requires that every crew member and trail worker read this FLTC *Safety Handbook* before going into the field. You will be asked to indicate that you have read the handbook by initialing and dating a Trail Maintainer Registration Form that you receive from the FLTC Office, your FLTC work crew leader, your Regional Trail Coordinator, your club Trail Chair, or an FLTC training coordinator, or you can submit the registration form that is attached at the end of the Appendices. *Please* be tolerant and comply, if you are asked to fill out the same form on several occasions.

SAFETY RULES

Crew leaders should not make the assumption that everyone thinks the way they do or knows what they know. Considerable time should be spent going over safety rules before each outing.

1. Tools should be carried in the safest way. The tool should be gripped by the handle about 6 inches behind the head (or at the balance point) and carried to the side, on the down slope side of the body, rather than over the shoulder or as a walking stick. This prevents injuries due to falling on the tool, since it can be easily tossed away when carried correctly. Tools with sharp blades should be carried with the blade facing the ground and equipped with a sheath to prevent accidental cuts and to retain their sharp edge. The sheath should remain on the tool while it is carried to the worksite and be removed only when used. Bulky or clumsy items should be held with two hands or carried by two people.

2. Plenty of room should be allowed between volunteers for walking and working, generally 10 feet between each crewmember for safety.
3. Crewmembers should always be aware of what others are doing and take full responsibility for their own safety and the safety of others. When working, always tell fellow workers what you are going to do before you do it.
4. The right tool should be used for the job. Respect the limitation of the tool you are using. Don't exceed its built-in limits.
5. The "Scan-Shout-Swing" order of doing things should be implemented. Crew members should look around to make sure no one is in harm's way and there is plenty of room to swing safely. If necessary, brush or limbs first should be cleared to avoid injury from a deflected tool. Second, intentions should be communicated and third, when all is clear, crewmembers may proceed.
6. Trail hazards should be removed as they are encountered, or their presence communicated to other workers down the line, either verbally or with a temporary sign (for instance, a temporary sign warning others of a nearby yellow jacket nest or a poorly supported leaning tree). Hazards should be removed as soon as practical to prevent others from being harmed.
7. Dehydration, heat stroke, lack of energy, and hypothermia are life-threatening concerns. Always carry a lot of drinking water and energy snacks. First aid supplies should be kept on hand and if in a work crew, every individual should know what is available and where it is kept.
8. Someone should know your location and expected time of return.
9. Machismo should be saved for the football field - it's easier to be carried off a football field than it is to be carried out of the woods.
10. Individuals should be aware of their physical condition and limitations. Weariness can lead to accidents. Pace your self - slow and steady does it. Do not try to outdo or compete with other, perhaps younger, members of your work party. Set your own pace. Don't let fatigue cause an accident.

THE WORK-OUTING

Conduct a short safety meeting at the start of each workday. Review Sections 1 & 2 and the Hazard Analyses in the Appendices, and point out the hazards of the job and the tools. Demonstrate how to use the tools safely and effectively.

Safety is the number one priority in all volunteer trail operations. Crew leaders are responsible for briefing crewmembers to maintain a safe working environment and instilling in them a sense

of responsibility. Conduct a short safety meeting at the start of each workday. Point out the hazards of the job and the tools. Every work leader should learn and teach his or her crew safe work habits and see that these practices are adhered to. Every tool is a potential source of injury and everyone cannot be watched, at all times. Therefore, ground rules must be established at the beginning and taught by example.

Fieldwork can be dangerous, especially when working alone. Take proper precautions. Learn safe work practices from the very first day. Basic safety equipment for all trail work should include boots, gloves, long pants and appropriate clothing for the weather. Know your abilities and limits. Take breaks before you are tired.

The correct tool for the job should be selected and inspected. Blades should be sharp, handles smooth, and heads securely fastened. Tools should be properly cared for and used correctly. Crew leaders should demonstrate proper carrying and handling techniques before leaving the parking lot. See some suggested safety guidelines in Chapter 2 – Selecting the Right Tool.

Careful planning will prevent problems during the outing. A checklist of supplies and safety briefing points is a must.

Sample Checklist for Work-Outing

- | | |
|---|--|
| <input type="checkbox"/> First Aid kit | <input type="checkbox"/> Tools (list them) |
| <input type="checkbox"/> Insect repellent | <input type="checkbox"/> Eye & ear protection |
| <input type="checkbox"/> High energy food (list) | <input type="checkbox"/> Other personal protective equipment (PPE) |
| <input type="checkbox"/> Water (adequate amount for conditions) | <input type="checkbox"/> Compasses, GPS units, or smartphones |
| <input type="checkbox"/> Rain gear or plastic garbage bags | <input type="checkbox"/> FLTC trail map(s) or GPS track |
| <input type="checkbox"/> Gloves | <input type="checkbox"/> Project maps and plans |
| <input type="checkbox"/> Hard hats | <input type="checkbox"/> First Aid notes/booklet |
| <input type="checkbox"/> Membership information | <input type="checkbox"/> Copies of “Safety Handbook” |
| <input type="checkbox"/> Notebook and pencil | <input type="checkbox"/> Day pack |

All potential participants should be told what they are expected to bring prior to the workday. Normally, participants are responsible for their own footwear, rain gear and gloves, and any special medical supplies (*e.g.*, Benedryl, epi-pen). There will always be a few who need an item, so crew leaders should bring extra, if they are available.

Sometimes people will bring their own tools. This is fine as long as their tools are in good condition and appropriate for the project. Inexperienced workers, for instance, seem very fond of hatchets. They are ineffective for trail work when compared to loppers, bow saws and Pulaski’s. Crew leaders should be firm about leaving such tools behind and should check all personal tools for soundness.

Just because a person has brought a tool from home does not mean that he or she knows how to use it correctly. Time should be taken to discuss proper use of all tools that are going to be used that day. If there are more tools than people, the determination has to be made as to which ones

are really necessary and which ones should be left behind. In most cases crewmembers should not carry more than one tool, except when walking into a major project sites. An exception to this is when small tools such as wire cutters for old barbed wire can be carried in a pocket or daypack. In addition to teaching basic rules, a crew leader must also discuss other precautions (see poisonous pests below).

Individuals and crew leaders must be aware of any signs of fatigue, dehydration, or heat stroke. If someone seems to be having trouble, crew leaders do not have to draw undue attention to it, but should not ignore it either. Crew leaders as well as individuals should ensure that everyone is getting enough rest periods and water.

Finally, this should be a good experience for everyone. If the experience is positive, people will come back for the next work outing.

SPECIAL CONSIDERATIONS WHEN WORKING WITH YOUTH

If supervising young people crew leaders should take a deep breath, sit back, and relax. Crew leaders of youth are to be congratulated for having accepted such an important and challenging endeavor. The first prerequisite is to learn stress reduction and relaxation techniques. The following tips may be helpful:

1. Safety is priority from the very beginning. Crew leaders should let members know that mishandling of tools or abusive behavior toward others is not tolerated; the reason being is that they genuinely care about the crew members, the continuation of the program, and performance quality.
2. Crew leaders should establish a rapport by doing things with the teens that are fun (like jumping into a lake, or picking berries) and by being tolerant of other bothersome things the youth might do (like when they start making fun of the functional clothes crew leaders wear).
3. It is essential for crew leaders to have a sense of humor.
4. Crew leaders should be impeccable role models, but not afraid to admit their own mistakes.
5. Crew leaders should empower the youth with a can-do spirit, not a spirit of invincibility but one of humble self-reliance built upon cooperation.
6. Crew leader should demonstrate proper and effective use of tools with which crew members are not familiar. Technique is more important than brute strength.

Working with youth, especially those often referred to as “at-risk”, is not something that is for everyone. It is a job that can be both extremely rewarding and extremely frustrating. However, it is clear that teaching youth the importance of respecting themselves and each other, by practicing safety and strong work ethics, can make a real difference in their lives and in the life of the trail.

USING THE RIGHT TOOL FOR THE JOB

Using the right tool for the job is directly related to safety. Using an incorrect tool for the job can lead to tool breakage, slips and injuries. For instance:

- A shovel should not be used to chop away at a large root in the ground. Shovels were designed for digging and moving dirt, not chopping solid wood. A cutter mattock or Pulaski should be used for chopping.
- A small hammer should not be used to drive spikes into railroad ties or rebar through 4x4's. Carpenter's hammers (16-ounce claw hammer) are made for nails, not spikes. A 4-pound hammer or sledge should be used to drive spikes or rebar.
- A bow saw should not be used like a weed cutter. Bow saws are designed to cut through wood, not to be swung at weeds or brambles. A Suwanee Sling or other weed cutter should be used to cut weeds.

Using tools improperly is one of the chief causes of accidents. Section 2 should be studied to understand which tools can best do the work that awaits you.

RULES FOR WORKING WITH TOOLS

1. Always work at a comfortable pace, rest when tired, and keep your mind on your work. To provide each person with relief from the particular motion and effort required in using one tool, and to reduce monotony, swap tools occasionally or even rotate them systematically. Fatigue and wandering attention can result in an accident.
2. Inspect all tools before use for defects and missing parts. A tool that breaks in use can be extremely dangerous.
3. Keep cutting tools sharp. Dull blades can bounce or glance uncontrollably and make work tiresome, increasing the likelihood of accidents caused by fatigue.
4. Before beginning work, clear away brush or limbs that might catch a swinging tool unexpectedly, causing a wild uncontrolled swing.
5. While working with a tool, always stand in a balanced position. Adjust your stance and tool grip continually to prevent slipping footholds and glancing blows. If the woods are wet, be especially careful and stop work during rain showers.
6. While working with a tool, anticipate the consequences of every move. If you are working with a rock or log, be ready to toss your tool aside and jump free if something should slip or fall. Avoid cutting toward any part of your body or another worker.

7. When carrying, loading, or storing a cutting tool, cover the blade with a sheath to protect the edge from being dulled and you and fellow maintainers from accidental cuts.
8. When transporting tools in a vehicle, secure them to prevent bouncing, sliding, or shifting.
9. When passing a tool to another, always pass it handle first, release it only when the recipient has a firm grip.
10. When working in groups, maintain at least 10 feet between workers, so wild swings, flying chips, and tools slipping out of your hands do not injure others.
11. Carry tools at your side on the downhill side. Grasp the handle at about the balance point with the sharpened blade forward and down. If you fall, throw the tool clear. Never carry tools over your shoulder or slung around your neck.
12. When leaving tools at a work site, lay them against a stump or downed log with the blades directed away from passing workers. Never sink double-bit axes, Pulaskis, mattocks, or similar double-edged tools into the ground or in stumps where they become dangerous obstacles.

FIRST AID

Ideally, all crew leaders should be certified by the American Red Cross in basic first aid and CPR. The initial courses should be hands-on; recertification through on-line courses from reputable providers is acceptable thereafter. So that others can assist if needed, leaders should carry plasticized quick reference sheets or a small first aid booklet such as, “Back Country Medicine for Backpackers and Hikers,” by Dr. Larry Hawkins, President of the North Country Trail Association, available from the FLTC office. A first aid kit should be checked, complete and large enough for the crew and the job at hand. Above all, it should be taken along on the job, and crewmembers advised of its location. Professional assistance may be hours away. Individual trail workers should always carry a first aid kit on maintenance and trail construction work.

POISONOUS PESTS

Ticks – Wood ticks are a nuisance, but seldom pose medical problems. Skin and clothing should be checked and any ticks that are found should be removed.

Deer ticks, on the other hand, are potentially very dangerous. These ticks, which are much smaller than the wood ticks, can carry the bacteria that cause Lyme disease. Generally, only about one percent of all deer ticks are infected with the Lyme disease bacterium. However, in some areas more than half of them harbor the microbe. Most people with Lyme disease become infected during the summer, when immature ticks are most prevalent. Except in warm climates, few people are bitten by deer ticks during the winter months. Ticks should be removed from clothing and body as soon as they are observed. Research suggests that a tick must be attached for many hours to transmit the Lyme disease bacterium, so prompt removal (under 24 hours) can

likely prevent the disease. A thorough tick-check at the end of the day is advised. Immature deer ticks are only about the size of a poppy seed and may easily be mistaken for a freckle or a speck of dirt. The risk of developing Lyme disease from a tick bite is small, even in heavily infested areas. Most physicians prefer not to treat patients bitten by ticks with antibiotics unless they develop symptoms of Lyme disease.

For more information on Lyme disease, go to the Centers for Disease Control and Prevention web site at www.cdc.gov/lyme.

Tips for Personal Protection

- Wear light-colored clothing (especially white socks) so ticks can be easily spotted.
- Wear long-sleeved shirts and closed shoes and socks.
- Tuck pant legs into socks and tuck shirt into pants. Gaiters may be used instead of tucking pant legs into socks.
- Apply insect repellent containing permethrin to pants, socks and shoes (e.g., Sawyer® Clothing) and compounds containing DEET on exposed skin. Do not overuse these products and take care not to expose plastic handles or coated binoculars to DEET.
- Walk in the center of trails to avoid overgrown grass and brush.
- After being outdoors in tick infested areas, remove, wash and dry clothing.
- Inspect your body *thoroughly* and carefully remove ticks.
- Inspect pets for ticks.
- Contact your local health department and park or agricultural extension services for information on the seasonal and geographic distribution of ticks in your area.

How to Remove Ticks

- Tug gently but firmly with narrow blunt end tweezers near the “head” of the tick until it releases its hold on the skin. A magnifying glass may be helpful.
- To lessen the chance of contact with the bacterium, try not to crush the tick’s body or handle the tick with bare fingers.
- Swab the bite area thoroughly with an antiseptic to prevent infection.

Mosquitoes – Mosquitoes were considered a nuisance and not particularly a safety hazard until the summer of 1999, at which time an outbreak of West Nile virus was reported in New York State. West Nile virus, a mosquito-borne disease never before reported in the Western hemisphere, is responsible for many cases of encephalitis, including several deaths, in people in New York and surrounding states. While the chance of anyone becoming infected with West Nile virus is very low, most cases in New York have occurred in people older than 50. People in this age group, especially the elderly, are also more likely to develop severe illnesses if they become infected.

For more information on West Nile virus, go to the Centers for Disease Control and Prevention web site at www.cdc.gov/westnile.

Tips for Personal Protection

From April to October, when mosquitoes are most active, take the following precautions:

- If outside from dusk to dawn when mosquitoes are most active, or during the day in an area where there are weeds, tall grass, or bushes, wear protective clothing, such as long pants, loose-fitting, long-sleeved shirts, socks, and possibly wearable netting, and seriously consider the use of an insect repellent containing DEET.

Poisonous Snakes – Poisonous snakes are infrequently encountered. Their presence along the trail varies tremendously, depending on the location within the state. Generally, snakes will move away from people if they hear them coming. The danger from poisonous snakes is greatest when the snake is surprised. In poisonous snake country, there are several precautions that can be taken to decrease the chance of being bitten. Gloves should be worn when moving fallen logs or other debris, high-top leather boots should be worn, stepping over large logs should be avoided and you should take care where you put your hands and feet.

If working in poisonous snake country, a first aid class should be taken or first aid books made available to crew leaders and members so appropriate action can be taken in case someone is bitten. Generally, if a doctor can be reached within one to two hours, drastic measures of treatment such as incisions and tourniquets should be avoided. The person with the bite should be kept calm and escorted to the nearest doctor immediately. The injured should not run, as this will cause the heart to more quickly pump the poison throughout the body. From many locations it is feasible to reach a doctor within the one to two-hour time frame. If you are working in a remote area, you should be prepared to administer first aid.

Spiders – Like snakes, poisonous spiders are infrequently encountered and are no more common in the woods than in a typical backyard.

Deer Flies and Black Flies – Wearing hats, long sleeve clothing, and DEET is the best preventive measure for these nasty nuisances.

Yellow Jackets and Hornets – These pests can cause painful stings and serious allergic reactions. Persons who know they are allergic should carry a complete sting kit including antihistamine inhalants and other supplies. Crew leaders should check with crewmembers to see if anyone is allergic and to be sure they have their kit with them. The crew first aid kit should also be equipped with “sting-kill” ampules and treatment for allergic reactions.

All members should be aware of insect nests and warn others of their presence. It is often the second and later crewmembers who get stung, as the first person that steps into or bumps a suspended nest has moved out of harm’s way by the time the insects attack. Yellow jackets typically nest in the ground while hornets build their nest in bushes and trees. If the pests cannot be killed and the nest destroyed, work elsewhere until a later date. If a nest is discovered, the area should be marked with flagging or a temporary sign to alert others.

At certain times of the year and in certain kinds of weather, yellow jackets seem to be more aggressive. Generally this is in mid to late summer and during periods of dry weather. During

these times, yellow jackets are attracted to food and drink. You should be alert when eating or drinking soda pop to avoid getting a yellow jacket in your mouth. A sting on the tongue is particularly serious as the tongue can swell and quickly block the airway.

Poison Ivy – Some people are extremely allergic to this easily identified plant. If seen, others should be alerted to its location so they can avoid it. A line of Technu® products, available in most drug stores, can help prevent contracting the poison.

For more information on Poison Ivy and other poisonous plants, go to the Centers for Disease Control and Prevention web site at www.cdc.gov/niosh/topics/plants.

Giant Hogweed – This tall majestic plant is a public health hazard because of its potential to cause severe skin irritation in susceptible people. Plant sap produces painful, burning blisters within 24 to 48 hours after contact. Plant juices also can produce painless red blotches that later develop into purplish or brownish scars that may persist for several years. For an adverse reaction to occur, the skin, contaminated with plant juices, must be moist (perspiration) and then exposed to sunlight.

Giant Hogweed is a Federal Noxious Weed, making it unlawful to propagate, sell or transport this plant in the United States. In the U.S. it is known to occur in many states including New York. It has become established along roadside ditches, stream banks, waste ground, tree lines and in open wooded areas. It is especially prolific along stream banks and moist roadsides.

Mowing, cutting and weed whacking are not recommended as a means of control because the plant's large perennial root system soon sends up new growth. Also, these tactics are risky because they increase opportunities for trail workers to come in contact with the plant's sap. Instead, put a circle of flagging tape around the plant, at some distance from it and taking care not to touch it, and notify the local NYS DEC.

To learn more about Giant Hogweed go to the New York State Department of Health web site at www.health.state.ny.us/environmental/outdoors/hogweed/giant_hogweed.htm

SIMPLE PRECAUTIONS

- Individuals should work in clothing that covers most of the skin. Good quality work boots (best if they have a steel toe), a hard hat and gloves should be worn. With power equipment (like a chain saw) safety goggles, ear protection and high quality chain saw chaps should be used.
- Frequent water and rest stops are recommended. You should use common sense and not try to do more than is prudent.
- Trail construction frequently demands heavy lifting. Be careful to keep your back erect and spine straight, doing as much of the lifting as possible by straightening your legs. Do not bend over a log or rock and pull with your arms; in this position you can strain your back lifting a surprisingly small load.

Section 2

SELECTING THE RIGHT TOOL

A wide variety of tools are available for trail use. The FLTC's Quartermaster oversees tools stored in the garage at the Mt. Morris office. Contact the VP-Trail Maintenance for the tool list. Clubs and Regional Trail Coordinators may have a selection of tools, as well. Trail maintainers provide many of their own basic tools (including chain saws) but may borrow from the FLTC at any time.

Local and individual preferences often dictate the kinds of tools, which are chosen for various tasks. Some of the most commonly used tools and their functional purpose are identified in this section. A few tips on using the tool safely and effectively are also included. Every trail maintainer needs to learn how to choose the correct tool for the job, use it effectively and safely, care for and store it properly. Purchasing high quality tools initially is more cost effective; long-term performance exceeds that of lower quality tools.

The right tool should be used for the job. Substitutes are dangerous and ineffective. Tools should be kept in good condition; throwing them on the ground can damage them. A file should be carried for spot-sharpening edges throughout the workday. Tools should be carried with the appropriate guards in place. At the end of the workday, all tools should be cleaned, sharpened, lightly oiled and stored properly.

Tools are often reviewed and critiqued in the *Trail Tenders' News*, the FLTC's newsletter for trail maintainers. Please find issues at www.fingerlakestrail.org → Members → Trail Workers.

Note: Per Hazard Analysis #12, p. 8, NYS DEC Division of Lands and Forests *Health & Safety Handbook*, December 2011, when building trail or a trail facility such as a lean-to or bridge, **“hard hats are required unless there is not energized machinery, tree felling, or overhead objects on the job site.”** However, FLTC Project and Construction Managers and Crew Leaders *may require hard hats to be worn in circumstances where these hazards are not present, and volunteers who do not comply can be asked to leave the job site.* Be sure to check with the person(s) in charge before heading into the field.

HAND TOOLS

Lopper

Uses: Cutting selected limbs or saplings during construction and maintenance phases. Larger models can cut limbs approaching 1 1/2" in size. Do not twist side-to-side to try to get a deeper cut.

Tips: High Quality loppers with replaceable parts should be used. Saplings should be clipped flush to the ground and limbs flush to the tree. Loppers must not be thrown on the ground as this may clog the head and dull the blade. At the end of the day, the blade should be cleaned and wiped with light oil. Anvil loppers cut more roughly but bypass loppers may become worn and eventually fail to shear.

Safety: Leather gloves and a hardhat should be worn. Eye protection is also recommended.

Hand Pruner

Uses: Cutting small branches encroaching on the trail. Also useful for cutting protruding roots that are tripping hazards. Mostly used for trail maintenance.

Tips: Handier and lighter to carry than a lopper when only minor pruning is needed, it should be carried in hand while hiking to clip small branches as encountered.

Safety: Leather gloves should be worn. Eye protection is also recommended.

Pruning Saw

Uses: Cutting limbs encroaching on the trail, cutting small trees or shrubs at the base, and removing small to medium sized windfalls. Pruning saws come in a wide variety of sizes and tooth patterns, ranging from small folding models with 6" to 8" blades to those with blades of 26" in length. Most blades are curved and cut only on the back-stroke, a handy feature when removing hard to reach limbs.

Tips: *If* the pruning saw can be resharpened, it should be resharpened often. A light coat of oil should be applied to the blade after each use.

Safety: Except for folding models, pruning saws should be kept in a sheath when not in use. A hand holding a limb or sapling should not be crossed beneath the hand pulling the saw, as this can lead to a nasty cut when the saw comes through the limb sooner than expected. Personal Protective Equipment (PPE) includes leather gloves and hardhat.

Bow Saw

Uses: Cutting limbs, small trees and small to medium sized windfalls, essentially the same as pruning saws except that bow saws can cut larger material. Bow saws have blades ranging from about 21" to 36" in length. The smaller saws are generally triangular in shape and work well for pruning. Their shape limits the length and depth of the stroke to material less than 4" to 5" in diameter. The larger saws are bow shaped and can cut material up to 8" in diameter, but are more prone to twisting and binding in the cut.

Tips: Bow saws cannot be resharpened due to the hardness of the blade. When the blade becomes dull, or bent, it should be replaced. It should be wiped with light oil before storing. Small saws are more useful; use another tool for cutting large material.

Safety: Same as pruning saws. PPE includes gloves and hardhat.

Pole Pruner and Pole Saw

Uses: Cutting overhanging limbs that cannot be reached with bow saws, loppers and other short-reaching tools. Pruners and saws are often combined on the same handle to allow for more flexibility.

Tips: When cutting large limbs with the pole saw, it is best to use a two-step process. In the first step, a 4" to 6" stub is left by making an under-cut and then a cut from the top of the limb. This prevents stripping the bark from the trunk of the tree. In the second step, the stub is removed flush with the trunk.

Safety: Fingers should be kept out of the pruning head. The rope may snag unexpectedly and cause the blade to close causing a serious cut. When using the saw, eye protection will prevent sawdust from getting into the user's eyes. Required PPE includes eye protection, hardhat and leather gloves.

Woodsman's Pal

Uses: The short, sturdy, versatile variation of the machete, the Woodsman's Pal, is handy for cutting limbs and clearing brush and small trees. Its blade can be used to chop small growth, and its hook can prune selected saplings or branches by pulling and twisting. Since clippers and weeders do the same job more safely and efficiently and the Woodsman's Pal usually leaves sharp stubs, the latter is often of limited use. But it is smaller than the other tools and may thus be more desirable when only a small amount of work is expected.

Tips: The blade should be kept sharp.

Safety: Because twigs or limbs can catch the blade on the back swing or where space is limited, extra care should be taken to avoid accidents. A good grip on the handle is necessary, and it is important that the user keep clear of other workers. If you are pulling with the hook, refrain from holding the branch or sapling in your hand, as the hook can slide up the branch and cut your fingers. For safety, purchase the Woodsman's Pal with a wrist strap or hand guard and a sheath. PPE includes hardhat, leather gloves and heavy leather boots.

Grass Whip ("Weed Whip" or "Grass Cutter")

Uses: The weed whip is swung back and forth like a golf club and cuts grass, weeds, light brush, briars and small tree seedlings. It is a very effective tool for clearing new growth along the trail.

Tips: Weed whips come in two basic varieties, L-shaped and triangular-framed. The second variety is more stable, cuts larger material and is recommended. Sharpen

the blade periodically (bevel side only), using a standard flat file. It is fairly easy to break the wooden handle, and for this reason, consider the Suwanee Sling.

Safety: Plenty of space should be left between the user and others. The handle should be held firmly in both hands and swung rhythmically back and forth. Strong swings should be made to prevent the blade from bouncing or glancing off springy growth. The tool should be carried or stored with a sheath in place. PPE includes leather gloves and leather boots.

Suwanee Sling

Uses: This is essentially a heavy-duty weed whip that also has an axe blade. It does the same work as the weed whip, but can also cut through larger material that may be occasionally encountered.

Tips: The tool's heavier weight allows it to more easily cut off larger material than a weed whip.

Safety: Same as a weed whip.

Axe

Uses Axes can be single-bit or double-bit. For trail work, an axe is of limited use. For building, most people prefer the multi-purpose Pulaski or a combination of chopping Mattock, good hand pruning saw, and bow saw. For routine maintenance, a good hand pruning saw and a bow saw are better choices. A single-bit axe is useful for placing wedges when chain sawing and for skinning limbs off trees. If you must cut through a lot of downed trees, consider using a double-bit axe.

Tips The blade(s) should be kept sharp.

Safety Determine and maintain adequate distance between workers. Stand with legs spread when swinging the axe; and take care not to swing the axe when tired, as a glancing blow is likely to occur. Wear gloves, long pants, and good boots; hardhat recommended.

Pick Mattock and Cutter Mattock

Uses: A mattock is a heavy, strong and popular tool that moves dirt and rocks, cutting through roots and unearthing boulders. It is especially useful when building new trail (especially sidehill trail), installing steps and waterbars and other heavy work. The mattock's heavy weight allows it to move more material with less effort than if trying to use a lighter tool.

There are two kinds of mattocks, pick mattocks and cutter mattocks. Both have an adze blade, but the pick mattock has a pick opposing the adze whereas the cutter

mattock has a cutter blade. The pick mattock is most useful in hard or rocky soil where the pick is useful to break up the soil or pry out rocks. The cutter mattock is more useful in deeper, rooty soil where the cutter is needed to sever roots. The FLTC tool crib has mid-duty lighter-weight mattocks for smaller volunteers.

Tips: As with other swinging tools, the user should blend force with accuracy.

Safety: Choking up on the handle should be avoided, as a glancing blow may strike the user. However, holding the handle at the very end and swinging the mattock high overhead should also be avoided, as the stroke is more tiring and less accurate than when the handle is held in several inches from the tip. If breaking rock, goggles should be worn. PPE includes heavy leather boots and leather gloves. When working on a hillside, take extreme caution not to tumble rocks or debris down on those working below.

Pulaski

Uses: The Pulaski combines the blade of an axe with a narrow grubbing blade. It was developed for fighting forest fires, but is also very helpful in trail work. It is not as balanced or safe as the axe, or as efficient as the mattock for moving soil, but it serves two purposes and saves weight if tools need to be carried long distances. If considerable amounts of axe work or mattock work are needed, the Pulaski is a poor choice; however, it is a superior all-around tool.

Tips: The axe end is sharpened and maintained like an axe, and the mattock end is sharpened like a true mattock (sharpen bevel side only). The Pulaski's mattock blade can serve as a substitute adze if it is sharpened to a keen edge. If a Pulaski is going to be used as an adze on wood, it should not be used for any other purpose.

Safety: The Pulaski can be dangerous due to its two sharp blades. It should always be stored and carried in a sheath. The same safety practices as used for an axe should be followed. PPE includes hardhat, leather gloves and heavy leather boots. The crew leader should demonstrate how to hold and use the tool safely and effectively and inexperienced users should have shin guards and possibly steel-toe boots. When working on a hillside, take extreme caution not to tumble rocks or debris down on those working below.

Hazel Hoe

Uses The Hazel Hoe is a heavy duty dirt chopping and grubbing hoe with a hefty axe-length handle. It looks like and is essentially a wide adze designed for working dirt rather than wood. It is a very effective tool for digging out new trail on hillsides. The tool's blade is also useful for smoothing new trail.

Tips Workers who are not comfortable using an axe or Pulaski may be quite comfortable using a Hazel Hoe.

Safety Maintain adequate space between workers and, if working on a hillside, pay attention to those working below so as not to send rocks or other debris tumbling down the hillside. Recommended PPE includes gloves and hardhat.

McLeod

Uses: The McLeod is a heavy-duty combination hoe and rake that is used for constructing and maintaining the trail. It has six digging (or rake) teeth opposite the hoe blade. It is useful for removing duff layers and loose ground debris to create a level trail and for finishing the grade and outslope of benched trail. It can also be used to chop off light brush and roots. It must be supplemented with a mattock or other digging tool when there is considerable digging or heavy brush.

Tips: The hoe blade should be kept sharp.

Safety: Adequate space between workers should be determined before swinging this tool. Leather gloves are recommended.

Council Rake (Fire Rake)

Uses: The council rake looks like a section of sickle bar mower on the end of a straight handle that is used for constructing and maintaining the trail. It is used for the same purposes as a McLeod.

Safety: Same as a McLeod.

Shovel

Uses: Shovels are used for digging and moving soil and other granular material, cleaning waterbars, culverts, outlets and diversion ditches. They are also used for leveling a base for sill rocks, steps, etc. In trail work, long handled, round-pointed shovels are used almost exclusively. A variation is the fire-shovel which has the advantage of being lighter weight and easier to carry. In the absence of a clam-type posthole digger, a small military-style trench shovel, with the blade at 90° to the handle, can be used to remove the dirt from the bottom of the hole being dug for a new wilderness privy.

Tips: If you're digging in rooty soil, you may want to sharpen the shovel blade by filing along the top side of the blade to within two or three inches of the shovel back. A sharp blade cuts duff a lot easier, but has little value in rocky soil or for moving dirt.

Avoid prying with the shovel, as either the blade will eventually bend or the handle break. Use a mattock, pick or rock bar instead.

Safety: The most common injuries when using a shovel are back injuries. Bending from the knees instead of the waist will help prevent injury. Leather gloves are recommended.

Posthole Digger

Uses: Digging holes for footings, posts, privies, etc.

Tips: There are two types of posthole diggers, the clam-type and auger-type. The clam-type is the more versatile of the two and can be used in a wide variety of soils. The auger-type works well only in sandier, drier soils. It will not work in rocky soils and it is hard to clear off excavated material if the soil is wet.

Avoid cutting or chopping with this tool. It should be used for lifting the soil out of the hole. Use a digging bar or rock bar to break up hard materials or loosen rocks.

Safety: Soil should be lifted from the hole with leg muscles, not back muscles. If the wooden handles are too flexible or the collar becomes bent, fingers can get pinched when the handles are closed. Leather gloves are recommended.

Sledgehammer

Uses: Breaking rocks, driving posts or stakes, nudging a heavy timber into place and driving large spikes. Full size (8 lb.+) sledgehammers are primarily used during construction phases; small (4 lb.) sledges may be used to pound in nails.

Safety: Before swinging, the user should make sure others are clear and obtain a firm stance with feet spread to shoulder width and firmly planted. PPE includes leather gloves. Goggles should be worn when striking rocks.

Crowbar (Rock Bar)

Uses: This is an essential tool for prying and levering large, heavy objects such as boulders, logs and beams. Crowbars are heavy-duty steel and vary in length, weight and diameter. In general, crowbars have a chisel tip on one end and a rounded handle on the other. They are usually 1" to 1 ½" in diameter and vary between 40" to 62" in length.

Tips: For most purposes, a 54" size seems to work best.

Safety: Since the crowbar often lifts and moves heavy loads, it can be dangerous. Fulcrums and footholds should be secure. The user should stay out from under the bar and the load being moved, and avoid levering with the bar between his/her legs. Undivided attention should be given during use to avoid mashed fingers and toes or other injuries. As with any lifting device, the user should lift with the legs,

not the back. PPE includes leather gloves and heavy leather boots. For additional safety, hard-toe boots are advisable.

Digging Bar (Tamping Bar)

- Uses: The digging or tamping bar, generally somewhat longer than the crowbar, may also be used for levering, although only for smaller loads. The bar's primary purpose is for digging and tamping, for which it has a chisel point at one end and a flat disc at the other.
- Tips: It is a handy tool for heavy trail work, although it may be too heavy to be worth carrying long distances.
- Safety: Same as rock bar. Leather gloves are recommended.

Log Carrier

- Uses: Carrying and moving heavy logs and timbers. The log carrier looks like a giant ice tong with long handles. It is a two-person tool.
- Tips: Many hands make light work. Use as many log carriers and people as will comfortably fit along the length of the log to make the load manageable. In the absence of a log carrier, a length of 1" thick natural fiber rope can be wrapped around the log and the ends tied around a cut sapling or long tool handle.
- Safety: The user should stand behind the handle of the carrier, facing the direction of travel and place both hands on the handle, bent at the knees, and all workers lift at once. Forearms should be roughly parallel to the ground when in the lifting and carrying position. Heavy weights are involved so caution should be used. Feet should be kept from under the log. PPE includes heavy leather boots and leather gloves.

Peavey or Cant Hook

- Uses: Rolling and positioning logs and timbers. This includes rolling the log to move it to another site or to rotate it in place. The main difference between these two tools is the shape of the tool's end. Peaveys have a straight spike at the end whereas cant hooks have a short gripping tooth. Both are used for essentially the same purpose. Peaveys are quicker to reposition when rolling a log some distance and for maintaining momentum. Cant hooks provide for more precise rotating. When arranged as opposing pairs, either tool can serve as a log carrier if a true log carrier is not available.
- Safety: The user should exercise caution not to roll logs onto his/her (or someone else's) toes. Logs may roll too fast and get away. Potential for severe injury is present

whenever heavy weights are being moved. PPE includes leather gloves and heavy leather boots. Hard-toe boots provide an extra measure of protection.

Wedges

Uses: There are two kinds of wedges: saw wedges and splitting wedges. In trail work, splitting wedges are used for splitting timbers for use in log construction projects such as split-log bridges. They weigh four, five or six pounds, are made of steel, and should be purchased with crowned or beveled heads to reduce mushrooming and spalling. Saw wedges are used in felling trees or cutting fallen timber into pieces. When a blowdown under tension begins pinching a chain saw or pruning saw blade, for example, a saw wedge may be driven in behind the blade to hold the cut open so the blade can be released.

Tips: Since the saw may accidentally strike a saw wedge, buy wedges that are soft enough not to damage the saw blade and resist sparking. Plastic, aluminum, and hardwood saw wedges are best. To keep from losing wedges in the brush or leaves, paint them bright colors.

RIGGING SAFETY

Before you think about using rigging, be sure to familiarize yourself with the dangers of using heavy lines, cables, winches and similar equipment. Even in the best of cases, rigging equipment will expose you to sharp edges and heavy awkward loads. In the worst cases, cables under tremendous tension can shift or break free and could strike you or your fellow workers with potentially lethal force. Loads can shift or drop, crashing into workers or releasing tension that sends cables and equipment flying.

Be sure you understand the safe working loads for all the components of your rigging system. The strength of the rope (usually wire rope) is critical. You'll find many construction types and materials, all of which affect performance. You should also make sure you understand the manufacturer's load rating on chains, nylon slings, shackles, cable grips and any other component you use. Generally, manufacturers label their products with safe working load limits. If not, and you do not know the safe working load of a piece of rigging, do not use it.

Cable Winch

Uses: To drag or swing heavy rocks or logs into place. When construction projects involve heavy stone or wood, ordinary hand tools may be insufficient.

Tips: The most common and simplest is the ratchet-and pawl cable winch, usually known as a come-a-long. These range from \$9.99 hardware store models to more substantial come-a-longs capable of pulling heavier loads. The inexpensive models are useless except for the lightest of jobs. The better models can move substantial loads without breaking but are limited by the length of cable that can

be wound around the spool (usually about 25”). Because of this limitation, hauling material a considerable distance requires frequent re-anchoring of the winch.

What seems to be the most popular cable winch among trail workers is a more sophisticated model known as the Griphoist® Winch. In addition to being a very strong winch, its bigger advantage is it’s a continuous cable puller. In other words, a cable of any length can be used. This allows for long pulls without having to re-anchor. These hand-powered winches use a pair of wire rope grips to pull a separate length of cable through the winch. Using the Griphoist®, a trail worker can stretch a cable all the way across a stream or ravine and pull a bridge timber into place. They also provide the basic lifting power for a “rigging” system. A Griphoist® and manual are housed in the FLTC Office tool shed.

Nylon slings should be used to anchor the winch to a tree and to harness rocks or logs. Chains can also be used, but in most situations the nylon slings can do the same job with less weight and less damage to the anchor tree. The winch cable should be kept freely suspended, rather than dragging it through dirt or rock, to avoid fraying and deterioration of the cable.

Safety: A worker should never position his or her body in the path of danger should loads drop or blocks, wire ropes or slings fail. Do NOT stand under a suspended load, over a loaded cable, under a high anchor, or downhill from a suspended load. PPE includes leather gloves, boots and hardhat.

Rigging

Uses: Rigging refers to a system of cables, pulleys and winches used to suspend and move heavy loads to a work site or into place. Rigging *systems*, powered by Griphoist® winches and including snatch blocks and ropes, can empower small crews to do great things.

Tips: The set-up and use of a rigging system requires a sophisticated level of knowledge and special training or experience. It should not be attempted without this knowledge as severe accidents, caused by the heavy loads or a breaking cable, could occur.

Rigging systems are most appropriate when there is a considerable amount of work to do at one site, such as when constructing a bridge, retaining wall, steps, or shelter. On this type of project a crew will not want to go back to the old method of brute force once they acquire the skill to effectively utilize rigging.

Safety: Similar to the safety practices shown under cable winches, but even more critical with rigging because the heavy loads are suspended and can fall on workers.

POWER TOOLS

When the situation allows, the use of power tools is appropriate along the Finger Lakes Trail. In most situations, power tools can substantially increase production. They allow fewer people to construct or maintain a given amount of trail in less time. However, they have certain drawbacks that must be recognized. Power tools can increase the potential for injury, especially in the hands of unskilled workers. Users must be particularly cautious to prevent injury to themselves or their co-workers and must wear PPE at all times. Power tools are generally heavier to carry than hand tools. They may not be worth the extra effort if long distances are being covered where only incidental work will be performed or the worksites are widely scattered. Check with the appropriate agency and or private landowner to see that the use of power tools is not prohibited.

All tools covered in this section require training to use properly, safely and efficiently. Get and read the owner's manual and handbooks on safe and efficient use of each power tool. Also, participate in a training seminar or workshop. Most agencies recommend or require specialized training before allowing people to use certain power tools within their jurisdictions. If you have never used the tool before, work with an experienced person certified to operate the machinery. Keep in mind the Finger Lakes Trail Conference's tradition of safety first.

Check list for the safe operation of power tools:

- ☐ Read the Owner's Manual and all supplements (if any are enclosed) thoroughly before operating any power tool.
- ☐ Don't use any other fuel than that recommended in the Owner's Manual.
- ☐ Refuel in a safe place. Don't spill fuel or start power tools where you fuel them. Do not refuel a hot power tool; allow it to cool off. Be certain that the power tool has dried thoroughly before starting if fuel has spilled on the unit.
- ☐ Don't smoke while fueling or operating power tools.

Lawnmower

- Uses: An ordinary side-discharge mower can be effectively used for clearing and maintaining trail, except in extremely rocky terrain. For grass, ferns and weeds (up to knee high) many feel that a lawnmower is more effective than a brush saw. It is more readily available and less expensive than a DR Mower®, but not as durable or powerful.
- Tips: A mower with a 22" to 24" cut and adjustable wheels seems to work well. Wheels should be set as high as possible. A mower with a universal blade for easy replacement is desirable.

Safety: Rotary mowers can throw objects, injure others and can cause severe injury to the operator's extremities if a hand or foot gets under the mower deck. The operator should insure that other workers keep a considerable distance from the mower so that thrown objects do not cause injury. Extra caution should be used when operating on slopes, or if the vegetation is wet, to avoid slips and possible operator injury (see Owner's Manual). Sturdy leather boots should be worn. Ear protection should be worn if using the mower for extended periods or if the mower is louder than 80db.

DR Field Mower®

Uses: This sturdy mower is an excellent choice for cutting heavy grass, weeds, briars and even saplings up to 1" diameter. A DR Mower® is simply a walk-behind brush-hog that is useful during trail construction and trail maintenance. It is more useful than a sickle-bar type mower because the material is chewed up and does not need to be removed from the trail as much as with a sickle-bar mower.

Safety: Similar to the safety practices shown above under lawnmower, but even more critical with the DR Field Mower® because it is much more powerful. Ear protection is required. Untrained users should work with an experienced user first. FLTC- or club-owned DR Field Mowers® are stored at locations around the state.

Brushsaw

Uses: Constructing and maintaining trail through areas of heavy brush, grass, briars and sapling sized trees. A brushsaw allows one person to rapidly clear large areas. In some situations, a DR Mower® can accomplish the same tasks more easily and quickly, especially in grass and smaller brush.

Tips: Brushsaws come in a variety of sizes. Trail work requires a more powerful unit than one that is used for lawn trimming. Generally, a brushsaw with an engine of 35cc to 80cc and bicycle-type handlebars is recommended. For durability, a known brand such as Stihl, Husquevarna or Jonserud should be obtained. These saws also come with a variety of blades depending on the material to be cut. Trail work requires a saw type or a universal grass-brush blade, not a string cutter.

The brushsaw should be supported by a shoulder harness, but can still become very tiring. Users should work in teams to make the job easier and switch positions regularly. When not cutting, the other person can remove brush from the trail but stay well clear of the blade.

Safety: The brushsaw's open blade is on the end of a wand and can snag and swing violently to the side, making it prone to injure other workers rather than the operator. Other workers should stay clear. Required PPE is ear protection, eye protection, gloves and leather boots. Hardhats are recommended.

Chain Saw

If you are a certified sawyer (certified chain saw operator), intend to help a sawyer (i.e., be a sawyer's Swamper), or lead or work on a crew working with chain saws on any trail in the Finger Lakes Trail System, you must read this section and Appendices 1 and 2.

Chain saws are one of the most dangerous pieces of power equipment. The FLTC's position is that only *certified* sawyers may operate chain saws on trails in the FLT System. This applies to all trails in the FLT System, including the main trail, branch trails, spurs, and side trails, on public *and* private lands. This position is based on the FLTC's "Chain Saw and Crosscut Saw Training and Certification Policy," attached as Appendix 1 and posted on the FLTC's website. The relevant pages from the USDA's Forest Service's *Health and Safety Code Handbook* follow the Policy in Appendix 1.

- Uses: Chainsaws are used for cutting medium to large size blowdowns, clearing heavy sapling growth during trail construction, cutting trees into pieces for wood construction projects, and cutting standing trees no larger than six inch diameter on State Forest land outside the Catskill Park and no larger than three inch diameter within the Catskill Park. If there is a hazard that is larger, consider relocating the trail until the hazard has fallen on its own. If the hazard is on state or federal land, contact the appropriate governing agency.
- Tips: Saws with 16" blades are generally adequate for most trail work. Models should be obtained with chain brakes, low kick-back chain, reduced-radius bar tip, throttle lock, vibration damped handles, chain catcher in the right-hand guard, and spark arresters and high quality mufflers. The user should carry a tool kit in a pack (file, scrench, and plastic wedge). A square-tooth chain is recommended for bore cuts.
- Safety: Chain saws are one of the most dangerous pieces of power equipment. They should be used only by field trained-and-certified sawyers. Before using a chain saw, also read a handbook on chain saw use and safety. Required PPE includes hardhat, face screen, hearing protection (usually sold as a unit), eye protection, safety glasses if no face screen, safety pants or chaps made from Kevlar, leather or Kevlar gloves, and above ankle leather boots with good traction, steel toed preferred. Chain saws should not be operated without the above PPE.

As a safety precaution, **sawyers should work with a partner (a sawyer helper, aka a Swamper)**. The Swamper must wear [an approved hard hat](#) and hearing protection. It is recommended that he or she also wear safety glasses and sturdy clothing appropriate for the season. There should not be more than two swampers per sawyer in any given work area.

During felling operations, the work area shall consist of a circle with the tree being felled at its center and its radius equal to two times the height of the tree. With two sawyers operating that distance would be four tree lengths from one tree to another. No one but the Sawyer and the Swamper are permitted within this area while the work is being done. Sawyers and Swampers should discuss and agree upon safety zones and escape routes before felling begins. When a Sawyer is felling a standing tree, lodged tree, or snag, the Sawyer and the Swamper(s) should identify the safety zones and plan escape routes together. The Swamper(s) should then stand in the safety zone, at 45 degree angles from the side and back of the Sawyer, on either side. If not wearing a hard hat, the Swamper must stand more than 2 tree lengths away. If wearing hard hat, the Swamper should stand at least 15' away, in the safety zone. The Swamper should never move behind the tree to be felled. Both Sawyer and Swamper should be prepared to use the escape route(s). Neither Sawyer nor Swamper should ever assume they can predict what a tree – especially a dead or damaged tree -- will do and should always expect the unexpected

Rest throughout the day, drink lots of water, and eat small snacks frequently to keep your energy level up. Do not, under any circumstances, use a chain saw after drinking alcohol or taking drugs, including prescription drugs that may cause drowsiness.

Check list for the safe and efficient operation of a chainsaw:

- ☐ Start your saw without help. Do *not* drop-start a saw or start a saw on your leg or knee. Hold the saw between your thighs or put your boot into the handle when the saw is on the ground. Never operate a chainsaw when you are fatigued.
- ☐ Keep all parts of your body and clothing away from the saw chain when starting or running the engine. Before you start the engine, make sure the saw chain is not contacting anything.
- ☐ Beware of kickback! Hold saw firmly with both hands when engine is running; use a firm grip with thumbs and fingers encircling the chainsaw handles and watch carefully what you cut. Kickback (saw jumps or jerks up or backward) can be caused by:
 - Striking limbs or other objects accidentally with the top tip of the saw while the chain is moving.
 - Striking metal, concrete or other hard material near or buried in the wood.
 - Running engine slowly at start of or during cut.
 - Dull or loose chain.
 - Cutting above shoulder height.
 - Inattention in holding or guiding saw while cutting.

- ☐ It is strongly recommended that you do not attempt to operate the saw while in a tree, on a ladder or on any other unstable surface. If you elect to do so, be advised that these positions are **EXTREMELY DANGEROUS**.
- ☐ Be sure of your footing and pre-plan a safe exit from a falling tree or limbs.
- ☐ When cutting a limb that is under tension, be alert for springback so that you or your Swamper(s) will not be struck when the tension is released.
- ☐ Use extreme caution when cutting small size brush and saplings because slender material may catch the saw chain and be whipped toward you or pull you off balance.
- ☐ Vibration – Avoid prolonged operation of your chainsaw and rest periodically, especially if your hand or arm starts to have loss of feeling, swell or become difficult to move.
- ☐ Exhaust fumes – Do not operate your chainsaw in confined or poorly ventilated areas.
- ☐ Observe all local fire prevention regulations. It is recommended that you keep a fire extinguisher and shovel close at hand whenever you cut in areas where dry grass, leaves or other flammable materials are present. Note: Spark arrester screens are available for installation in your muffler, where fire regulations require them. Check local regulations for your special requirements.
- ☐ Turn off your saw when moving between cuts and before setting it down. Always carry the chainsaw with the engine stopped, the guide bar and saw chain in the rear, and the muffler away from your body.
- ☐ Use wedges to help control felling and prevent binding the bar and chain in the cut.
- ☐ Don't touch or try to stop a moving chain with your hand.
- ☐ Don't allow any other person or animal close to a running saw or where a tree is being cut down.
- ☐ Don't touch or let your hand come in contact with a hot muffler, spark arrester or spark plug wire. Don't run the saw without a muffler, exhaust stack or spark arrester. Keep screens and baffles clean. Keep spark plug caps clean and in good repair. Replace promptly if necessary.
- ☐ Keep the chain sharp and snug on the guide bar.
- ☐ Don't allow dirt, fuel or sawdust to build up on the engine or outside of the saw.
- ☐ Keep all screws and fasteners tight. Never operate a chainsaw that is damaged, improperly adjusted or not completely and securely assembled. Be sure that the saw chain

stops moving when the throttle control trigger is released. Keep the handles dry, clean and free of oil or fuel mixture.

- Safe chainsaw operating techniques should be constantly stressed to all users. If you observe an unsafe operation of a chainsaw don't be shy; speak up! Tell the operator of the observed unsafe method to help prevent an accident. The chain operates at a fast cutting speed and the slightest slip or miscalculation can bring extremely serious injury.

CLOSING

Trail work can be dangerous. As a volunteer you could find yourself swinging sharp cutting tools, handling chain saws and other power tools or winching rocks under tons of pressure. So safety should be foremost in your mind for yourself and your coworkers.

The Finger Lakes Trail Conference has an enviable safety record. As a volunteer, you should make learning safe working practices an integral part of any new skill you acquire.

Trail work safety often demands an emphasis you probably won't find elsewhere in modern life because your assignment may take you far from professional medical or emergency help. You may be miles from a car. If you get badly hurt, evacuation may take many hours and risk the lives of crewmembers and rescuers. So, as a volunteer, take the same attitude that experienced hikers do on the trail: you are personally responsible for assessing your own fitness and preparedness. Equip yourself with knowledge and gear appropriate to the location, duration, weather and difficulty of the work project.

We recommend that most workers get first aid training and carry an adequate first aid kit to the field. We also recommend that you avoid working alone. And, when you are working at close quarters with others, recognize that your actions always pose some risk to your companions. Give others the room to work safely.

Before you head out on to the trail, learn about the special hazards in your area. Poison ivy, stinging nettles, wasps, ticks carrying Lyme disease, and hunters during autumn hunting season can expose you to danger. Adjust your clothing, work assignments and work schedules accordingly.

One last word: hold and participate in "tailgate meetings" every day, before you start work, to make sure that you review the job at hand, the associated hazards, and the tools and safety gear you will need to bring.

ACKNOWLEDGEMENTS

The author thanks the Finger Lakes Trail Management Committee for their suggestions and manuscript corrections. He also acknowledges the following publications from which ideas and statements were usurped.

National Park Service, U.S. Department of the Interior, 1996. *North Country National Scenic Trail – A Handbook for Trail Design, Construction, and Maintenance*, Madison, Wisconsin.

Birchard, Jr., W. and Proudman, Robert, 2nd edition. *Appalachian Trail: Design, Construction, and Maintenance*. Appalachian Trail Conference, Harpers Ferry, VA.

Peter R. Wybron, FLTC Treasurer (Ret.), Individual Trail Sponsor
May 2009
York, New York

The FLTC ad hoc committee charged to review and update the *FLTC Safety Handbook* in 2012 wishes to thank Peter for the magnificent job he did preparing the original draft of this handbook

We wish to acknowledge the following publications and documents from which additional ideas and statements were excerpted:

National Wildfire Coordinating Group, *Wildland Fire Chainsaws S-212 Student Workbook*, February, 2004.

New York State Department of Environmental Conservation, Division of Lands and Forests, *Health and Safety Handbook*, December 2011.

USDA, US Forest Service, *Health and Safety Code Handbook*

USDA, US Forest Service, Missoula Technology and Development Center, *Instructor Handbook* for “Chain Saw and Crosscut Saw Training Course”

USDOL, OSHA, *eTools, Logging, Handbook Operations*
(<http://www.osha.gov/SLTC/etools/logging/Handbook.html>)

Matt Branneman, FLTC Director of Crews & Construction, Co-chair
Steve Catherman, FLTC Vice President for Trail Maintenance
Marty Howden, FLTC TQ Chainsaw Training Coordinator, Co-chair
Lynda Rummel, Vice President for Trail Quality
December 2012
Mt. Morris, New York

Appendix 1

Appendix 1A

FLTC Chain Saw and Crosscut Saw Training and Certification Policy

(edited for clarification October 2012/LR)

The FLTC endorses the approach to employee worker-safety programs taken by the North Country Trail Association/National Park Service and the U.S. Dept. of Agriculture (USDA) United States Forest Service, and joins with those agencies in the administration of safety programs to protect volunteers and employees working on all trails in the Fingers Lakes Trail System, including the portion of trail that is coincident with the North Country National Scenic Trail. The FLTC appreciates and supports programs that protect trail workers under the Volunteers in the Forests Act (Federal), the Volunteers in the Park Act (Federal), the Adopt-A-Natural Resource Agreements (NYS DEC) and the Volunteer Service Agreements (NYS OPRHP) and related agency sponsorship of training and safety programs.

In its authorization to equip and train FLTC volunteers as well as in its work with cooperating State and Federal agencies, the FLTC:

- Recognizes that individual FLTC volunteers have primary responsibility for their own personal safety and for compliance with the requirements for chainsaw and crosscut saw operators. Furthermore, each volunteer engaged in club- or crew-sponsored maintenance and construction activities assumes personal responsibility for following crew-leader or club directions, assessing his or her own physical condition and preparedness for engaging in trail work activities, and coming properly equipped and clothed in a manner appropriate for the location, duration, weather conditions, and proposed work.
- Acknowledges that, through its agreements with the North Country Trail Association, National Park Service and the USDA Forest Service, as well as the NYS DEC and the NYS OPRHP, the FLTC may sub-delegate leadership and control over defined sections of the FLT System (including the FLT/NCNST) to hiking and trails clubs, which in turn will have the authority and responsibility to control all club volunteer-maintenance activities engaged in by their members and affiliates.
- Follows current individual safety requirements that apply to federal and NY State employees in those agencies, but recognizes that volunteers may require additional time, resources, and assistance to meet agency requirements and goals. Those requirements can be found in the **USDA Forest Service *Health and*

*Safety Code Handbook's "Minimum Requirements for Chainsaw Operation" (Section 22.48, pages 20-47 through 20-62) and "OSHA General Requirements for Logging Operations, 1910.266." See **also** list of required Personal Protective Equipment **below**.*

- Follows the USFS Missoula Technology and Development Center's (MTDC) curriculum, or its agency-approved alternatives such as Game of Logging or Wildland Fires Chainsaws S-212, for chainsaw and crosscut saw certification. In evaluating individual sawyer skills when certifying or recertifying sawyers, FLTC/NCTA authorized chainsaw instructors may consider equivalent course materials from other programs. The FLTC's Vice President for Trail Quality and Chainsaw Training Coordinator will determine whether the content of any other courses is adequate.
- Encourages trail-maintaining crews and clubs to maintain current volunteer lists with their federal and state agency partners. All names should be submitted to the FLTC's Office. As point person for agreements with the state and federal land managers in the state, the FLTC's VP-Trail Maintenance will assure that FLTC agreements with the land managers list all volunteer workers and outline any criteria to be met to ensure applicable medical coverage and tort protection (workers' compensation and liability coverage) for incidents on the FLT/NCNST arising from these groups' volunteer activities there. This coverage is authorized under agency sponsored "Adopt-A-Natural-Resource" or "Volunteer Service" programs at the state and federal level.
- FLTC recognizes that under the AANR (DEC), the Volunteer Service (NYS OPRHP), and respective Federal VIF and VIP programs, volunteers are considered "state employees" or "federal employees" for the purpose of medical and tort-claims protection (workers' compensation and liability coverage). However, the FLTC maintains that its organizations and its individual volunteer workers are independent citizens working under private FLTC or club auspices within the law, regulations, and policies set by the federal and state agencies.
- In addition to the chainsaw certification, sawyers must have current certification in CPR/First Aid.
- Sawyers will be encouraged to travel to other sections of trail in the FLT System at least 3 times during their 3-year certification period, when asked and when able. We request that our sawyers take the best course that prepares them to work in the most diverse situations on the widest range of lands. It is recommended that sawyers not work alone when operating a chain saw.

To the extent financially feasible, FLTC will:

- Seek funding to fully implement training and equipment programs necessary for safety management.
- Seek instructor-certifiers who can be qualified under USDA Forest Service or NPS auspices as instructors who can authorize local instructors and operators. FLTC state partners and trail maintaining clubs should encourage willing, skilled, regularly practicing sawyers with talents for teaching to become qualified as instructors by a Forest Service- or NPS- qualified instructor-certifier.

- Reimburse approved volunteer expenses for First Aid/CPR training and PPE purchases.
- Encourage all agencies to recognize current certifications still in effect through their full term.
- Prepare current best management practices, which will be summarized in a volunteer-friendly format, such as the *FLTC Safety Handbook* and on the website.
- Work with the agencies to publish and distribute training and safety-administration handbooks, videos, or other media and to streamline reporting requirements and other paperwork.

Personal Protective Equipment for Chainsaw Operators

The following personal protective equipment (PPE) is required by the USDA Forest Service and the FLTC for all chainsaw operators:

1. Forest Service approved hard hat
2. Eye protection
3. Hearing protection (85 + decibels)
4. Leather gloves
5. Long Sleeve Shirt
6. UL-approved chainsaw chaps or pants (chainsaw chaps must meet the requirements of the Forest Service, and it is recommended that they overlap boot tops a minimum of 2 inches.)
7. Heavy 8" high laced boots with nonskid soles (cut-resistant or leather, waterproof or water-repellant, hard toes are optional).

It is recommended that all sawyers carry the contents of an OSHA-approved first aid kit such as the Logger's First Aid kit, at minimum. It is preferred that sawyers carry a more advanced kit more easily carried when a vehicle is not nearby.

For further direction refer to Forest Service Handbook 6716.03: Personal Protective Equipment (condition of hire) Policy, posted on the FLTC website.

*Attached:

- NYS DEC's Participant List AANR form for Sponsors
- NYS OPRHP Volunteer Service Agreement Form that individual trail workers need to complete and submit yearly.

Appendix 1B

USDA, US Forest Service's Health and Safety Code Handbook, Section 22.48, Chain Saw Operations

22.48 - Chain Saw Operations. Chain saw operations include, but are not limited to, felling, bucking, brushing, limbing, and specialized uses. Individual chain saw operators have the obligation to say "NO" and walk away from any situation they determine to be an unacceptable risk. Complete a JHA for chain saw related work projects and activities (sec. 22.08).

22.48a - Standards. The standards for noise exposure, explosives, PPE, hand and portable powered tools, logging operations, first aid training, and hazard communication are in 29 CFR 1910.95, 1910.109, 1910.132, 1910.151, 1910.242, 1910.266, 1910.1030, and 1910.1200; and 1926.50, 1926.52, 1926.100 - 1926.102, 1926.301, and 1926.302.

22.48b - Qualifications.

1. In addition to having the applicable training and certifications listed in sections 22.07 and 22.48a, all saw operators shall be currently certified by a nationally recognized organization to render first aid and perform cardiopulmonary resuscitation (CPR). Supervisors shall ensure that saw operators receive training or retraining in first aid and CPR before certifications expire. Refer to section 52.3 for direction on the bloodborne pathogens program.

2. Every unit at the Region, Station, Area, and Institute level that utilizes crosscut saws and chain saws shall develop an approved crosscut/chain saw program that includes the following minimum requirements for employees involved in crosscut/chain saw work projects and activities:

a. Classroom and field training encompassing in part or in total a national training program, such as Wildfire Power Saws S-212 (sec. 22.06).

b. Demonstration of sawing ability (to a certified operator or certified instructor) in functional areas.

c. Supervision by a certified instructor or certified operator of saw work by new operators.

3. The Regions, Stations, Area, and Institute shall appoint a crosscut/chain saw Program Coordinator. As a minimum the Program Coordinator shall:

a. Possess current knowledge of policy and regulations pertaining to crosscut/chain saws and related equipment.

b. Be trained and certified to evaluate and certify or recertify saw instructors.

- c. Be certified at the highest level of operator proficiency.
4. Sawyers must maintain national certification cards indicating their proficiency levels as follows:
- a. "A" apprentice sawyer. These sawyers have completed the nationally approved classroom and field training for general saw work (such as bucking, limbing, and the first basic steps in felling) or specialized uses (such as construction, maintenance, and fencing). Generally, they are trained at the local unit and must be supervised by a B or C level sawyer during saw work activity, which may include slashing and felling in the least complex situations. This certification expires 3 years after the date of issue. The certifier has full authority to impose restrictions on apprentice sawyers as deemed necessary.
 - b. "B" intermediate sawyer. This level includes skilled saw operators capable of performing only those tasks as approved by a certifier and documented on the back of the certification card. During saw activities, intermediate sawyers are not allowed to field certify sawyers. Certification is restricted to "C" advanced sawyers and "C" certifiers.

This certification expires 3 years from the date of issue. The certifier has full authority to impose restrictions on intermediate sawyers as deemed necessary.

Appendix 2

Hazard Analyses

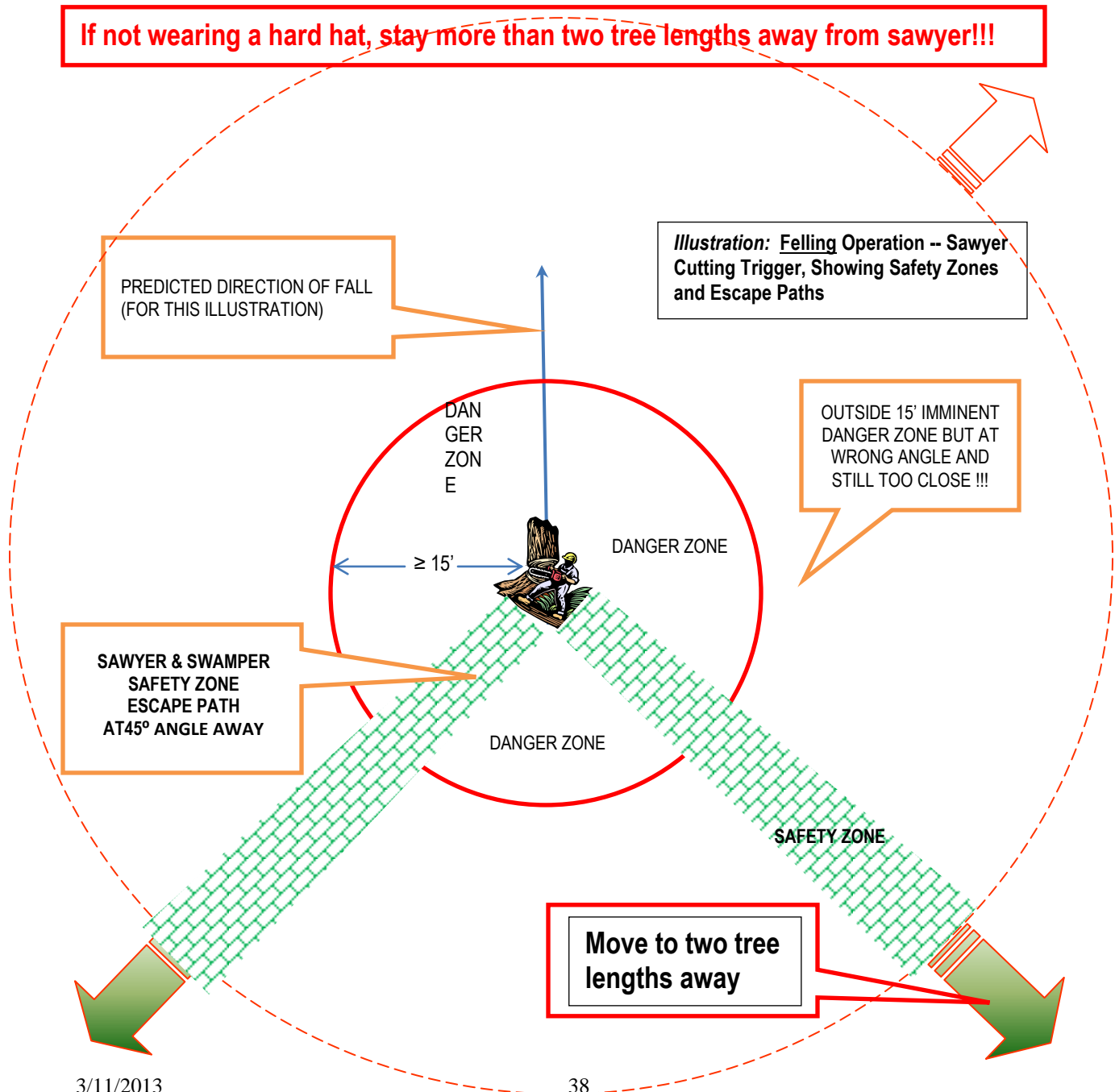
Appendix 2A Hazard Analysis Chain Saw Operation

Hazards for Chain Saw Operators and Swampers

Hazard	Definition	Ways to Avoid
Throwback	As the tree falls through other trees or lands on objects, those objects or branches may be thrown back toward the logger	Watch tree as it falls from safety zone and use escape path
Dangerous Terrain	If the tree falls onto stumps, rocks, or uneven ground, the tree or limbs may bounce, break or roll	Clear terrain if possible; watch tree as it falls from safety zone and use escape route
Lodged Tree (Hang)	A tree that has not fallen completely to the ground because it is lodged or leaning against another tree	Sawyer will likely drop the tree in chunks, increasing the vertical stance of the tree. The tree will fall or possibly break off and hit another tree. If tree remains hung up, do NOT move under it to pull it down!
Widow-makers	Broken-off limbs that are hanging freely in the tree to be felled or in trees close by	Before the tree is felled, scan overhead; move out from under any widow-makers
Snag	Standing dead tree, standing broken tree, or a standing rotted tree to be felled nearby may break off when falling	The most unpredictable situation. Stand 2 tree lengths away if can, otherwise stand in safe zone and use escape path.
Spring Pole	A tree, part of a tree, limb or sapling under stress or tension due to the pressure or weight of another tree or object will spring back sometimes violently	Identify spring poles together before limbing and bucking. Stand away while sawyer cuts
Freshly Uprooted Tree	The root end may spring back, sometimes violently, when trunk is cut	Do NOT stand near root area. Stand on uphill side, away from roots.
Barberchair	Tree trunk may shoot backwards violently when back cut or plunge cut is below level of the face cut and the hinge is cut	Do NOT stand behind tree. Sawyer and swamper should be to the side in safe zone and use escape route.

Extreme Weather	Strong winds, hazardous snow or ice conditions, electrical storms, dense fogs, fires, landslides and darkness.	Terminate work and move to safety. Watch tree tops for fresh winds that may impact direction of fall
Misunderstood signals or noises	<i>E.g.</i> , Swamper assumes sound of chain brake signals he/she can approach more closely	Look at each other and watch for repeat of activity or signal
Chainsaw noise	Damage to hearing due to chain saw operation noise	Always wear ear protection when within 15' of running saw
Wood chips from sawing	Flying chips can lodge or embed in unprotected eyes	Helpers should also wear eye protection near running saw

If not wearing a hard hat, stay more than two tree lengths away from sawyer!!!



Appendix 2B

Hazard Analysis for Chainsaw Maintenance

(adapted from the NYS DEC Div. Lands & Forests Dec. 2011 *Health & Safety Handbook*, p. 10)

Hazards for Chainsaw Maintenance

Hazards	Definition	Ways to Avoid
Lacerations, blisters; chemical exposure; burns	Lacerations -- from moving the chain when sharpening or injury from maintenance tool; blisters - - from repetitive movements with maintenance tools or handling hot equipment; burns – from handling hot equipment or spilling gas	Always wear gloves and safety chaps/pants when filing chain, using gas, handling equipment that's hot (especially muffler); Follow safety procedures outlined in certification course; have first aid kit nearby

Appendix 2C

Hazard Analysis for General Trail Maintenance

Common Hazards (List Not Exhaustive)

Hazards	Definition	Ways to Avoid
Lacerations, blisters	Cuts to and irritations of the skin, resulting from brushing against sharp-toothed saw blades, swinging tools with handles	Sheath the blade when hiking & wear protective clothing, including gloves, when swinging tools
Repetitive motion	Same motion over long period	Take periodic rests, switch to another tool, rotate tool use
Lifting, handling heavy objects	Large segments of tree trunks; large stones, boulders	Use cut saplings to pry, rotate or roll large tree pieces off trail; lift using legs and turn pieces end over end; use roll-away cut & let gravity move tree chunk; move boulders and telephone poles using GripHoist®
Splinters, shards, projectiles	Splinters from handling rough wood or prickles; projectiles & shards from chopping downed logs and cutting roots near rocks	Wear gloves & eye and head protection, as warranted

Embedded thorns, skin tears	Multiflora roses and hawthornes have aggressive thorns	Wear long-sleeved shirt & long pants, possibly rose gloves
Poison Ivy exposure	Oil from the plant leaves or stem or on clothes causes blister rash	Wear long pants; apply ivy wash to exposed skin ahead of time; wash with soap and water immediately after exposure; wash clothes before re-wearing
Slips, trips, falls	Ice or rain, wet leaves & debarked wood, roots and rocks, steep grades, loose scree, etc.	Wear <u>good</u> hiking boots/shoes, long pants to minimize abrasion,
Pinched fingers, toes	Typically pinched when trying to lift boulder, or when closing lopper, or when a cut piece of log rolls	Look carefully at the situation before positioning your fingers
Bee stings	Inevitable, especially from ground bees, which change nest location annually	Carry epi-pen and Benydril; mark nests with flagging & warning sign

Appendix 2D

Hazard Analysis for Side Hilling (Benching-In Trail)

Hazards for Side Hillers

Hazard	Definition	Ways to Avoid
Falling Debris	Workers digging out trail above other workers on steep hillside dislodge rocks, sticks and other objects that can fall onto persons working below	Persons working below workers should not stand directly below but off to the side and must wear a hard hat
Cascading Debris	Dislodged rocks, sticks, tools or water bottles may strike other objects that bounce, break, or roll down hill	Clear terrain of major threats between workers before digging, if possible
Struck Rocks	The impact of a Pulaski or mattock may send a rock chip sailing in almost any direction	Stage the work, use different tools, work 30' apart,

Appendix 2

Trail Maintainer Registration Form



Name _____

Street _____

City/State _____ Zip _____

Email(s) _____

Primary Phone (_____) _____ Secondary Phone (_____) _____

Club (if any) _____

Area(s) that I am assigned to: (☐ Check here if you are not assigned to a specific section of trail.)

Map _____ Start _____ to Map _____ End _____

Map _____ Start _____ to Map _____ End _____

Training: I have received (check those you have taken and enter date taken):

In the last 3 years, training (workshops, "on-the-job" mentoring/coaching, etc.) in basic trail maintenance or construction (standards and techniques for clearing, building, blazing/signage; trail use policies; landowner relations; etc.)

☐ Chainsaw (Training Provider: _____) (____/____/____)

☐ First Aid (Agency/Type: _____) (____/____/____)

☐ CPR (____/____/____)

☐ Other (____/____/____) Specify: _____

What training do you need? _____

Safety Handbook: Prior to maintaining or building trail or trail facilities for the FLTC, **you are required to read** the FLTC's *Safety Handbook*, available at www.fingerlakestrail.org → Members → Trail Workers or from your crew leader, Regional Trail Coordinator or ClubTrail Chair. Read the handbook *before* returning this form. Your initials here _____ and the date ____/____/____ indicate you have read the handbook.

☐ Check here if you work on (or *might* work on) State land administered by the NYS Department of Environmental Conservation. If so, you will also need to complete the state's **Individual Volunteer Application** that can be found on the NYSDEC website so that you will be covered under their **Volunteer Stewardship Program**. That application must be submitted to the FLTC office.

Liability and Workers' Compensation protection is provided to a volunteer at no charge performing authorized work on the Finger Lakes Trail System where it traverses state land administered by the NYSDEC, providing that the volunteer has registered in the Volunteer Stewardship Program. Registration is required prior to performing work (see above). The Finger Lakes Trail Conference has assumed administrative responsibility with NYS for all FLTC trails on state land administered by the NYSDEC. Your signature below constitutes acceptance of this agreement. I agree to report all injuries to the FLTC Service Center within 24hrs and provide any information required by the State.

Signature _____ Date _____

Parent/Guardian Signature _____ Date _____

Liability Waiver

Those persons enjoying the Finger Lakes Trail (FLT) and/or activities sponsored by the Finger Lakes Trail Conference (FLTC) or any clubs conducting activities on behalf of, or in support of the FLTC, accept full personal responsibility for their own wellbeing, or, for the wellbeing of a minor when acting in the capacity of parent or guardian. Further, as a member of the FLTC and/or a sponsoring club, users of the Finger Lakes Trail accept and understand that hiking and trail maintenance activities are rigorous activities often conducted in rugged outdoor conditions subject to variations in weather and terrain conditions which may involve the risk of injury or death, and, that I am fully responsible for my own safety and selecting activities that are consistent with my physical capabilities. Furthermore, I agree to follow FLTC Safety Procedures while doing trail work.

Signature _____ Date _____

Parent/Guardian Signature _____ Date _____

Return this form, initialed and signed and dated, to: Finger Lakes Trail Conference, 6111 visitor Center Rd., Mt. Morris, NY 14510.



Trail Maintainer Registration Form Notes

The main purpose of this form is to get basic information about **ALL** of our trail workers. That includes those who may only be one-time helpers. The FLTC needs to communicate with trail workers from time to time, so having your contact information is essential. Three times a year, we will send the *Trail Tender News* (TTN) to each registered worker who is actively involved in trail work. TTN contains helpful information and announcements that you will most likely need to know about. Whenever possible, we prefer to send this information by email to save paper and postage.

If you are associated with one of our Sponsoring Clubs, please indicate that on the form. If you are assigned to a specific section(s) of trail, please indicate what area (or if not, just check the “not assigned” space).

Another reason for this form is to collect information about Training. This will help us plan future training. It would be helpful if you could give as much detail here as possible. Feel free to attach more information if there's not room on the form. Please be sure to tell us your **NEEDS** so that we may provide support to you. We also require all our maintainers to read our Safety Handbook and acknowledge that they have done so on the front of this form.

If you work on state land administered by the NYSDEC, you are eligible for Liability and Workers' Compensation protection at NO charge through a Volunteer Stewardship Agreement between the FLTC and the State. **But to activate your eligibility, you must complete the state's Individual Volunteer Application that can be found on the NYSDEC website and return the completed form to the FLTC office.** Please complete the form if you work on NYSDEC lands now or might do so in the future. It provides just one more measure of protection for both you and the FLTC.

As a part of our Risk Management Program, we have developed safety measures and standards for trail workers, BUT no matter how careful everyone is, there is always a chance of injury. We don't want our workers taking on projects that they can't handle and we require everyone to follow our safety procedures. The last section of the form asks you to sign an acknowledgement that you are aware of risks and that you agree to “be safe” in the way you conduct yourself while involved in hiking or trail work.

If you are a husband-wife team or if you have a partner sharing a trail assignment, BOTH need to fill out a form even if it contains much of the same information.

Return this form to either of the following:

- Finger Lakes Trail Conference, 6111 Visitor Center Rd., Mt. Morris, NY 14510
- Your Club's Trail Chairman (or designated leader)

THANK YOU
for your cooperation in this matter!

Having this data makes our administration of trail maintenance much easier.

Trail Maintainer Reg. Form, rev. 11-20-13 SC/

Volunteer Service Agreement



Please Print

Name:	Location/Facility:
Street:	Date(s) of Service:
City/State/Zip:	To:
Telephone #:	From:
Social Security #:	Are you 18 years of age or older? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, state age: (Parent or guardian must sign below if under 18)
Description of Volunteer Service: Site work associated with clearing brush at the CCC/POW Camp site off of Moscow Road.	

In Case of Emergency Notify:

Name:	Address:
Telephone:	City/State/Zip:

I certify, to the best of my knowledge, that the statements I have made are true and correct. I understand that the volunteer services described above are to be performed at no cost to the state. I will be required to comply with all regulations of the Office of Parks, Recreation & Historic Preservation ("OPRHP") and the regulations and procedures of the _____ Region.

The _____ Region of the Office of Parks, Recreation & Historic Preservation agrees, during the period of service, to provide for the volunteer Worker's Compensation coverage to the extent provided by law. If I am injured, I agree to promptly notify OPRHP and OPRHP shall process my claim under the Worker's Compensation Law. As a volunteer, I am also entitled to defense and indemnification pursuant to the Public Officers Law § 17. I agree to immediately notify OPRHP's Counsel's Office at (518) 486-2921 should I require such defense and indemnification. The personal information on this form will be treated as private pursuant to the Personal Privacy Protection Act.

(Date)	Signature of Volunteer
(Date)	Signature of Park Manager or Designee

If you are not 18 years of age or older, a parent or guardian must complete the following statement:

I have read the Volunteer Services Agreement and confirm that _____
has my permission to participate as a volunteer in the program described for the _____ Region.

(Date)	Signature of Parent or Guardian
--------	---------------------------------

This form is valid for the calendar year in which it is signed if it is being used for multiple volunteer days.