

Crew Leader Guide

Working with volunteers to build quality natural surface trails.

Safety, Enjoyment, Quality Product and Productivity

This guide has been written to assist Crew Leaders in providing trail work volunteers with a safe, enjoyable, productive experience building quality trail.

It draws on the work of other trail building organizations as well as the experience of the VOAz trail building program, which started in 1999. Any organization that uses this guide may identify standards and practices unique to its program and amend these materials accordingly. Of equal importance is bringing the leadership together around a common set of technical work and event management standards.

Outdoor stewardship organizations that employ volunteers to achieve their mission have a vested interest in providing their volunteers with the best possible experience. There is, as well, an issue that transcends any single organization. The first time experience of a volunteer is apt to weigh heavily on whether that individual volunteers again, either with the same or another stewardship organization. This may be more relevant to environmental stewardship work than other volunteer endeavors because this work is often hard and dirty. While some first time volunteers who

have a good experience never return, those that have a good experience are far more likely to return than those who do not. A bad experience, on the other hand, may discourage some from participating again with *any organization*. When all leaders in this field do their best to make outdoor volunteering a positive experience, all organizations engaged in this work benefit.

Additional materials, publications and videos are available in the Training section at www.VOAz.org.

Requirements of Crew Leadership

In addition to avoiding or properly responding to injury, having fun, producing quality trail, and working productively, trail work organizations seek to build and maintain a *constituency* that is committed to the organization and provides a reliable corps of skilled trail workers.

Trail work is an especially attractive way to volunteer outdoors because it results in a tangible product that can be enjoyed by many for years to come. There are skills to be learned, but the basics are not overwhelming.

While every organization needs new volunteers, having a constituency of dedicated and skilled trail workers improves your outcomes and makes it easier to bring in new volunteers.

Successful recruitment and retention of good volunteers requires paying close attention to work event planning and volunteer management. Perhaps no role



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is more critical to this than crew leading. This individual has the most contact with volunteers during work events and will, by and large, determine the success of the experience from the perspective of volunteers.

Leading trail work volunteers entails motivating, teaching and supervising the technical tasks of a particular project with a small team of people who typically bring a wide range of skills, experience, and physical stamina to the crew. Crew leading is not for everyone who simply enjoys trail work. Crew leaders must have a strong commitment both to building quality trails and to helping others have a good time while doing good work.

Crew leading may be defined in terms of three general skill areas:

Technical skills – Crew Leaders must possess a core set of technical skills and safe work practices for trail work

Leadership skills – Crew Leaders must be able to motivate volunteers to engage in the shared goal of building sustainable trail

Management skills – Crew Leaders have to integrate a series of activities that go into a successful work event

This three-part division is a conceptual convenience. All three general skills interact and overlap. For example, a Crew Leader's credibility as a leader depends on possession of basic technical trail work skills -- the stronger these skills, the easier the crew leadership task, all else being equal.

Technical Skills

Few trail building organizations can afford to wait until a trainee has a full repertoire of trail building skills before allowing her/him to lead volunteers. Therefore, identifying a reasonable set of core Crew Leader skills is primary to a training program. An example of such a skill set is below; it includes skills that are needed for most trail work events. The training videos available at www.VOAz.org do not cover every topic. See *The Joy of Trail Work*, available through VOAz.org, and other widely available trail work publications.

The core technical skills for Crew Leaders fall under these general areas:

- Safety and Tool Technique
- Leave No Trace
- New and Realigned Trail Tread Construction
- Trail Maintenance

Safety and Tool Technique

View Video 2 at www.VOAz.org

- Initial safety evaluation and talk
- Tools and work technique
- Responding to emergencies using the safety net

Leave No Trace

Reasonable outdoor behavior and how it relates to trail work. Visit www.LeaveNoTrace.org for additional information.

New and Realigned Trail Tread Construction

Videos referenced are viewable at www.VOAz.org

- Four stages of new tread construction:
 1. Clear trail corridor (Video 3)
 2. Rough-set tread bench (Video 4)
 3. Finish tread & install special structures (Videos 3 & 4)
 4. Polish corridor and close old trail
- Side hill tread construction (Video 4)

- Tread on nearly flat terrain (Video 4)
- The most common special structures:
 - Cairns & Guide Stones
 - Climbing turns
 - Grade Reversals (Video 5)
 - One rock dams
 - Simple rock walls
 - Outflow hardening at grade reversals
 - Back-slope and tread armoring
 - Surface level drainage crossings (Video 5)
- Trail closure

Trail Maintenance

Four stages:

1. Re-clear trail corridor
2. Reset tread (remove slough)
3. Clean, repair, and add special structures as needed (rock walls, drain dips, tread and black slope armoring, wash crossings, cairns, etc.)
4. Polish corridor and close social trails or cross-cutting paths

By establishing a minimum set of technical skills Crew Leaders can set personal goals for any additional skills they may want to develop *beyond* the core skills. They may then set their own limits with respect to their time commitment to volunteering as a Crew Leader.

Leadership Skills

Effective leadership draws on a wide range of skills. Some that seem particularly relevant to work with volunteer crews are listed below. Attention to these skills can enhance both the volunteer and the crew leadership experience.

- Communication
- Expectations and Goals
- Consistency
- Balance
- Role modeling
- Teaching
- Problem solving
- Constructive criticism
- Praising
- Supporting Other Crew Leaders
- Handling serious rule violations

Communication

The opening safety talk can create an inviting climate for communication by a friendly greeting and self introductions. Establish eye contact and maintain an open body posture — stand with arms in an open position, not folded across the chest. When talking to volunteers, remove your sunglasses and position the sun behind your crew.

Listen to what crew members say. Paraphrasing or repeating what someone says is a good way to assure that you have heard what had been said to you. This technique is called “active-listening” and happens to be an important life skill as well. Active listening means that one consciously focuses on what the other is saying and be receptive, even if your experience with the subject may incline you to quickly dismiss what seem to be bad ideas. If you try to fake this, others will perceive it.

Additional active listening rules are:

- Maintain eye contact
- Keep an open mind
- Don't interrupt
- Ask clarifying questions
- Pay attention to body language (i.e., *Is the other person open to what you are saying?*)

Expectations and Goals

The amount of work to be done for the day, and the work standards and trail specifications to be followed should be clearly stated. Whatever the goal, give it some heft and enthusiasm. Volunteers want to know that what they are doing is important. Try to accommodate the personal goals of crew members whenever possible. These may come out during the opening talk, especially if you inquire. Many volunteers will not have specific expectations, other than wanting to have a good day and feel like they are doing some good.

Volunteers are reassured if the leader knows what he or she is doing. If you are in doubt about anything, it is best to get matters clarified before you start. It is okay to acknowledge your own uncertainty and seek advice, including suggestions from crew members.

Consistency

Crews will lose their commitment if the rules change, instructions are contradictory, or work has to be redone. This applies across events as well as to a single event. This is one benefit of adopting written standards within and among trail building organizations. While there may be more than one way to accomplish a task, the volunteer experience will be enhanced if all Crew Leaders within an organization abide by one standard norm.



Consistency is hard to sustain if you do not perform a task frequently. Most volunteer Crew Leaders don't have the benefit of regular retraining and may inevitably drift from standards. A degree of candor with volunteers may be appropriate. Sometimes the lack of consistency reflects disagreements about the level of quality warranted in a particular location. Some strive for an immaculate trail even in very remote locations, while others hardly consider this worth the effort. There are several appropriate responses. Explore the differences and a logical reconciliation will usually emerge. Consult with a more experienced Crew Leader or a technical supervisor. In most situations more than one approach to a task is reasonable; simply settle on one for now. Volunteers will usually respond well if asked to do things as requested, provided you have responded to their questions in a reasonable manner.

Balance

Balance in this context means making good use of resources (i.e., the materials to build a quality product). For example, building 100 feet of good, sustainable trail rather than 500 feet of poor trail or 10 feet of beyond-perfect trail. Do good work but don't go overboard.

While the above may be a good guide, it may mistakenly suggest that we are smart enough to articulate an absolute standard to which we could reliably attach the term “perfect.” The natural environment is sufficiently complicated and the number of variables that could impact on what defines a “perfect” trail is very large and mutates as you move along a trail (sometimes within a few feet) and through time (use patterns, bike technology, and other factors shift over time). While there may be an enormous difference between poorly laid out or poorly constructed trail and that which could be considered “very good” in both respects, it is a bit pretentious to claim more, especially before trail users and the weather have had their way with you handiwork.

Teaching

Crew members should come to understand the principles of sustainable, leave-no-trace, trail construction and safe and effective use of tools. For each phase of trail work on a particular section:

1. define the task
2. demonstrate the skills required to complete the task
3. monitor and coach as crew members begin the work

How people first do a job largely determines how they will do it in the future. Taking the time to train at the beginning of the day pays off by the end of the day and at future events. Show enthusiasm for quality trail work.

On the other hand, teaching can be overdone. Some volunteers may not share the typical Crew Leader's enthusiasm for learning and quality work. If, for example, someone persists in using a tool in an inefficient though safe way, it is probably best not to persist in attempting to correct them. Some will arrive at a project with well established but poor trail work habits. Sometimes it is better to review a completed task, suggest how "you might have done it" rather than asking people to redo work. After all, current knowledge of what works is far from perfect.

Role Modeling

Crew members who are new to trail work may learn more from what their Crew Leader does than what he or she says. This extends to all aspects of crew behavior, not just work habits. If the Crew Leader doesn't take water breaks, crew members are likely not to take them. Although it is not easy to model best behavior hour after hour, especially as you get absorbed in the work, try to remain cognizant of your impact as a model for behavior.

Smile. Some people just do this a lot; others need to consciously remind themselves that when you are not smiling, people think you are scowling.

Problem Solving

There are two types of work execution problems encountered during an event. One is the global: "How are we going to complete our assigned section of work?" This is addressed at the beginning of each day or on a new work section of trail. Crew leaders should walk their crews through the work section and discuss the work to be done. Though Crew Leaders may have construction notes, staking, and flagging to guide their work, this does not obviate the need for crew members to understand the reasons for the plan and how it will be implemented. If this leads to serious questions about the original specifications, contact technical staff for the event.



Secondly, as work proceeds, localized problems may develop. Involve the crew in finding a solution. Here are a few general principles of problem solving:

1. Define the problem – distinguish facts from assumptions
2. Generate alternatives – identify but don't evaluate
3. Evaluate and select – this requires balancing the pluses and minuses of each plausible alternative
4. Implement – devise and put into play an action plan of manageable steps

This logical procedure should not be taken to mean that intuition plays no role in good problem solving. Brain research has shown that the best problem solving is dependent on intuition to help us identify and evaluate potential solutions. With more experience our intuition about trail work gets better as does our problem solving.

Praising

Never forget that people are giving of their free time to do manual labor, often traveling substantial distances early in the day to get to the event, and walking, carrying tools, to the work area. Being mindful of this fact will give the tone of authenticity needed to make expressed gratitude effective. Do not get so focused on catching or correcting errors that good efforts are overlooked. Always praise every crew member and as often as it is reasonably justifiable. But, be specific. Point out particular features of work for praise. Avoid generalities—"You are a great trail builder"—that may come across as patronizing.

During the final review of a completed section of work, note situations that may need to be monitored or that may require additional work; but, brag a lot and praise the crew for the fine work they have done.

Supporting Other Crew Leaders

This might also be called “supporting all quality volunteer trail work.” Within an organization, the skill levels of Crew Leaders can vary substantially and, unless an organization consciously fosters quality work, there may be little if any consistency. Work events are not the time to thrash out differences with respect to work standards or performance within an organization. Trashing the work of other organizations, either because you believe their standards are too weak or too demanding, is also not appropriate. Attitudes of superiority never leave a good impression. The simple observation that not all trail work is done to the same standard is factual and appropriate.

Acknowledging sub-standard work done by other leaders in your organization, when it is pointed out by volunteers, perhaps as your crew is leaving the work area at the end of the day is appropriate. If you have not done so already, explain how deficiencies will be corrected.

Handling Serious Rule Violations

The two main types of serious problems Crew Leaders must manage are serious violations of technical and safety standards, and behavior that is disruptive to the crew. The latter is not simply obnoxious and annoying behavior, but behavior that is clearly undermining the quality of the experience for other crew members.

Such problems rarely occur, but when they do, take the involved individual or individuals aside and explain your concerns. If this does not resolve the matter, repeat the discussion. You may need to make it clear that, as Crew Leader, you have the authority to ask a volunteer to leave your crew.

If a volunteer decides to leave under these circumstances, their choice or yours, ask them to speak with the Event Manager or the land manager before leaving the project area. It may be possible to assign them to another crew or task. The land manager has legal authority over what takes place on the trail site. Rely on this authority in difficult situations.

Physically or verbally aggressive behavior and sexual harassment must be dealt with swiftly and firmly. There should be no tolerance of such behavior. Engage the land manager and the Event Manager in such situations.

Any serious crew incidents or anytime someone is dismissed from or walks off a crew should be documented in writing to the sponsoring or host organization. It may be appropriate to identify a witness, with his or her permission.

Common Errors of Crew Leaders

Errors are common and most volunteers are pretty forgiving. Here are some of the most commonly observed Crew Leader errors:

- Working more than leading (failing to work at all is equally bad)
- Inattention to hydration and regular breaks
- Not taking the time at the beginning of the day to orient, involve and train. Conversely, be wary of taking longer than necessary to orient volunteers. Strike a balance or run the risk of losing the initial energy of volunteers.
- Losing track of crew members who are ill-prepared to work unsupervised
- Over-managing and not involving people in problem solving
- Failing to praise good work and thank volunteers
- Working more than lead (*This bears repeating*)

In sum, many volunteers respond to guidance — they are looking for leadership.

Training for Crew Leadership

An apprenticeship is perhaps the best way to become a well-rounded leader of volunteer crews. Unfortunately, working with a highly skilled Crew Leader over an extended period of time in a wide variety of circumstances is not practical for most volunteer trail building organizations. The training videos and other resources for trail work available at www.VOAz.org can assist in developing core skills. Structured training events led by experienced trainers that pull these elements together in a group exercise

are essential if extended mentoring is not possible. All training programs should try to provide for some mentoring opportunities at real events and periodic refresher courses.

Management Skills

The purpose of this section is to orient Crew Leaders to the essential components of successful event management. Event management is given fuller treatment in the document *Planning & Event Management*, available at www.VOAz.org. Some Crew Leaders may never be responsible for anything beyond leading a crew of volunteers, with overall advance planning and day of logistics being handled by another volunteer or agency staff. For very small events where there may be only one or two crews, a Crew Leader will likely handle all of the event planning and management responsibilities in addition to leading a crew.

Project Selection

There is a step even prior to event management—selecting a project—that may or may not involve a Crew Leader. This step may include trail design work, if that has not already been done by the host agency. A Crew Leader should not accept responsibility for trail design if s/he does not have formal trail design training and experience laying out trail with a qualified trail designer. Most of the degraded trails that abound are the product of poor initial layout.

Moreover, event planners should avoid accepting a project if sustainable outcomes are not probable. Otherwise you may be wasting volunteer time. A classic example of this is clearing rock from an eroding trail. This occurs because the trail is too steep and is not engineered to frequently remove water that becomes trapped on the trail. The rocks on the trail are those too large to be washed down trail during rain events. Removing them will just restart the cycle of soil and very small rock being eroded, kicked loose, and then being washed away — leaving large rock on the trail to the discomfort of users. Making this judgment and specifying a workable solution requires understanding “trail sustainability.” (For additional information, see “Trail Design Principles” at www.VOAz.org)



In addition to the basic design screening process through which any proposed project should pass, other considerations to be addressed in the selection process include:

- all legal requirements (i.e., Environmental Impact Studies) have been met by the land manager
- appropriateness of the work for volunteers—will the technical requirements of the project fall within the technical capabilities of your volunteers?
- likelihood that a completed product will result—can you muster the labor force needed within the agencies timeline?
- attractiveness of the destination
- volunteer accommodations
- availability of required tools
- essential material support will be provided by the host agency or land manager, another partner or the trail work organization

Event Management Roles

Once a commitment is made to a land manager, all events involve similar basic tasks with respect to event promotion and volunteer support activities. Key roles and responsibilities in trail event planning and management include:

- Project Manager (*project goals and technical design, over all event scheduling, coordination of other team members and land manager communications*)
- Event Manager (*day-of planning and operations*)
- Support Services Manager (*food services, camping facilities, check-in, emergency services, etc.*)
- Technical Advisor (*responsible for field planning, flagging, construction notes, and day-of monitoring and technical support*)
- Tool Manager

A Crew Leader may be called on to perform all of these roles for a small event. Other participating volunteers can be called on to assist. Some tasks, such as food services, may be assigned to every volunteer — “Bring your own food and drink.”

Marketing to recruit volunteers is another aspect of event management. In addition to your agency’s internal marketing tools, *OutdoorVolunteer.org* is a website where you can post stewardship events for outdoor-minded volunteers. In addition to listing your event on this state-wide, searchable calendar, the site provides easy-to-use and powerful tools for on-line registration and communications with your volunteers. Visit the web site for more information and instructions on listing your group and volunteer events.

Phases of a Successful Trail Work Event

The event day for a Crew Leader can be broken into distinct phases. These phases have been tied to the discussion of essential safety items and demonstration of proper tool handling and use. This is a core Crew Leader responsibility at every event, even when all of the planning and management tasks described above are performed by others.

The sequence is not to be used as a rigid template but as a general guide for successfully managing a crew. The short title for each phase is:

1. Prepare (*rehearse, visit work site*)
2. Welcome and Walk-in (*introductions, goals for the day, initial safety items*)
3. Get Ready (*tool safety, storage, and use, walk through work area*)
4. Do It (*work, break, smile, coach, teach, monitor, praise - all repeated through the day*)
5. Wrap Up (*final walk through, more praise*)
6. Exit (*gather and clean tools, evaluations, walk out, final thank you message*)
7. Report (*notes for future events, incident reports, Crew Leader debrief*)

A summary of each phase follows. As the number of items to be covered is substantial, Crew Leaders should carry a checklist as a memory aid. Using such aids also communicates the importance of their content and is not a sign that you are ill-prepared. VOAz has produced a convenient spiral-bound, pocket-sized Crew Leader Safety & Tool Check List. You may purchase this or download a printable version at www.VOAz.org. They contain the essential safety-talk items to be covered at each phase.

1. Prepare

Develop a general plan for the day. Unless the work is a continuation of work already begun, a site visit before the event is highly recommended. The level of preparation required is a function of the complexity of the work, the logistics involved in getting volunteers to and from the work area and the extent to which the work will be guided by construction notes prepared by technical staff. The characteristics of the crew, if known (i.e., Boy Scouts, corporate group, seasoned trail volunteers), should be taken into consideration in devising a preliminary plan of work.

2. Welcome and Walk-in

When the crew is assembled and their readiness for the day is assessed (clothing, water, etc.), introductions are made, goals discussed, and initial safety items reviewed. Explain your role and identify and explain the role of any on-site technical staff. A version of the Crew Leader Safety & Tool Check List should be used from this point forward to make certain all critical items are covered. Because there are many safety items to discuss, this is broken into chunks to avoid long periods of just talk. Volunteers are eager to get to work at the start of the day. You need to balance getting through safety fundamentals with getting people to work.

3. Get Ready

The initial tool use talk is completed after arriving at the work area. Any remaining safety items are also discussed.

During an initial walk-through of the work area, give you crew a clear idea of the work to be done and ensure understanding of the work plan. Listen to your crew members and answer questions. A Crew Leader’s initial concept of the work plan may well be modified based on crew member inputs. Clearly state what the product goals are and how much time you have.



The amount to be accomplished needs to be reasonable. If they are to enjoy themselves, volunteers need to understand that they are there to work, but are not “under the gun”.

It is best to discuss tool handling close to the time when the tools will be used. For example, if there is a lot of corridor clearing work to do you might just about and demonstrate proper tool use and technique associated with just this task. When the corridor is clear, gather the crew and move on to the tools used for the next task.

Ask crew members to come to you if they have any questions as they work. Tell them you will intervene if you spot ways which enhance safety and efficiency.

4. *Do It*

This is the time when the crew gets down to work. The amount of teaching, coaching and monitoring of tool use and work quality will depend on the skills volunteers bring to the event, how quickly they learn, and how willing they are to take direction. Correctly reading each crew member’s needs is one of the most important responsibilities of a Crew Leader. The leadership skills discussed previously come into play at this point. Those with good skills should be identifiable early in this phase and their abilities tapped to help guide the work of less experienced volunteers. These individuals may be prospective Crew Leaders.

This is also the phase when things can potentially go awry if Crew Leaders revert to their true love — just building good trail. This happens at the expense of the rest of the crew, especially less experienced crew members. A good rule of thumb is for a Crew Leader to not do any work other than minor assists and demos for the first hour or so.

The Crew Leader must also monitor exertion and water consumption. Call for drinks every 20 to 30 minutes, depending on the temperature. Require short breaks every hour.

Praise specific instances of good work. Involve the crew in troubleshooting unanticipated problems—draw on a technical staff if available.

5. *Wrap Up*

As a section of work is completed, the Crew Leader may need to contact technical staff for sign-off. The crew should be gathered for a walk-through and review of what has been accomplished. Boasting is appropriate as well as honest discussion of disagreements about process and product.

Gather the tools and move to the next work section. Between thirty and sixty minutes before the scheduled end of the work day, examine the remaining work in the current work section and devise a finishing plan. Depending on the amount of work completed on this final section, contact technical staff for a sign-off.

Later in the day is when lapses in quality and risks of injury may increase. To minimize these problems, avoid rushing the work. If there is a requirement to “complete” the work, it may be possible to adjust the specs (i.e., 18” tread, rather than 30”) and schedule another work date to finish the work.

6. *Exit*

Gather and clean tools. Make note of damaged tools. Make sure all crew members are accounted for. Appoint a sweep and return all tools to the main tool cache and group by type. Be sure to thank crew members again before they depart.

7. *Report*

After the Crew Leader sends his or her happy volunteers on their merry ways, time should be taken to review evaluations. Point out damaged tools to the Tool Manager. Prepare incident reports (injuries, crew member dismissals or early departures) or make enough notes to be able to accurately prepare them later.

Do your own self-evaluation and talk to any supervisory staff involved with the event. You may want to practice portions of your safety talk before the next event or discuss technical issues that arose during the work with experienced technical staff or senior Crew Leaders.