

Juan Bautista De Anza National Historic Trail



Volunteer Safety Handbook

Anza Trail Coalition of Arizona

ADOPTED _____

THE ANZA TRAIL COALITION OF ARIZONA, INC.

APPROVED _____

NATIONAL PARK SERVICE

Version 2024

Materials in this handbook were heavily borrowed from the excellent volunteer safety handbook created and produced by the Ice Age Trail Alliance, a National Park Service National Scenic Trail support group. We are grateful for the use of these materials.



Table of Contents

Emergency Contacts.....	5
Basic Safety Rules and Proper Attitude.....	7
Safety Training for Volunteers	7
Operational Leadership Concepts & <i>Trail Safe!</i>	7
Trail Safe!.....	8
In the Mean Time	9
Safety Briefings	9
On-Line Resources	10
Volunteer Agreement Form	10
Job Descriptions.....	11
Job Hazard Analysis (JHA).....	11
Daily Checklist.....	12
Tool & Equipment Use/ Inspection.....	13
First Aid.....	14
Pest Prevention.....	14
Insect, Snake and Animal Safety.....	14
Poison Hemlock/Poison Ivy	15
Section 2. Specific Hand & Power Tool Safety.....	16
HAND TOOLS.....	16
Lopper.....	16
Hand Pruner.....	17
Pruning Saw.....	17

Axe	18
Pick Mattock.....	18
Shovel	18
Posthole Digger.....	19
Sledgehammer	19
Pinch Point Crowbar.....	19
Digging Bar (Tamping Bar).....	20
Rock Rake.....	20
Pitchfork.....	21
POWER TOOLS.....	21
Checklist Safe Op. Power Tools	22
Weed trimmer.....	22
Mower.....	23
Chain Saw(s).....	23
Pole Saw	23
Chain Saw Checklist.....	25
Injury Reporting Procedures.....	26
Injury Reporting Kits	27
When an Injury Happens	27
Appendix 1A	29
JUBA Chain Saw Training & Certification	29
PPE for Chainsaw Operators	29
First Aid Kit.....	30
Appendix 1B USDA, US Forest Service’s Health and Safety Code Handbook, Section 22.48, Chain aw Operations.....	31

Appendix 2 Hazard Analyses.....33

 Hazard Analysis Chain Saw Operation33

Appendix 3 Power Equipment Policy34

 1.0 Background and Purpose34

 2.0 Power Equipment Requirements34

 3.0 Safety-First Strategies.....36

Emergency Contacts

Use the section below to fill in contact information for the Trail Boss, Trail Section Chiefs, and names and contact information for other volunteers you may want to work with.

If emergencies arise = Dial 9-1-1

- County Sheriff: (520) 761-7869
- Tubac Fire District: (520) 398-2255
- Rio Rico Fire District: (520) 281-8421

My Contacts:

Trail Boss: _____ Phone: _____

email address: _____

I Chose to Look the Other Way

I could have saved a life that day,
But I chose to look the other way.
It wasn't that I didn't care;
I had the time, and I was there.

But I didn't want to seem a fool,
Or argue over a safety rule.
I knew he'd done the job before;
If I spoke up he might get sore.

The chances didn't seem that bad;
I'd done the same, he knew I had.
So I shook my head and walked on by;
He knew the risks as well as I.

He took the chance, I closed an eye;
And with that act, I let him die.
I could have saved a life that day,
But I chose to look the other way.

Now every time I see his wife,
I know I should have saved his life.
That guilt is something I must bear,
But it isn't something you need to share.

If you see a risk that others take
That puts their health or life at stake,
The question asked or thing you say
Could help them live another day.

If you see a risk and walk away,
Then hope you never have to say,
"I could have saved a life that day,
But I chose to look the other way."

Section 1. General Safety

Basic Safety Rules and Proper Attitude

Work in advance with the Trail Boss or Section Chief to discuss, obtain approvals for, and notify them of your plans on the trail. Ensure emergency responders know how to find you in the event of an emergency. When seconds count, time spent directing emergency responders to your remote location is time you don't have.

Ensure that all volunteers have the appropriate PPE (Personal Protective Equipment), know how to use it, and actually do use it. Consult the Job Hazard Analysis (JHA's) and appropriate ATCA and partner policies (i.e. power equipment operator, etc.) for recommended vs. required PPE.

PLAN your WORK & WORK your PLAN.

Avoid working on the trail alone if at all possible. If you must go alone, tell someone your location, what you plan to do including equipment you're using, and your expected time of return. Some tasks require a companion worker, such as chainsaw operations.

- Check the weather forecast. Dress appropriately. Have plenty of water, energy snacks, a first aid kit, and cell phone on hand.
- Everyone is responsible for their own safety, as well as the safety of others. Speak up if you have questions, concerns, or see something that is unsafe. Stop the work, resolve the problem, and either continue safely or put the work on hold until issues are resolved.
- Don't exceed your personal physical or skill limitations. Work at your own pace.
- *There is no single inch of the trail that merits even one drop of blood from anyone.*

Safety Training for Volunteers

Operational Leadership Concepts & Trail Safe!

NPS Operational Leadership introduces a new tool within our National Park Service Occupational Safety and Health Program—a tool designed to prevent or mitigate risk associated with human errors when we are faced with threats.

Very often it rarely matters what we tell (policies, procedures, rules, regulations, safety program guidelines, etc.) an adult to do, it only matters what that person perceives the situation to be at that final moment when they make a decision, and their personal assessment of risk, the probability of success, and the consequences of failure.

NPS Operational Leadership is not a replacement for a safety program. It is a *special human factors tool* that is part of the National Park Service Safety Management System. NPS Operational Leadership is about each individual becoming a leader within his or her own job description, taking responsibility for their own safety and the safety of the employees and volunteers.

Why is it called NPS Operational Leadership?

The term “Operational” refers to every job we do in each of our diverse workplaces. Whether you are crafting side hill tread on a steep cross slope, building an informational kiosk at home in your workshop, conducting a trail assessment in the field, replacing bridges after the monsoon, or attending Hike the Hill in Washington, D.C.—the work of creating, supporting, protecting, building, promoting, and stewarding the Anza Trail entails countless operational jobs to perform. The term “Leadership” refers to effectively managing ourselves and motivating and guiding the activities of other team members. Essential to this is stimulating others to work and communicate as a team as well as providing feedback to team members regarding their performance.

Therefore, Operational Leadership pertains to every job skill and empowers employees and volunteers to be assertive about their safety and the safety of the team. NPS Operational Leadership encourages everyone to participate in the decision making and risk management process.

Trail Safe!

NPS Operational Leadership training is a 16-hour classroom program—one which is logistically difficult for ATCA volunteers to attend, given the dispersed nature of the volunteer workforce.

Trail Safe! is a series of self-study videos which capture all core learning objectives of NPS Operational Leadership. The eight videos in the series can be watched from the convenience of a volunteer’s own home on any device with Wi-Fi connection. The entire series can be viewed in about three hours. All volunteers are encouraged to participate in the *Trail Safe!* program by visiting the ATCA’s *Trail Safe!* webpage found [here](#). Please follow the instructions for accessing the videos and reporting your participation to the ATCA to receive a *Trail Safe!* pin to show others you have completed the video series.

In the Mean Time...

Volunteers and staff familiar with NPS Operational Leadership and/or *Trail Safe!* should share their knowledge with others whenever possible. Trail-wide implementation of these concepts and practices will rely heavily on learning from others in real-life settings.

- Utilize Operational Leadership in advance of planned work activities where there is opportunity to fully assess Risk and Mitigation needs using the GAR (Green-Amber-Red) model ([here](#)). Document and retain your planning efforts.
- Apply Operational Leadership concepts throughout the day on all work events, regardless of project size.
- Ensure that all volunteers are aware of and have access to this Safety Handbook.
- Promote the use of safety briefings at all opportunities.

Safety Briefings

- Conduct a short safety briefing at the start of each workday, and periodically throughout the day as necessitated by changing circumstances.
- No job is too small or easy, nor any staff or volunteer too skilled, to “skip” the briefing.
- Briefings should be conducted in two orchestrated parts -- by the Trail Boss or Section Chief who provides the overview of the project, and then, if needed, by a Crew Leader who then briefs the smaller assigned group.
- Briefing topics should include such things as: introductions if not everyone knows one another; verification of training certification (such as use of chainsaws); weather outlook; review of the task(s) at hand; discussion of any known risks and how they will be handled (mitigated or avoided); brief review of any appropriate JHA; PPE check; and Q & A
- Ensure everyone knows where First Aid Kits, emergency care locations, and NPS Injury Reporting Kits are located.
- Remember.... Briefings are meant to be brief, while still covering the essential information to provide for a safe and enjoyable work event.

Sample Safety Briefing

Good Morning! My name is Dave Smith and I'll be leading the work project today out on the trail. I see we have a new person to welcome with us today, so let's all introduce ourselves and where we're from (introductions). Okay. Well, it looks like we'll have pretty good weather today, but the temperature and humidity is expected to rise in the afternoon, so be sure you have two quarts of water with you and take frequent breaks in the shade. Let's also watch out for each other as far as heat illnesses.

Okay. Well, our job today is to walk about two miles up the trail and then back here to the parking lot, brushing and pruning the trail as we go. Mike and I will be in the lead with our bow saw, Jane and Frank can take the right side of the path with their pruners, and Sally and Joe can do the same on the left side. Let's all stay within sight of the others. Just so everyone knows, there is a hornet nest up the trail about half a mile from here. I have it flagged, so we'll know when we're getting close.

Does anyone have any severe allergy to bees or wasps? Oh, you do Mike? Do you have an epi-pen with you, and can we assist you if needed (discussion)? OK, that sounds good. I see we all have our gloves, and Mike and I have our hard hats in case we need to saw any overhead limbs. I have the First Aid Kit in my daypack, and the Injury Reporting Kit, too. Do we have any nurses, EMT's or medical professionals in the group today? Now before we get started, let's quickly review the JHA for safe carrying and use of our tools (review JHA). That's about it. Does everyone have their cell phone with them? Does anyone have any questions or anything else to add?

On-Line Resources

NPS and ATCA Websites for Volunteer Resources

Electronic versions of the items listed below can be found on the ATCA website at <http://www.anzatrail.org/>

From the Home Page, click on Volunteer Resources.

Volunteer Agreement and Group Volunteer Agreement Forms

The OF-301a Volunteer Agreement Form is required of each volunteer in order to receive Injury and Tort protections through the National Park Service and US Department of Labor. Volunteers in good (current) standing through their membership in any ATCA chapter or Trail-wide group are already covered under existing group agreements with the NPS. The OF-301b is for scouting or other groups working on the trail.

Non-ATCA member volunteers (i.e.: first time volunteers you have recruited for specific trail work, school or scout groups, etc.) must complete an OF-301a or OF-301b Volunteer Agreement before performing any volunteer service on behalf of the Juan Bautista De Anza National Historic Trail, in order to have Injury or Tort protections extended to them.

Consult the Trail Boss for more information on how to use these forms.

Job Descriptions

Each volunteer is required to have a “Job Description” as part of the OF-301a Volunteer Agreement under which they are covered. Standardized Job Descriptions exist for work categories including Trail Boss, Trail Section Chief, Sawyer, etc. The job description denotes the “scope of duties” a volunteer may be asked to perform, and specific jobs are numerically referenced to a corresponding Job Hazard Analysis (JHA) for safety purposes.

Job Hazard Analysis (JHA)

JHAs are written in standard template format used throughout the safety community. Very simply, they serve three purposes: 1) identify each task or step within an activity, 2) denote the hazard(s) that could be encountered within each step of the activity, and 3) provide recommended procedures to avoid the hazard(s).

JHAs are very useful in conducting safety briefings, as they cover the material in a very concise, yet thorough, manner. Volunteer work leaders should refer to the pertinent JHAs of the day while conducting safety briefings.

As stated above, JHAs are numerically referenced to specific tasks within the Job Descriptions. This provides all volunteers with a quick and easy reference in finding a specific JHA for any job. For example... the job “Litter Cleanup” is found within the Job Description “Trail Maintenance.” It is referenced as JHA #5. Simply go to the JHA library and scroll down to JHA #5 to see the Job Hazard Analysis for litter cleanup.



Daily Checklist

- Volunteers should equip themselves with basic necessities for a successful day afield. Items to include will change with the season and weather, but the following is a suggested list of gear and supplies that will fit well into any day pack

- √ First Aid Kit
- √ Insect repellent
- √ Energy snacks
- √ Water
- √ Leather gloves
- √ Notebook and pencil
- √ Eye/ear protection
- √ Cell phone
- √ Sturdy leather work boots
- √ NPS Injury Reporting kit
- √ JHAs
- √ Wide brimmed hat



Tool & Equipment Use/ Inspection

1. Always work at a comfortable pace, rest when tired, and keep your mind on your work.
2. To provide each person with relief from the particular motion and effort required in using one tool, and to enable volunteers to learn new skills, swap tools occasionally and rotate tasks. Fatigue and wandering attention can result in an accident.
3. Inspect all tools before use for defects and missing parts, and at the end of the day. A tool that breaks in use can be extremely dangerous.
4. Keep cutting tools sharp. Dull blades can bounce or glance uncontrollably and make work tiresome, increasing the likelihood of accidents caused by fatigue.
5. Before beginning work, clear away brush or limbs that might catch a swinging tool unexpectedly, causing a wild uncontrolled swing.
6. 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. Stop work during rain showers.
7. While working with a tool, anticipate the consequences of every move. Avoid cutting toward any part of your body or another worker.
8. 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.
9. When transporting tools in a vehicle, secure them to prevent bouncing, sliding, or shifting.
10. When passing a tool to another, always pass it handle first, release it only when the recipient has a firm grip.
11. 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.
12. Carry tools at your side on the downhill side. Grasp the handle at about the balance point with the sharpened blade forward and down. Never carry tools over your shoulder or slung around your neck.
13. When leaving tools at a work site, lay them against a stump or downed log with the blades directed away from passing workers. If on a slope, lay tools on the uphill side of the trail with heads uphill. 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. So that others can assist if needed, leaders should carry plasticized quick reference sheets or a small first aid booklet.

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. Refer to Appendix 1 for special requirements of Logger's First Aid Kit when operating chainsaws.

Pest Prevention

Insect, Snake, and Animal Safety

Hikers and trail workers may encounter a variety of creatures which pose safety hazards ranging from minor inconveniences to potentially life-threatening situations. Common sense and a general awareness of your surroundings are your best defenses.

Insects

- Avoid sitting on rotten logs or stumps. Spiders and ants often use them for homes
- Wearing long-sleeved shirts, socks, and long pants will help guard against stinging insects
- "Bee" aware that not all stinging insects nest in trees. Some bees and other stinging insects nest underground and will become disturbed by earth-moving activities
- Many stinging insects become more aggressive in the Fall
- Insect repellents containing DEET or Picaridin may help protect against biting or stinging insects
- If you know you are allergic to insect bites and stings, take the proper medication with you on the trail, and seek proper medical attention immediately if you are stung or bitten

Snakes

- Wearing sturdy leather gloves and boots at least 10 inches high are good precautions .
- Do not put your hands or feet into areas you cannot see, such as brush piles or rock crevices
- All snake bites, whether venomous or not, should receive immediate medical attention
- Rattlesnakes have "hemotoxin" venom, which attacks red blood cells and tissue of bite victims. Keep the victim as calm and quiet as possible, keep the wound site inactive and positioned below the level of the heart, and transport the victim to a hospital immediately.

Wildlife

- Do not handle or approach wildlife. Young animals that appear to be abandoned should be left where they are. Resist the temptation to “rescue” young animals
- You may be sharing the trail with a mountain lion. It’s very rare to see one, but in the more remote sections, make a little noise as you hike to give big cats a chance to be forewarned of your approach and move away before a surprise confrontation occurs. If you encounter one, back away slowly. Do not turn your back or run, as this may trigger an aggressive response. Mothers and cubs must be avoided at all times.
- Some wildlife such as foxes, skunks, raccoons, and other mammals commonly contract diseases or illness such as rabies or mange and may lose their natural fear of humans. Avoid any animal that is encountered, especially those which appear ill, agitated, or disoriented. Report such wildlife sightings to the Arizona Game and Fish. [\(520\) 628-5376](tel:5206285376)

Poison Hemlock

Poison Hemlock is a tall, poisonous plant with many branching stems forming dense colonies along the river. Every part of the hemlock plant is poisonous, including the seeds, root, stem, leaves and fruit. It can be fatal if ingested.



Don’t cut, mow or burn poison hemlock — the seeds can re-sprout and the fumes can be toxic. Pull plants, including roots, then place them in plastic garbage bags and put them in the trash. Wear a face mask, long sleeves and gloves when handling poison hemlock.

Poison Ivy

Poison Ivy grows in different forms; sometimes it is a shrub, sometimes as a plant low to the ground, sometimes as a vine climbing upward (especially on trees). The adage, “Leaves of Three- Let It Be,” is true.



Some people are extremely allergic to this easily identified plant. If seen, others should be alerted to its location, so they can avoid it. It is recommended to wear gloves and long-sleeved shirts when working in areas of Poison Ivy.

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.

Specific Hand & Power Tool Safety

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 each tool safely and effectively are also included. Every trail volunteer 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. 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.



Remember the ATCA “CUSS” model for tool use and safety (Carry, Use, Storage & Safety = CUSS).

HAND TOOLS

Lopper(s):

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. FISKARS power-gear models are proven performers.

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 backstroke, a handy feature when removing hard to reach limbs. The STHIL PS-30 folding saw is a proven performer.

Tips: If the pruning saw can be re-sharpened, it should be re-sharpened 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.

Safety: 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 re-sharpened 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.

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. 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. A hardhat is recommended.

Pick 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 side hill rail), maintaining existing trail, installing steps and water bars and other heavy work. The mattock's 5-lb. weight allows it to move more material with less effort than if trying to use a lighter tool. The pick mattock is especially useful in hard or rocky soil where the pick is useful to break up the soil or pry out rocks.

Tips: As with other swinging tools, the user should blend force with accuracy. Use the pick mattock with a clock-like "pendulum" motion, across and not into, your body.

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.

Shovel:

Uses: Shovels are used for digging and moving soil and other granular material, cleaning water bars, culverts, outlets and diversion ditches. They are also used for leveling a base for sill rocks, steps, transferring loosened soil into buckets to disperse off-trail, etc. In trail work, long handled, round- pointed shovels and flat "transfer" shovels are used almost exclusively.

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 should be worn.

Post Hole 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 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 maybe 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.

Pinch Point Crowbar:

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, Pinch Point crowbars have a 45 degree beveled chisel tip on one end and a rounded handle on the other. The bevel is used to obtain greater mechanical advantage.

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

Safety: Since the Pinch Point crowbar often lifts, moves, and positions 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, including tamping back fill and setting trail signage posts.

Safety: Same as Pinch Point crow bar. Leather gloves are recommended.

Rock Rake (Steel Rake):

Uses: The rock rake or steel rake is used for removing debris and for leveling. It is especially useful for leveling and removing rocks after the front end loader on the tractor has been used on the trail.

Tips: It is very handy for cleaning and tidying the trail.

Safety: When using rakes, opt for a rake that is light and manageable, ensuring it matches the user's physical capabilities. It's crucial to maintain proper technique while raking. Avoid overextending your reach or arching your back excessively. Instead, use shorter strokes and stand in an upright position to minimize strain.

The repetitive motion of raking can put stress on the same set of muscles, especially if the user favors one hand over the other. To prevent muscle fatigue, it's beneficial to take periodic breaks or alternate hand positions during the task. This adjustment can help distribute the physical effort more evenly.

Safety should always be a priority, even when the rake is not in use. When placing rakes on the ground, ensure the tines are facing downwards to prevent accidents. Additionally, when transporting rakes, secure them properly to avoid any potential injuries from loose tools. Leather gloves are recommended.

Pitchfork (Sometimes incorrectly referred to as a garden fork):

Uses: The pitchfork is used for removing grass, hay, leaves, small sticks and other loose material. It can also be used as a rake by point the tines upside down and using a seeping motion to move the material into a pile.

Tips: Use a fast motion to stick the fork into the debris pile. Pushing the tool in slowly tends to move the debris forward and away from the User.

Safety: When using a pitchfork, opt for one that is light and manageable, ensuring it matches the user's physical capabilities. It's crucial to maintain proper technique while using. Avoid overextending your reach or arching your back excessively. Instead, use shorter strokes and stand in an upright position to minimize strain.

The repetitive motion of using a fork can put stress on the same set of muscles, especially if the user favors one hand over the other. To prevent muscle fatigue, it's beneficial to take periodic breaks or alternate hand positions during the task. This adjustment can help distribute the physical effort more evenly.

Safety should always be a priority, even when the fork is not in use. When placing forks on the ground, ensure the tines are facing downwards to prevent accidents. Additionally, when transporting forks, secure them properly to avoid any potential injuries from loose tools. Leather gloves are recommended.

POWER TOOLS

When the situation allows, the use of power tools is appropriate along the Anza 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 always wear PPE. 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.

All tools covered in this section require training to use properly, safely and efficiently. Read the owner's manual and handbooks on safe and efficient use of each power tool. If you have never used the tool before, work with an experienced person certified to operate the machinery.

Refer to Appendix 3—ATCA Power Equipment Operator's Policy.

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.

Weed Whacker (a.k.a. string trimmer or portmanteau strimmer):

Uses: The weed whacker is used for cutting weeds and grasses along the trail and especially for cutting grasses around the parking areas at trail heads.

Tips: The weed whacker can cause injuries to the operator and to persons close by. The operator must be aware of his surroundings.

Safety: It is crucial to maintain proper technique while cutting grasses and weeds with this tool. Avoid overextending your reach or arching your back excessively. Instead, use shorter strokes and stand in an upright position to minimize strain.

The repetitive motion of using this tool can put stress on the same set of muscles, especially if the user favors one hand over the other. To prevent muscle fatigue, it's beneficial to take periodic breaks or alternate hand positions during the task. This adjustment can help distribute the physical effort more evenly.

Start the weed whacker on firm ground in an open area. Hold the trimmer firmly with both hands, keeping one hand on the handle and the other on the shaft. Keep the cutting part of the weed whacker below or at knee height. Don't trim too close to the ground and be careful when trimming around obstacles like trees. Avoid spraying weed whacker fumes towards people or animals and be aware of wind direction.

Safety should always be a priority. The high speed of the cutting string can pick up debris and send it flying at a high speed and for long distances. The operator must wear safety equipment, and if there are people nearby, the cutting operation should be curtailed until people have been moved out of the danger area. Work with your back to parked vehicles to minimize this risk of breaking windows when pebbles fly.

When transporting any tools, secure them properly to avoid any potential injuries from loose tools.

Ear and eye protection is required when using a weed whacker. Wear sturdy shoes, long pants and long sleeve shirt. We have helmets that have face shields and eye protection; use them! **Leather gloves are recommended.**

Field Mower

Uses: This sturdy machine is the mower of choice for cutting heavy grass, weeds, briars and saplings up to 1” diameter

Safety: Similar to safety practices for using a lawnmower, but take even more care with the Field Mower because it is much more powerful. Ear protection is required. Untrained users should work with an experienced user first.

Chain Saw(s):

Pole Chain Saw: (Also, see below for the chain saw safety requirements)

Uses: Cutting overhanging limbs that cannot be reached with bow saws, loppers and other short-reaching tools.

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: Follow all chainsaw safety procedures. When using the pole chainsaw, eye protection will prevent sawdust from getting into the user’s eyes. Required PPE includes eye protection, hardhat and leather gloves.

Chain saws are one of the most dangerous pieces of power equipment. The NPS and ATCA’s position is that only certified sawyers may operate chain saws on the Anza Trail, including the main trail, branch trails, spurs, and side trails, on public and private lands.

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 portion of the Anza Trail under ATCA responsibility, you must read this section, Appendices 1 and 2, and comply with the ATCA Power Equipment Operator Policy. The ATCA Power Equipment Operator Policy and relevant pages from the USDA’s Forest Service’s Health and Safety Code Handbook are in the Appendices Section.

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. If there is a hazardous standing tree, 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. Certified chainsaw operators may only fell standing trees within the dbh limitations noted on their certification card. (Class A Faller <8" dbh; Class B Faller 8" to <24" dbh; Class C Faller 24+" dbh). Certifiers may further restrict chainsaw operators to "bucking and limbing only," etc.

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, srench, 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 may be used only by field trained-and-certified sawyers. 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. Transport the saw with the plastic sheath in place.

As a safety precaution, sawyers should work with a partner (a sawyer helper, aka a Swamper). The Swamper must wear an approved hard hat, hearing, and eye protection. 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. Only the Sawyer and the Swampers 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. 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:

- Do not drop-start a saw or start a saw on your leg or knee. 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.
- Be aware of kickback! Hold the saw firmly with both hands when the 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 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.
 - Do not attempt to operate the saw while in a tree, on a ladder or on any other unstable surface.
- 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 spring back so that you or your Swampers will not be struck when the tension is released.
- 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 material 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.

Injury Reporting Procedures

DIRECTOR'S ORDER #7: VOLUNTEERS IN PARKS

Approved: /s/ Jonathan B. Jarvis, Director

Effective Date: March 15, 2016

Duration: This Director's Order will remain in effect until revised or rescinded.

Benefits and Protection/Risk Management

8.3 VIPs (Volunteers in Parks) will be treated as Federal employees for the purposes of (1) compensation for work-related injuries (see 5 USC 8101(1) (B) and 54 USC 102301(c) (3)...

National Park Service VIPs are entitled to submit injury claims for compensation to the US Department of Labor, just the same as Federal employees of the National Park Service, provided that:

- 1) The volunteer is officially signed up on either a Group or Individual OF-301a Volunteer Agreement.
- 2) The injury was sustained while performing a volunteer task within the volunteer's "scope of duties" as defined within the Job Description portion of the OF-301a Volunteer Agreement.

These topics are addressed under the "**On-Line Resources**" section of this Safety Handbook and on the ATCA website.

Injury Reporting Kits

Because volunteers of the Anza Trail work in distant locations from NPS offices where immediate access to US Department of Labor forms is not possible, **Injury Reporting Kits** were created. It is strongly recommended that volunteers review the materials in these kits before their use is required, that the kits be made available to volunteers in all work activities, and that volunteers be advised on the location of the kits within a work area (i.e.: staged in a tool trailer, carried by a crew leader, etc.). Each kit was initially set up to process up to three separate injury incidents. If your chapter received five kits, you have adequate resources to process 15 injuries, and so on. Replacement materials or addition kits are available from the ATCA Trail Boss.

When an Injury Happens

- First and foremost, *Seek Medical Attention!!!* We can always deal with the paperwork later.
- Whenever possible, without delaying transport and treatment, take the **Injury Report Kit** with you to the clinic or emergency room.
- Advise the receptionist that you are a Federal Volunteer and request direct billing to the US Department of Labor. Don't Delay Your Medical Attention with undue arguing. Present your personal insurance card and get the help you need.
- If you use your personal insurance card and have to pay any out-of-pocket expense or co-pay, **save your receipts** for possible later reimbursement from the US Department of Labor.

From within the Injury Report Kit, present the treating physician with one of the copies of the **CA-16 Form (Authorization for Exam)**. It should have a colored sticker at the top of the form that reads: "Take to Hospital". Have the physician **complete Part B** of the CA-16 Form (back side of first page). It is highly recommended that you convince the physician to complete Part B on-the-spot. It will speed up the process of completing your claim to the US Department of Labor. Return the completed CA-16 to your Trail Boss ASAP. It is acceptable to leave the CA-16 and envelope with the physician... but your injury claim processing may be delayed if the physician does not attend to this paperwork promptly. *In either case, the completed CA-16 must be mailed (P.O. Box 4711, Tubac, AZ 85640) or hand-delivered to your Trail Boss, not directly to the US Department of Labor.*

- If you are directed to fill a prescription at a pharmacy, once again, you should present the pharmacist with the **OWCP and the Treating Physician** document and request direct billing to the US Department of Labor. Again, if you end up using your personal insurance to fill a prescription, save your pharmacy receipts for any co-pay or out-of-pocket expenses.
- As soon as possible, notify the Trail Boss of any injury related to volunteer work on the

Anza Trail. He will assist you to complete your injury claim to the US Department of Labor, Office of Worker's Compensation Programs (OWCP). It is important that an ATCA representative be involved in the process at the earliest opportunity.

email: trailboss@anzatrail.org
Cell: 520-841-6944 (messages only)

The US Department of Labor makes all determinations on injury coverage or reimbursement to both Federal employees and volunteers. There is no National Park Service "*Insurance Policy*."



Appendix 1A

The Juan Bautista De Anza NHT Chain Saw Training and Certification follows the current individual safety requirement Policy.

The Anza Trail Coalition of Arizona (ATCA) endorses the approach to employee worker-safety programs taken by the Juan Bautista De Anza National Historic Trail, 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 coincident with the Juan Bautista De Anza National Historic Trail.

In its authorization to equip and train ATCA volunteers as well as in its work with cooperating State and Federal agencies, the Juan Bautista De Anza NHT:

- Recognizes that individual 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 trail chapter or affiliate-sponsored maintenance and construction activities assumes personal responsibility for following 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.
- Follows current individual safety requirements that apply to federal employees and volunteers, 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" pages 115-130. See **also** *list of required Personal Protective Equipment below.*
- In addition to the chainsaw certification, sawyers must have current certification in CPR/First Aid.

Personal Protective Equipment for Chainsaw Operators

The following personal protective equipment (PPE) is required by the USDA Forest Service and the Juan Bautista De Anza NHT for all chainsaw operators:

1. OSHA-approved logger's 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 US 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).
8. Sawyers must possess and OSHA-approved logger's First Aid Kit whenever working with chainsaws.

[59 FR 51672, Oct. 12, 1994; 60 FR 47022, Sept. 8, 1995]

**The OSHA –approved First Aid Kit for logging activities (chainsaw operations) includes:
Part Number: 1910 Part Title: Occupational Safety and Health Standards •Subpart: R
Subpart Title: Special Industries Standard Number 1910.266 App A

First Aid Kit

The following list sets forth the minimally acceptable number and type of first-aid supplies for first-aid kits required under paragraph (d)(2) of the logging standard. The contents of the first-aid kit listed should be adequate for small work sites, consisting of approximately two to three employees. When larger operations or multiple operations are being conducted at the same location, additional first-aid kits should be provided at the work site or additional quantities of supplies should be included in the first-aid kits:

1. Gauze pads (at least 4 x 4 inches).
2. Two large gauze pads (at least 8 x 10 inches).
3. Box adhesive bandages (band-aids).
4. One package gauze roller bandage at least 2 inches wide.
5. Two triangular bandages.
6. Wound cleaning agent such as sealed moistened towelettes.
7. Scissors.
8. At least one blanket.
9. Tweezers.
10. Adhesive tape.
11. Latex gloves.
12. Resuscitation equipment such as resuscitation bag, airway, or pocket mask.
13. Two elastic wraps.
14. Splint.
15. Directions for requesting emergency assistance

[59 FR 51672, Oct. 12, 1994; 60 FR 47022, Sept. 8, ce1995]

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.

22.48 b - 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 blood borne 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 ATCA Trail Boss and Trail Sections Chiefs are the coordinator for any chainsaw work. At a minimum, the Trail Boss 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. The ATCA Trail Boss and Trail Sections Chiefs are the coordinator for any chainsaw work. At a minimum, the Trail Boss 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.
5. 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.
 - a. **"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	E.g., 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

Appendix 3 Power Equipment Policy

Anza Trail Coalition of Arizona (ATCA)

Policy: Power Equipment Operator Requirements Approved:

Effective Date: September 1, 2024

Related Policies: NPS//USFS

Table of Contents

1.0 Background and Purpose

2.0 Power Equipment Operator Requirements

3.0 Safety-First Strategies

1.0 Background and Purpose

Power equipment tools are used along the Anza Trail for trail construction, maintenance and land stewardship purposes. These tools provide a means to efficiently maintain or remove vegetation within the trail corridor and trailway lands. Power equipment, as defined herein, includes, but is not limited to weed trimmers, field mowers, pole saws and chainsaws.

The use of power equipment presents a clear and present danger to the user and anyone in close proximity. Moving parts, flying debris and falling trees are inherent hazards associated with power tool use. In addition, trail work often occurs in places that are distant from professional medical care.

The use of power equipment brings with it a responsibility that operators protect themselves and those working with them from injury. The ATCA stands to minimize the likelihood of serious medical and liability claims if staff and volunteers follow a few required and recommended safety procedures.

The National Park Service (NPS) has instituted chainsaw safety requirements from tort liability to paying medical expenses for injuries that govern volunteer eligibility for Federal insurance coverage under the Volunteers-In-Parks program. This policy will bring a standard measure of safety requirements to the organization and is intended to satisfy ATCA partner (NPS) requirements.

2.0 Power Equipment Requirements

2.1 ATCA volunteers who operate Power Equipment on the Anza Trail or trailheads, must wear appropriate Personal Protective Equipment per the table below.

2.2 Any ATCA volunteer who operates a chainsaw along the Anza Trail, must have taken approved chainsaw safety training within the last three years and should be able to provide proof of having done so.

2.3 Chainsaw Operators/Crews will have a portable fire extinguisher and a Logger First-Aid kit within a reasonable distance of the worksite.

2.4 Operators will maintain current First Aid and CPR certification and have in their possession and know how to use appropriate communication equipment, e.g., cell phones, in case of injury.

<i>Minimum PPE required</i>	<i>Brush cutter (hand-held)</i>	<i>Mower</i>	<i>Weed eater</i>	<i>Chainsaw*</i>
Hard Hat	No	No	No	Yes
Ear Protection	Yes	Yes	Yes	Yes
Face/Eye Protection	Yes	Yes	Yes	Yes
Gloves (leather)	Yes	Yes	No	Yes, or cut-resistant
High-visibility Vest or Jacket	No	No	No	Yes
Leg protection	Leather, nylon or canvas	Leather, nylon or canvas	Leather, nylon or canvas	OSHA-approved minimum-layer cut-resistant
Protective footwear	Leather boots	Leather boots	Leather boots	Cut-resistant steel-toe boots or steel-toe boots with cut-resistant overlay

*Must meet OSHA 29 CFR requirements. OSHA-approved Kevlar, Ballistic nylon and Engtex 4-6- layer materials are acceptable

3.0 Safety-First Strategies

Volunteer trail workers are advised to practice the following:

- 3.1 Have adequate training, knowledge, and experience to operate power or non-powered equipment to perform the task at hand.
- 3.2 Practice safe tool use, storage and transport.
- 3.3 Inform someone where you are going and when you plan to return.
- 3.4 When operating power equipment, work with a partner or in teams of three.
- 3.5 Have a cell phone and first-aid kit on-site.
- 3.6 Volunteers who lead on-the-ground ATCA events, including hikes and educational presentations, should know where (on the website) to find the emergency medical services contact information, and directions to the nearest medical facility from the event location.
- 3.7 All official volunteer activities that utilize power equipment must include at least one volunteer with current certification in basic first aid and CPR.
- 3.8 Trail Boss, Section Chiefs, volunteers and outing leaders will be encouraged and supported financially, as able by the organization, to be certified in basic Chainsaw Safety, First Aid, and CPR trainings.