



The Colorado Trail
Foundation

Crew Leader Handbook

May 2022

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Introduction

Thank you! As a leader of a trail crew on The Colorado Trail (CT, the Trail) you are demonstrating your commitment to creating and maintaining a permanent and wonderful recreation and environmental legacy. It is only through the effort and leadership skills of people like you that The Colorado Trail exists and will continue to exist indefinitely.

Important Colorado Trail Foundation (CTF) Contact Information

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Amy Nelson, Office Manager: (w) 303-384-3729, 8:00 am – 4:00 pm M-F,
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Darin Radatz, Field Operations Manager: (c) 810-990-9748, darin@coloradotrail.org

Handbook Organization

This manual is intended only as a crew and camp organization guide, not a trail construction manual. Construction techniques and specific equipment use guides are provided in the United States Forest Service's (USFS, Forest Service) "Trail Construction and Maintenance Notebook", a copy of which can be found in the Crew Leader Bin. If you have any questions regarding trail work, techniques, updates or work to be done on your crew, please contact the CTF Field Operations Manager or on-site Forest Service staff.

The CTF offers a variety of trail crew types, including both basecamp and backpack crews. To make it easier for crew leaders of the two different types of crews to find relevant information in this Handbook, sections specific to **basecamp crews** are shown in text boxes with a blue background while sections specific to **backpack crews** are shown in text boxes with a green background. All other sections are applicable to both types of crews.

Crew Leader Role

As a crew leader you represent the CTF. **One of your main jobs is to convey the CTF's thanks to the volunteers** for their commitment to making and preserving The Colorado Trail as a national treasure. Your job is to create an experience for the crew that will result in each person knowing they are contributing to the success of the crew and to the benefit of the Trail. You should encourage them to return in any capacity and to encourage others to volunteer.

Please review this Handbook carefully. Remember, you represent the CTF and your execution reflects directly on its present and future reputation as one of the premier trail maintenance organizations in the world. The Board of Directors and staff warmly extends its appreciation and thanks for your contributions and commitment to The Colorado Trail. CTF Board Policy Statements relevant to crew leaders can be found in Appendix A.

History of the Trail

- Conceived in 1973 by the Forest Service, The Colorado Trail was to fill a void in a growing segment of outdoor users – individuals and families who wanted to walk in the woods and enjoy the outdoors but didn't want the extreme wilderness experience.
- 1973-1987, Gudy Gaskill and countless volunteers worked to map, mark and build CT tread.
- Gudy Gaskill "The Mother of The Colorado Trail" established The Colorado Trail Foundation in 1987. She and her thousands of volunteers provided the painstaking manual labor to build the CT.

- By the end of the summer of 1987, The Colorado Trail was functionally linked and open for business between Denver and Durango with an official dedication ceremony held in 1988.
- In 2012, the CTF added the Collegiate West as an alternate route to the Collegiate East forming a spectacular 160-mile loop in the middle of the Trail.
- The CT today has comfortable tread for the day user, but also provides plenty of challenges for backpackers, cyclists and equestrians interested in completing the entire Trail.
- See <https://coloradotrail.org/trail/trail-history/> for more detail.

General Crew Leadership Model

Forest Service Relationship

- Nearly all of the CT is located on USFS land.
- The Forest Service is responsible for management of the CT.
- Treat Forest Service employees with respect and follow their direction.
- Discuss privately any disagreements about project approach with Forest Service staff onsite; defer to their decision.
- Do not undercut Forest Service staff to crew members, regardless of any disagreement..

Lead by example —you are a role model.

- Be considerate and helpful to each person.
- Model the behavior you expect from volunteers.

Spend the bulk of your time and energy teaching, supervising, and demonstrating.

- Demonstrate how to do something rather than doing it yourself.
- Provide instruction and feedback to volunteers on trail work and spend little time doing trail work, particularly early in the crew. As the volunteers and project progress and less supervision and feedback are needed, crew leaders can spend more time doing trail work.
- Break crew into more manageable teams and utilize experienced crew members to help with instruction and supervision.
- Assign tasks appropriate to the volunteer's age, ability and experience.

Remember when interacting that:

- Everyone is a volunteer. They don't have to be there.
- Ask for help. Don't order. Say Please and Thank You.
- Set clear expectations or goals.
- Always be aware of how your actions and words will affect your crew members.
- Provide frequent positive feedback in camp as well as on the tread.
- Watch for fatigue, encourage snack and water breaks.
- Ensure everyone is working in a safe manner.
- It is important that the volunteer does not feel they have wasted their time.
- Solicit and accept feedback.
- Explain decisions that lead to changes, etc.

- Plan for the workload to decrease during the crew. People not used to rigorous work will become more tired and less enthusiastic.
- Plan to work the close-in areas last, when practical.
- Plan the less rigorous work for the end of the crew, when feasible.

Make this fun.

- Frequently recognize each person's goals and contributions with respect and humor.
- Attempt to match and mix personalities when assigning tasks, so all get to know one another as soon as possible.
- Interact with each person every day on the trail and in camp.
- Visit each task location as often as practicable but not so often as to give the impression that you lack trust in their ability to perform the task.

Crew Leader Task Checklist

This checklist is a brief description of tasks to be completed from development of the crew schedule through final tasks after the crew is complete. Additional detail on many of these tasks is included in the "Crew Leader Task Details" section.

Crew Planning and Scheduling

Crew planning and scheduling is typically completed near the end of the calendar year and must be completed ahead of finalizing the upcoming season's trail crew schedule, typically in early January.

- ☐ Discuss any crew preferences (locations, dates, duration, style (basecamp or backpack), etc.) with the Field Operations Manager during or shortly after the current crew season.
- ☐ Review crew option(s) proposed by Field Operations Manager, including type of project, and confirm proposed crew(s) and dates of crew(s) you would like to lead.
- ☐ Review draft trail crew schedule, including dates and location of crew, description of crew, and crew leader contact information. Confirm accuracy of information or make corrections, as needed.

Pre-Crew Tasks

These tasks can be started as soon as you know what crew(s) you will be leading.

General

- ☐ Schedule a date and time for a site visit to recon the crew project and campsite (as desired) with the Field Operations Manager.
- ☐ Make sure portable toilets, if needed, are coordinated by the Field Operations Manager.
- ☐ Communicate desired crew meeting time and location to the Field Operations Manager for incorporation into the crew travel instructions. Review crew travel instructions for correct dates, meeting time and location, and contact information.
- ☐ Send welcome email to crew members.
- ☐ The crew leader bin can be picked up at the CTF Field Operations Center after you have been notified it is ready or delivered with the crew trailer for basecamp crews or tools for backpack crews. Coordinate other delivery arrangements with the Field

Operations Manager. Appendix B contains a list of the contents of the crew leader bin for both basecamp and backpack crews.

- ☐ Make sure you have a current roster to take on the crew. The CTF Office Manager will send a roster to you with the travel instructions approximately one month in advance of the crew start date. Contact the Office Manager a few days prior to the start of the crew to see if there have been any additions or cancellations.
- ☐ Complete Trail Crew Volunteer Certificates by hand or Microsoft Word template available from the Field Operations Manager. Bring several extra blank certificates for late crew additions.
- ☐ Determine if there is a fire ban covering the location of the crew immediately prior to the start of the crew.

Basecamp Crews

- ☐ Recruit kitchen manager (if desired). If you have a kitchen manager, determine who will be doing each task – the kitchen manager or the crew leader. Consider sharing the workload. Note: Even if there is a kitchen manager, there is still a need for crew volunteers to help with the food prep. Sometimes the kitchen manager does not work on the trail – let the kitchen manager decide. If the kitchen manager works on the trail, they usually work a much shorter day.
- ☐ Plan menus (determine if there are special diet needs and to what extent you want to accommodate them).
- ☐ Arrange for additional ice chests, if needed. Coordinate with Field Operations Manager.
- ☐ Purchase non-perishables in advance of crew; purchase perishables the day before or day of crew start.
- ☐ Coordinate delivery of equipment trailer and drinking water with Field Operations Manager.

One-Day, Weekend, and Backpack Crews

- ☐ Coordinate delivery of tools and other equipment with Field Operations Manager.
- ☐ Purchase lunch food for one-day crews the day before the crew (weekend and backpack crew members provide their own food).

Crew Tasks

- ☐ Meet volunteers and welcome them as they arrive at camp or trailhead.
- ☐ Camp setup.
- ☐ Organization meeting.
- ☐ Safety meeting.
- ☐ On-trail operations.
- ☐ Camp operations.

- ☐ Evening activities.
- ☐ End of crew thank you meeting to hand out certificates and volunteer gifts.
- ☐ Camp takedown.

Post Crew Tasks

- ☐ Complete Crew Leader Report.
- ☐ Complete expense reimbursement report.
- ☐ Complete camp and field equipment report.
- ☐ Send your volunteers a post crew thank you letter or e-mail and coordinate for photo sharing.

Crew Leader Task Details

Site Visit

Coordinate date and time with the Field Operations Manager.

- Walk the project site(s) to understand the scope of the work and to evaluate conditions to alert the crew about, such as: mud, water, snow, steepness, length, and time and distance and elevation change, etc. This can be done early as soon as the snow clears or as late as the day before the crew starts.
- Ensure that the project work has been flagged and that you understand clearly the work to be completed. Takes notes during the project recon, as necessary. Discuss additional work that can be done if the project work is completed early or the project work cannot be completed because of weather or other reasons.
- Discuss any special tool requirements (beyond standard tool list – see Appendices C and D for standard equipment and tool lists for basecamp and backpack crews, respectively) for type of project and crew size.
- Discuss support that will be provided by the USFS, including:
 - Supervision/direction/assistance by trails staff.
 - Tools.
 - Project materials.
 - Pack string for backpack camps or material transport (rare).
 - Chain saw or grip hoist work.
 - Trash pickup.
 - Firewood.
 - Portable toilets (rare).
- Toilet Provisions:
 - Check with the Field Operations Manager to verify portable toilet and servicing (if needed) will be provided during the crew.
 - If portable toilets will not be provided, make plans for a trench toilet.
- Routes to nearest medical facility locations and emergency contacts (review crew Project Plan). See “Evacuation Procedures” in this Handbook for details and Appendix E for a sample Project Plan.
- Camp Layout

- Crew canopies/tarps, crew trailer, and water trailer, if relevant.
- Portable toilets or trench toilet.
- Shower enclosure(s), if relevant.
- Tent site locations and capacity.
- Parking limitations.
- Locate sources for ice, food, propane, and other supplies in nearby communities if mid-crew resupply is necessary.

Communicate with Crew Participants

Contact the crew participants approximately 4 weeks before the crew meeting date to introduce yourself and provide crew members with supplemental information. (Obtain a crew roster from the CTF office if you haven't received one; it should be included with the travel instructions sent by the office). Provide updated information prior to your crew as needed.

- Find out if anyone is planning to arrive late or leave early and determine whether that is acceptable or not; this decision is at the crew leader's discretion. Considerations include:
 - Arriving late may result in the crew member not receiving general crew procedure information and instruction on tool use and safe operations.
 - Arriving late or leaving early may displace a volunteer that is able to participate in the full crew duration if the crew is full; less of an issue if the crew is not full.
 - Arriving late or leaving early is typically problematic for backpack crews and is discouraged due to increased liability if a crew member were to get lost or injured while hiking in or out alone.
- Review the travel instructions that were sent by the CTF office (make sure everyone received them). Emphasize any critical items.
- Discuss possible field conditions in context of what to expect in terms of work and weather.
- Review the "What to Bring..." and What to Expect..." documents sent by the CTF Office with crew registration confirmation and emphasize any item(s) you feel are important for your crew. Emphasize personal protective equipment (PPE), particularly long pants and boots. Encourage bringing reusable lunch containers on crews where lunch is provided.
- Include any other site-specific information on planned work and distance/elevation to the project that you learned from your site visit.
- Encourage participants who have indicated they need transportation to contact those on the crew roster who have indicated they can help with transportation. Encourage carpooling.

- Encourage participants from lower elevations (less than 5,000 feet) to arrive several days early and spend time at 8,000 ft to 9,000 ft to acclimate.

Basecamp Crews

- On crews where food is provided and you intend to accommodate dietary needs in your menu planning, determine what those needs may be. Ask if there are any volunteers who have food allergies or is vegetarian, vegan, celiac, diabetic, lactose intolerant. Even if you don't accommodate these individuals, it is important to know about them so you know how careful you need to be to avoid food cross -contact. If you don't plan to do accommodate dietary restrictions, reiterate that volunteers with special dietary needs will need to provide their own food.
- Recruit help with transport of food and coolers, as necessary.

Basecamp Crews

- ☐ Set up the canopies first. There are 2 provided, one is generally used for the cooking area and the other is used for the social gathering area. It's easier done with 8 people per canopy; you need a minimum of 4 people.
- ☐ Dig trench toilet (if required). See below for details.
- ☐ Set up the tables, shelf unit and stoves in the kitchen canopy.
 - **Set up cook stoves on wood table only – not on plastic tables!** Use stove pads under stoves.
 - Set up coffee/hot water stove on free-standing stove stand.
 - Place propane tanks outside of kitchen canopy, pass hoses and fittings under canopy walls and connect to stoves.
 - Ensure stove valves are closed, then open propane tank valve and check all connections with leak detection spray.

Camp Setup and Organization

Basecamp Crews (cont.)

- Prepare water supply station
 - Water supply will be either a trailer with a large water tank or multiple 7-gallon water jugs.
 - To avoid having to refill the water tank during the crew week, use the provided PVC pipe and hose in a stream (when available) to collect dishwashing, handwashing and sun shower water; make sure to boil the dishwashing water.
 - Use a 7-gallon jug (provided in the equipment trailer) with water to keep in the cooking area to be used by the kitchen crew.
 - Use another 7-gallon jug for drinking water and to fill water bottles. Water bottles can also be filled directly from the water tank.
- Prepare dishwashing station.
 - Place relatively near the cook tent. Set up EZ-Up canopy to cover dishwashing station.
 - Use non-potable water (if available) for dishwashing but it must be boiled. Later in the week, if you feel you have plenty of water, you can start using the water from the trailer or water jugs (if provided) for dishwashing as the water from the trailer is drained anyway before moving it at the end of the week.
 - Use the blaster to boil the water using the steel pails. Cover the pails with a lid from the kitchen to heat faster and use less fuel. **Swap the propane tank from the blaster with one of the tanks from the stoves mid-week on longer crews to avoid emptying the blaster tank before the end of the crew.**
 - Use a four-washbasin system for dishwashing, with potable or boiled stream water in each basin.
 - The first basin is pre-wash and contains water only, or water and soap. The prewash water does not have to be hot.
 - The second basin is wash water and contains hot (at least 110°F) water and soap.
 - The third basin is rinse water and contains hot (at least 110°F) water only and is used to remove soap and any food particles before the sanitizing rinse.
 - The fourth basin is sanitizing water and contains warm (at least 75°F) water and 1 teaspoon (approximately 1 capful) of Clorox per gallon of water (marks on side of basin show 1- and 1½-gallon levels). Items to be sanitized should remain in the sanitizing solution for at least 1 minute.
 - After dishwashing is complete, pour dishwater through the provided screen into a 5-gallon bucket to separate food particles from water.
 - Screen dirtiest basin water (typically pre-wash) first and use cleaner dishwater to rinse dirtier basins and screen rinse water. Disperse screened dishwater on vegetated slopes at least 200 feet from camp and streams or lakes. Use a different location each time dishwater is disposed of.

Basecamp Crews (cont.)

- Do not use dishwater to put campfire out as the water may still have odors that attract animals.
- Dispose of food particles collected on screen in trash.
- Prepare hand washing station (two red buckets, plastic lid and foot pump assembly).
 - Stack buckets using plastic lid on lower bucket – **lid does not have to be pressed on tightly!**
 - Place it reasonably near the cook tent.
 - Provide liquid soap from cleaning box in trailer.
 - Stream water may be used.
 - Warm water encourages hand washing on cold mornings.
 - Waste water can be used to douse fire before going to bed; otherwise disperse on vegetated slopes at least 200 feet from camp and streams or lakes.
- Erect shower enclosures (see Appendix F for assembly instructions; laminated copy included in crew leader bin) at least 200 feet from water sources. Even if soap is biodegradable, it should be kept away from water sources because it will degrade more readily in soil than in water.
- Store food, coolers, trash and recyclables securely at night and when no one is in camp for protection from foraging animals. Secure storage includes the crew trailer or personal vehicles (windows closed and doors locked); coolers and containers certified bear-proof may be left outside if properly secured.

See Appendix G for details of basecamp crew food management and operation.

Backpack Crews

- Erect group tarp(s) – provide shelter during inclement weather and gathering/socializing point for crew.
- Dig trench toilet. See below for details.
- Protect food, trash, and leftover food at night and during the day whenever away from camp by hanging or using bear cannisters. Erect hang lines as needed. See Appendix H for details of food hang lines.

- Dig trench toilet (if needed).
 - Look for a location that is at least 200 feet from water sources, well-drained (not in a low spot) and has a significant layer of organic material to speed decomposition of the waste.
 - Use trees and shrubs to screen toilet location; if screening is inadequate, use small tarp to provide screening.
 - Remove organic material and set aside for use in rehabbing the trench at the end of the crew.

- Dig trench 10-12 inches wide by 6-8 inches deep; the trench length will depend on the number of crew members and duration of the crew.
 - If a toilet box is provided, line with a garbage bag and tape to the top of the box.
 - Provide and explain a flag system to indicate whether the toilet is occupied or available for use.
 - Cover feces with a thin layer of soil after each use. Leave a shovel at the site for shoveling soil.
 - Remove and dispose of the liner bag (if used) with crew trash.
 - Toilet paper may be collected and disposed of with trash or may be burnt if campfires are allowed.
- ☐ Campfires
- Determine if fire restrictions are in place: check with Field Operations Manager, Forest Service staff, or <http://www.coemergency.com/p/fire-bans-danger.html>.
 - Use existing fire rings when available.
 - Manage fires so they burn down to coals before extinguishing. Use smaller sticks toward the end of the fire so they have time to burn. Avoid extinguishing the fire while there are still half-burned logs, particularly in the last fire of the crew.
 - **Clean** (no grease or food residue) paper and cardboard products may be burned when having a fire. Don't place the trash in the fire until the fire is ready to be started or is burning – trash left in the fire during the day may blow around camp if winds develop or may get wet if it rains.
 - **Do not burn plastics.** Burning plastics gives off noxious fumes and frequently leave unburned plastic residue in the fire pit, including on the fire pit rocks. If not recycling, or plastics are not accepted for local recycling, dispose of plastics with the trash.
 - Extinguish the campfire using wash water from the hand wash station or nearby stream water, if available. Scatter the ashes widely when they are cool to the touch. Leave a clean campfire ring so that others will reuse it and not build another ring at the campsite.

Introductory Meeting

This is normally held the first evening on longer crews; one-day and other shorter crews might feature an abbreviated version as soon as all of the crew members have arrived. A laminated copy of this page is included in the Crew Leader Bin.

- Welcome all participants and thank them for coming.
- Introduce yourself and provide some background regarding your work with the Foundation.
- Encourage everyone to bring up concerns and questions as they arise.
- Ask all to identify themselves, whatever background they want to share, particularly their involvement with the CT: trail user, crew volunteer, adopter, etc.
- Remind everyone that if they leave camp for any reason to tell someone or leave a note. Do not hike alone.
- Remind everyone to watch for signs of altitude sickness, wear sunscreen, a hat with a brim, and drink lots of water. Urine should be clear or very light yellow.

- Give an overview of the CT:
 - Explain that volunteer crews are NOT SELF-SUPPORTING and that donations make CT maintenance possible.
 - The CT is 567 miles, including both Collegiate East and Collegiate West.
 - There are only three paid employees: Executive Director, Office Manager and Field Operations Manager.
 - Working Board Members.
 - Gudy Gaskill is “Mother of the Trail”; George Miller is President Emeritus.
 - The CTF works with a Forest Service liaison based in Lakewood as well as staff in eleven Ranger Districts.
 - See “History of the Trail” in this Handbook for a timeline of development of the CT.
 - The CTF Adopt-A-Trail program is the other component of maintaining the CT: 84 groups and individuals have adopted sections from 2 miles to 16 miles long and do the basic maintenance each year.
 - The entire Trail has been accurately surveyed and mapped with advanced GPS gear.
- Consider recruiting people to help out with extras:
 - Storywriter for website.
 - Photographer for Tread Lines/website/CTF files.
 - “Social Director” To arrange evening entertainment: music, games, storytelling, etc.
 - Assistant (team/squad) leaders to help out during the week if you want to break into work groups.
 - Tool monitor: Someone to keep tabs on the location and number of tools and ensure that all tools are accounted for.
 - Someone to sharpen tools during the week (if needed).
 - Ask who has background in first aid or other medical or rescue knowledge.
- Review week’s schedule.

Basecamp Crews:

- Generally, up at 6 AM, Breakfast at 7 AM, on trail by 8 AM.
- Crew members make their own lunch during breakfast. Take snacks and water. Rest breaks taken in the morning and afternoon, or as needed. Non-work days, lunch items will be put out at breakfast but other lunch option can be available for those in camp.
- Generally, work until 4 PM or so; dinner team goes back to camp about 1 hour before the rest of the crew, depending on the complexity of dinner. Weather, crew makeup and work plans require flexibility.
- Dinner is usually at 6 PM; plan to finish cleanup before dark.

Backpack Crews:

- Ready to hit trail with lunch packed by 8 AM.
- Rest breaks taken in the morning and afternoon, or as needed.
- Generally, work until 4 PM or so. Weather, crew makeup and work plans require flexibility.

- Evening campfire, if wanted and allowed (check for fire restrictions).
- Discuss that there will be an end-of-day/last night gathering (multi-day crews). Certificates and volunteer gifts will be handed out then (or when reaching trailhead for backpack crews).
- Discuss scheduled time for tool and safety training, if not first thing.
- Discuss day off (when relevant) possibilities and see if people want to do a group hike.
- Discuss last morning camp breakdown.

Basecamp Crews

- In-Camp Task Signup
 - You can use the provided laminated form (see Appendix I and copy in crew leader bin) or your own system.
 - Determine the number of tasks each person should sign up for by dividing the number of tasks by the number of crew members. To determine the number of tasks, decide how many people are on each task. Example: Cooking dinner Monday night might have 4 people, washing the dinner dishes might be 3 people. You may end up with 100 tasks divided by 25 people, so each person signs up for 4 tasks. Crew leader and kitchen manager should not sign up for tasks – they are responsible for general camp and kitchen oversight.
 - Explain each task and get signup sheet completed.
 - Post the task sign up in a prominent place for anyone to review at any time.
 - The individual who has agreed to do that task must arrange any changes.
- Review water source(s).
 - Drinking water always from water trailer tank or water jugs.
 - Stream or lake water (if available; otherwise water trailer tank or water jugs) for cooking (if boiled), handwashing station, dishes (if boiled), and sun showers.
- Review trash and recycling procedures.
 - Two collapsible trash bag holders are included in the crew trailer. One may be used for trash and the other for recyclables. Hang laminated signs (in crew leader bin) on bag holder frames to designate bags for trash and recyclables.
 - Dispose of all trash in provided plastic garbage bags. Garbage pits for organic waste or burning of food waste are not allowed – animals can smell buried food and dig it up and burning will likely not be complete, potentially creating nuisance animals at campsites.
 - The CTF encourages recycling on crews and many crew members support it. If recycling, determine what types of recyclables will be collected based on locally or regionally accepted materials. Rinse items well and crush cans and other items to reduce volume. Arrange for drop off of recyclables by crew volunteer on day off and/or at end of crew.
- Request trash disposal from FS staff working with or visiting crew.

Basecamp Crews (cont.)

- **All trash bags (full or partial) and all recyclable bags must be stored in the crew trailer or locked vehicle at night and when away from camp during the day.**

Backpack Crews

- Review water source and approach route.
- Crew members are responsible for their own trash. **Trash, including uneaten food, must be hung with food to avoid animal problems.**

Complete the Volunteer Sign-up Form

Print a copy of the “Group Volunteer Sign-up Form 301-B”, available as a pdf file on the CTF website ((<https://coloradotrail.org/>; select “Trail Crews” under the “Volunteer” pull-down, then select “For Crew Leaders”, then “Group Volunteer Sign-up Form 301-B”) prior to the crew. Fill in the crew number and dates, then have all participants (including yourself) print their name and contact information (legibly!) and sign it. This documents participants on the crew that are eligible for USFS or BLM workers compensation insurance in the event of an injury while working. Mail or scan and email the completed form to the CTF office (PO Box 1292 Poncha Springs CO 81242 or Darin@coloradotrail.org) when you have returned from the field.

Safety and Tool Training

Conduct this training at the beginning of 1-day, weekend, or backpack crews and before heading to the project on basecamp crews. Print a copy of the USFS Risk Assessment Worksheet (RAW), available as a pdf file on the CTF website (<https://coloradotrail.org/>; select “Trail Crews” under the “Volunteer” pull-down, then select “For Crew Leaders”, then “Risk Assessment Worksheet”) prior to the crew. Review the RAW with crew members and the additional safety information below prior to doing any work. A laminated copy of this page is in the crew leader bin.

- **Personal Protective Equipment and Other Safety Measures**
 - Issue hardhats and sweatbands to crew members; show how to attach sweatbands. Have each crew member write name (actual or trail name) on no-residue Frog Tape (in crew leader bin) and affix to hardhat; instruct them to not cover up the CT logo on front of hardhat (front is best, below or above logo). Instruct crew members to take care of hard hats and protect from small animals gnawing on harnesses for salt from sweat. Keep hardhats in vehicles on basecamp crews or in tent vestibules or with food hang on backpack crews.
 - Long pants, boots, sunglasses/safety glasses, hard hat and gloves are required. Shorts and low-cut shoes are not allowed.
 - Always wear a hardhat when working on the trail – USFS requirement.
 - Wear safety goggles when hitting something with a single jack or double jack. They are available in the crew trailer.
 - Sunscreen, first aid, water, lunch. Water is critical – bring 2 quarts or a filter if water is available. If you're thirsty, you are already dehydrated!

- Demonstrate How to Carry and Use Each Tool
 - Carry tools by finding balance point on handle and carrying with sharpest edge down at side. Never carry tools on your shoulder.
 - Carry on downhill side so you can toss the tool out of the way if you trip. An uphill toss is more difficult and the tool could rebound into your path.
 - Always walk and work at least 10' apart.
 - Swing tools to the side of body, not toward body, to avoid tool glancing off rock and hitting foot or shin. Generally swing tool from waist level or below; if overhead swing is necessary, make sure everyone is clear.
 - Store tools on uphill side of trail with handle closest to tread. Make sure tool is secure and will not slide downhill. Don't store tools in the trail.
 - Make sure there is room between adjacent crew members when working on the trail – if volunteers are getting bunched up, have some move ahead.
 - When passing by others working on trail, state “coming through” and wait for them to stop working and step aside.
 - When trail users are approaching, let them know that trail work is occurring and let other nearby crew members know to stop work until the trail users pass by.
 - Keep fingers clear when using rock bar(s).
 - Get help when lifting heavy or awkward items. Lift with legs, not back. Designate leader when using rock sling or timber tongs to direct lifting, moving and setting down.
- Explain Project Scope
 - Explain nature and extent of work.
 - Need for the work.
 - Determine equipment to take.
 - Discuss whether tools will be cached near the project.
 - Divide into teams with assistant leaders providing supervision/direction – it is impossible for the crew leader to adequately supervise and direct 20 to 25 volunteers. When using assistant leaders, the crew leader provides direction and feedback to the assistant leaders and allows them to relay to their team members.
- Leave No Trace Principles
 - Walk on the trail tread whenever possible.
 - Pick up all non-natural items and carry them back to camp.
 - Remove all flagging after work is completed.
 - On trail, track out toilet paper or dig 6" minimum hole, cover and tamp.
- Lightning
 - Crew Leader will decide when crew should move to safer ground or return to camp, although crew members are allowed to make that decision themselves if they feel that the Crew Leader is not conservative enough.
 - Distance from lightning can be estimated by dividing the number of seconds between the flash and the accompanying thunder by five – the result is the approximate distance in miles. **There is no safe distance from lightning**, although the further

away, the lower the chance of getting hit. Estimating the distance is primarily useful for determining whether the storm is moving toward or away your position.

- Seek cover in uniform stands of trees; avoid isolated groves or individual trees.
- Avoid rock overhangs or shallow caves/mine explorations.
- If you have no choice but to be in an open area, separate the group with everyone at least 50 feet from each other and place tools away from people.
- If unable to quickly reach a safer location, squat or sit on a pack (no metal frame) or sleeping pad with your feet close together and wrap your arms around your legs. The objective is to get as low as possible without laying down. Do not allow anything to touch bare ground.
- Altitude Sickness (adapted from <https://www.backpacker.com/skills/how-to-hike-strong-at-altitude>)
 - Acute Mountain Sickness (AMS) – Occurs when the body hasn't adjusted to lower oxygen levels at higher altitudes. The brain's blood vessels dilate to gather more oxygen, causing swelling of the brain.
 - Symptoms: Headache, dizziness, nausea or difficult sleeping.
 - Prescription: Rest. AMS should resolve itself in a day or two; if not, descend to lower elevation.
 - High Altitude Cerebral Edema (HACE) – Progression of AMS to more serious illness, typically only when above 13,000 feet.
 - Symptoms: Lethargy, irritability, vomiting, seizures, and, if untreated, death. Patient may behave as if drunk and confused.
 - Prescription: Descend at least 3,000 feet and seek medical care.
 - High Altitude Pulmonary Edema (HAPE) – Increase in blood pressure in the lungs in response to low oxygen levels, causing fluid to accumulate in air sacs.
 - Symptoms: Shortness of breath, progressing to bad cough and weakness, possibly gurgling or wheezing in the chest; untreated, it may result in coma and death.
 - Prescription: Descend immediately and seek medical care.
 - Prevention
 - Acclimate – if from lower altitude, spend a day or two between 8,000 and 9,000 feet before going higher.
 - Start slow on the first day at higher altitude; ramp up exertion depending on how you feel from the day before.
 - Stay hydrated – increased respiration and heart rate at altitude, along with low humidity and working hard uses more water – drink extra water.
 - Avoid or limit alcohol consumption, at least for the first couple of days at altitude – alcohol can depress breathing at high altitude and lower blood oxygen.
 - Consume plenty of calories.
 - Wear long sleeves and use sunscreen on exposed skin to provide protection from the higher amount of UV radiation at altitude.
 - Get in shape prior to the crew, although conditioning at lower altitude cannot fully prepare your body for high elevation

- **Injuries and First Aid**
 - First aid kits are provided for every crew. See Appendix J for a list of contents.
 - Utilize crew members with background in first aid or other medical or rescue knowledge, as necessary.
 - Administer first aid. Note any first aid supplies used on the form provided (Appendix J) in the first aid kit and deliver to the Field Operations Manager at the end of the crew so that supplies can be replenished.
 - For serious injuries, complete Patient Conditions Form (Appendix J) and monitor vital signs over time. Depending on the seriousness of the injuries and trend in vital signs, determine if evacuation is advised.
- **Garmin inReach Satellite Communicator**
 - Garmin inReach units provided for each crew – be sure you are familiar with operation (see Appendix K for instructions (also included with each unit)). Cell phones are more convenient if there is reception. inReach units can also be linked to smartphones for easier texting even when there is no cell reception.
 - Test the inReach unit when you reach camp or project site to ensure it is operational.
 - Check for messages at least daily.
 - Let crew members know that it is available for emergencies and where instructions and Project Plan are kept in the event that crew leader is incapacitated.
- **Other**
 - A federal workers compensation program provides insurance on workdays only. Incidentally, Congress approved this program only because of actions initiated by the CTF.
 - The CTF carries additional liability insurance that augments the above coverage.
 - Volunteers driving a CTF-owned vehicle while engaged in activities related to crews are covered by this policy.
 - Colorado Good Samaritan Act of 1978 provides protection for those providing assistance if action is needed before professional help is available.

End-of-Crew Celebration

A laminated copy of this page is in the Crew Leader Bin.

Thank everyone for coming and for the work done, provide an overview of what was accomplished, number of feet completed, number of water bars installed, etc.

- Explain what is available on the CTF website (www.coloradotrail.org).
 - Crew schedules
 - Store – Guidebook, databook, map book, t-shirts, etc.
 - CTF blog – current conditions, closures,
 - Current weather conditions
 - Info for trail users
 - Facebook presence
- Other useful websites include: www.trailforums.com, www.whiteblaze.net, www.thecoloradotrail.com, www.hiking-the-colorado-trail.com.
- Encourage volunteers to continue participating:

- Ask them to invite their friends next time.
- Volunteer for other activities such as office work, mailing parties.
- Distribute Certificates of Appreciation and Volunteer Gifts.
- Remind participants about the Friends Picnic held in September, as well as the Durango/Salida Gathering in October and the Holiday Party in December.

Camp Breakdown

- ☐ Bring tools from project site and collect hardhats at the end of the last day of work unless they are to be left for subsequent crew. Have crew members remove tape with name and sweatband from hardhat and wipe down with a mild soapy solution (avoid wetting sweatbands)
- ☐ Dismantle community camp and equipment.
- ☐ Backfill and naturalize the toilet trench if you had one.
- ☐ Inspect the work and camp areas; remove all trash, including micro-litter.

Basecamp Crews

- ☐ Pack all nonperishable food and non-food items purchased for the crew and offer to other crew leaders for use in a subsequent crew.
- ☐ Offer opened and perishable food to volunteers to take home.
- ☐ Donate remaining unopened food to local charity.
- ☐ Pack trailer. Use the loading instructions and photos in Appendix L or laminated copy in the Crew Leader Bin.
- ☐ Drain the water tank.
- ☐ Coordinate with Field Operations Manager regarding disposal of crew trash. If the Field Operations Manager does not arrive prior to crew departing the campsite, make sure the trash is securely bagged (no leaks) and placed in the back of the crew trailer to avoid disturbance by animals until the trailer is retrieved. Alternatively, if convenient, the crew leader or a crew member may take the trash with them for disposal.
- ☐ Crew leaders or crew volunteer should dispose of recyclables if recyclable material is separated from the trash during the crew.
- ☐ Do not leave before checking for stragglers in the camp area and parking location.
The leader should be the last to leave the area.

Backpack Crews

- ☐ Coordinate with Field Operations Manager regarding tools: carry out and cache at trailhead or deliver to CTF Field Operations Center, cache for subsequent crew, or cache for pack string retrieval.
- ☐ Carry all trash, including leftover food waste, to the trailhead and dispose of at a suitable facility. Dispose of toilet paper if not burned.

Post Crew Activities

- ☐ Arrange for return of the crew leader bin to the Field Operations Manager/CTF Field Operations Center. Packing the crew leader bin in the crew trailer or dropping it off at the Field Operations Center might be two convenient arrangements.
- ☐ Complete crew leader forms via the CTF website (<https://coloradotrail.org/volunteer/trail-crews/for-crew-leaders/>):
 - ☐ Crew Leader Report
 - Volunteer hours should approximate what it would take for FS staff to accomplish what volunteers are doing on a trail crew.
 - Include travel time for all crew members (not necessarily the time from house to the TH but an approximate time from the office of the local FS district office to the trailhead or campsite). No need to be precise, just add an hour or two, depending on how remote your project is.
 - Include recon time, whether before or during the crew.
 - Include crew leader and kitchen manager time preparing for crew, including meal planning, communications, food purchasing and pre-crew food preparation.
 - Include the usual time you spend hiking to the project and working on the trail and hiking back.
 - For multi-day crews, include some time each day for cooking and cleanup, but don't include time sleeping. Include time for setting up and taking down camp. If you weren't camping, you would be spending time driving back and forth.
 - Don't include any time for days off but do include time for the tool safety talk and if you walk and discuss the project with the crew volunteers on a non-work day.
 - ☐ Camp and Field Equipment Report – report any problems with camp equipment or tools.
 - ☐ Expense Reimbursement Request Form – be sure to provide receipts and review what expenses are reimbursable.
 - ☐ Injury and Incident Form – complete if a crew member was: seriously injured and required treatment and/or transport to a medical facility; departed early due to injury, illness, or other reason; or caused a conflict(s) with the crew leader or other crew members that required intervention and/or consideration of their suitability for future CTF crews.
- ☐ You are encouraged to write an article about your crew to be published on the CT website. It should be heartwarming and funny.
- ☐ Send a post-crew thank you email with pictures to crew participants or set up a photo sharing site for all crew members (or recruit a crew participant to set one up). Please share photos with the CTF for use in future newsletters, crew brochures, or social media posts; contact the Executive Director for sharing instructions.

Emergency Procedures

CTF trail crews are frequently located in remote locations that may present significant challenges in the event of an emergency:

- There is frequently no cell phone service.
- Emergency response times may be measured in hours, not minutes.
- Bad weather, difficult terrain, lack of suitable helicopter landing sites in close proximity and other factors may add to the response time.
- Crews typically have limited first aid supplies and training so the ability to aid a sick or injured party in the field is limited.

Project Plan (including Emergency Procedures)

A Project Plan specific to each crew is provided to each crew leader, with copies forwarded to the CTF office and to the Forest Service Ranger District staff most closely associated with the crew project (see Appendix D for example Project Plan). The Project Plan includes:

- Contact information for the Forest Service, CTF staff and the crew leader (including the crew Garmin inReach contact number) so communication can be initiated by any party.
- Contact information for the Sheriff's office in the county the project is located in.
- Directions to the project site, campsite, and trailhead, including gps coordinates.
- The location of potential helicopter landing sites (should be field verified and/or other potential landing sites identified).
- The location and contact information for the nearest emergency and non-emergency medical facilities, including driving directions.

Medical Emergency Procedures

- The crew leader makes all decisions and provides directions but may rely on medical professionals on the crew and USFS staff, if present.
- Assess the situation.
- Render aid within the limits of your training and if it is safe to do so.
- Determine if outside medical attention is needed (if in doubt contact help). Examples include:
 - A severe injury, such as a suspected broken bone, lightning strike or a serious burn.
 - A suspected heart attack or stroke.
 - A severe or progressive illness, HACE or HAPE.
- **Write down important facts - the aid dispatcher and medical help need to know this.**
 - Who you are and how you can be contacted.
 - Specific location - GPS coordinates and any other description that would be helpful.
 - How the problem occurred.
 - Number of patients.
 - Description of injury or illness and estimate of severity.
 - Patient's age, gender, vital signs, known allergies, etc.
 - Description of actions taken to stabilize patient.
 - Number of helpers available on-site and their level of experience and capability.
 - Equipment (first-aid supplies) available on-site.
- Evacuation Options
 - Contact the County Sheriff to request search and rescue or emergency medical assistance and determine resources available.

- Use cell phone if service is available or Garmin inReach satellite communicator (SOS function) if no cell service is available. The inReach unit is a cumbersome means of communicating, but somewhat better if synced with a smart phone (need to download an app prior to the crew).
- Discuss evacuation options available:
 - Helicopter – potentially the fastest means of evacuation, depending on location of helicopter, suitable landing sites and weather.
 - Transport patient – move patient to trailhead and evacuate by vehicle until meeting emergency vehicle along the evacuation route and transfer patient. Not suitable if possible neck or spinal injury.
 - Search and Rescue evacuation – stabilize patient at site and wait until rescue personnel arrive. Mark route with flagging to provide direction. Assist with the evacuation as requested.

Helicopter Evacuation

- Helicopter evacuation can be relatively fast. There are a number of things that slow the process, however.
 - Landing a helicopter in a Wilderness Area requires special authorization from the Forest Service. If there is no prior authorization it may take a lot of time to get the authorization.
 - The weather must be good enough all along the path the helicopter travels from base to patient to hospital.
 - There must be a location where the helicopter can land safely.
- If a helicopter has been dispatched, prepare a landing spot.
 - **Landing area:** An area about 100-foot diameter will typically suffice but high altitude and temperatures may require a larger area. Choose a level area accessible from all directions.
 - A helicopter must approach and leave ground into the wind so a long dimension into the wind is helpful.
 - Prepare the area by removing obstacles that could blow around like tents and camping gear, and by marking the area with flagging and using a signal mirror or a smoky fire to attract the pilot.
 - **Patient Preparation**
 - While the helicopter is in the air prepare the patient to move.
 - Provide protection from rotor wash and flying debris.
 - Attach the first aid record which you have been recording to patient where it will be visible to caregivers - pinned to the patient's shirt, for example.
 - **Landing and Takeoff Assistance**
 - When the helicopter is preparing to land one person should indicate the surface wind direction to pilot by standing with his/her back to the wind at the upwind edge of the landing area and holding an improvised "flag" to show wind direction. Flagging tape on a hiking staff may be helpful.
 - Everyone else must stay well clear of landing area.
 - Wait for helicopter crew to exit helicopter. Do not approach the helicopter: there is danger from main rotor and tail rotor.

- Assist the helicopter crew in loading the patient if requested. Anyone who is not helping must stay away from the helicopter.

Non-Medical Emergency Evacuations

- A forest closure, approaching forest fire or other emergency condition may require evacuation of the entire crew.
 - Follow evacuation direction provided by the Forest Service.
 - Leave crew equipment, if directed; otherwise, remove all crew equipment.

Appendices

Appendix A: CTF Board Policy Statements Relevant to Crew Leaders

BP-03 Crew Leader Qualifications and Responsibilities

(Adopted by the Board of Directors on October 4, 2008.)

In selecting volunteers to serve as crew leaders, the Foundation will seek individuals who meet the following qualifications:

1. Are recommended to become a crew leader by a leader with whom he/she has served as co-leader or assistant crew leader.
2. Have received crew leader training.
3. Have a current First Aid/CPR certification.

Crew leaders should agree to lead crews by the following guidelines:

1. Manage the crew in accordance with normal Trail crew practices and as directed by the Field Operations Manager and/or Forest Service Staff.
2. Work constructively with representatives of the U.S. Forest Service and in compliance with USFS trail maintenance standards.
3. Assure that all crew members have completed registration and waiver forms.
4. Seek reasonable economies in purchasing food and miscellaneous supplies.
5. Establish a positive relationship with Trail crew members to assure that volunteering on a CTF Trail crew is a safe and enjoyable experience.
6. Inform crew members in a positive way about The Colorado Trail Foundation and CTF volunteer opportunities.

BP-07 Expense Reimbursement

(Adopted by the Board of Directors on October 4, 2008.)

The CTF values the time and effort of all volunteers, however, reimbursing all volunteer expenses would pose a financial burden that would limit the Foundation's ability to sustain the organization and maintain The Colorado Trail. To serve as a good steward of the funds donated for the benefit of The Colorado Trail, the CTF will reimburse only those expenses incurred in essential CTF operations in the following areas:

- **Food** – purchased for such needs as Trail crews, Board meetings and volunteer appreciation and fund raising events.
- **Equipment and Supplies** – such as equipment, materials and supplies purchased by CTF leaders for Trail maintenance/construction and the repair of tools used in maintaining the Trail.
- **Personal Vehicle Use** – gasoline purchased for use in personal vehicles for such needs as towing a CTF trailer or attending a special project meeting with the approval of the Field Operations Manager.
- **Special Projects** – expenses incurred to carry out special projects as agreed on and approved by the Executive Director, Executive Committee or the Board.

Individuals seeking reimbursement will normally be expected to provide receipts for expenses. Cash advances for CTF expenses may be provided in unusual or necessary circumstances.

The Foundation normally will not reimburse the following expenses:

- Expenses incurred in attending Board meetings, CTF programs or activities.

-
- Expenses incurred by volunteers serving as crew members or adopters.
 - Vehicle expenses other than gasoline.

This policy will be administered by the Field Operations Manager to serve the best interests of The Colorado Trail Foundation.

Appendix B: Crew Leader Bin Contents

Item	Qty	Basecamp Crews	1-Day/ Weekend/ Backpack Crews
Construction & Maintenance Notebook	1	X	X
Trail Crew Leader Handbook	1	X	X
Camp Site Introductory Meeting Checklist	1	X	X
Camp Safety & Tool Training Checklist	1	X	X
Last Night Checklist	1	X	X
Task Chart	1	X	
Whiteboard Marker and Eraser	1	X	
Daily Schedule	1	X	
Campsite Reserved Sign	1	X	
Registration Form	3	X	X
Liability Form	3	X	X
Certificates of Appreciation	#	X	X
Crew Brochures	3	X	X
Rite-in-the-Rain Journal	1	X	
Sharpie	1	X	X
Roll of Frog Tape (for names on hardhats)	1	X	X
Hardhat Sweatbands	#	X	X
Volunteer Gifts	#		

#: Maximum number in crews

Appendix C: Standard Equipment and Tools for Basecamp Crews

Below is the list of standard equipment and tools included in the CTF crew trailer for a multi-day basecamp crew of 25 volunteers. Specialized/additional tools can be included to address the nature of the crew project(s) and/or larger crew size, as needed.

Item		Container
General Camp Equipment		
2	10'x20' Canopies/Ends & Sides	Duffel Bags
	Bungee Cords (attached to canopies)	
2 Sets	Canopy Poles	
2 Sets	Canopy Connector Pieces	Two Large Storage Bins
	Cotter Pins	
	Turnbuckles	
	Guy Lines	Bucket
	Heavy Duty Stakes	Canvas Bag
2	10' x 20' Canopy Floors	
1	12' x 14' Canopy Floor	
1	First Aid Kit	
1	Fire Extinguisher	
2	7-gallon Water Jugs	
	Extra Tarps	
2	Shower Enclosures and Wooden Platforms	
1	Shower Bag Fill Pipe and Hose	
1	Hand Wash Assembly (Foot Pump with Intake, Hose and Spigot Tubing, Two Plastic Buckets with One Lid)	
1	Crew Banner	
1	Broom and Dustpan	
1	Toilet Assembly (if needed)	
Kitchen Equipment		
3	6-ft Plastic Tables	
1	6-ft Wooden-Top Table	
1	Set of Plastic Shelves	
4	2-Burner Propane Stoves	
4	Insulating Stove Pads	
1	Oven (Fits on 2-Burner Stove)	
2	Folding Stove Stands	
Propane Accessories and Lanterns		Medium Storage Bin
	Stove Replacement O-Rings and Repair Kit	
2	Battery-Operated Lanterns	
	Regulators and Hoses	
2	Regulator with female quick-connect "T"	
1	Regulator with attached 5-ft hose and stove connection fitting	
1	Regulator and shutoff valve with attached 5-ft hose connected to bucket heater (blaster)	
1	5-ft hose with male quick-connect and "Y" or "T" with two 5-ft hoses with stove connection fittings	
3	5-ft hose with male quick-connect and stove connection fitting	
3	30-lb Propane tanks	Not in trailer
2	65-Quart Coolers	Percolators and Pump Pots
2	36-Cup Coffee Percolators	



1	36-Cup Coffee Pot (w/out percolator)	Packed in Coolers
2	## Cup Pump Pots	
1	5-Gallon Insulated Drink Jug	
2	Trash Bag Holder Frames	
Kitchen Staples Box		Small Storage Bin
1	Sugar, 1 lb	
1	Flour, 1 lb	
1	Brown Sugar, 7-oz. bottle	
1	Vegetable Oil, small bottle	
1	Olive Oil, small bottle	
1	Bouillon Cubes, assorted bag, two kinds	
1	Vinegar, small bottle	
1	Vanilla Extract, bottle	
1	Hot Sauce, small bottle	
1	Soy Sauce, small bottle	
1	Artificial Sweeteners, assorted bag	
1	Coffee Creamer, 12-oz. bottle	
1	Tea Bags, assorted bag	
1 roll	Aluminum Foil	
1	Matches, 12-oz. bottle	
1 each	Lighters/Strikers	
1	Toothpicks, 7-oz. bottle	
1	Plastic Silverware, assorted	
1 can	Non-Stick Vegetable Spray	
1 or 2	Salt & Pepper Shakers, 2-Packs	
Spice Box (extra-small storage box)		
1	Salt, 4-oz. bottle	
1	Black Pepper, 4-oz. bottle	
1	Onion Powder, 4-oz. bottle	
1	Garlic Salt, 4-oz. bottle	
1	Garlic Powder, 4-oz. bottle	
1	Cinnamon, 4-oz. bottle	
1	Chili Seasoning, 4-oz. bottle	
1	Cumin, 4-oz. bottle	
1	Parsley, 4-oz. bottle	
1	Baking Powder, 4-oz. bottle	
1	Baking Soda, 4-oz. bottle	
Large Kitchen Storage Box		
2	Griddles	
4	Cutting Boards	
5	8, 12, 16 Qt. Stock Pots with Lids	
3	12” Skillets with Lids	
2	Large Salad Bowls	
1	Large Rectangular Pan	
2	9” Square Pans	
3	9” Round Cake Pans	
2	Large Sauce Pans	
2	Small Sauce Pans	
3	Half Pans	
1	Colander	

	Assorted Knives in Knife Case and Knife Sharpener	
4	Measuring Cup	
5	Misc. Storage Containers	
<u>Kitchen Utensil Storage Box</u>		
2	Whisks, various sizes	
1	Grater	
2	Can Opener	
	Peelers	
1	Church Key	
3	Turners	
2	Tongs	
	Solid & Slotted Spoons	
3	Rubber Scrapers, heat resistant, various sizes	
	Spreaders	
1	Egg Beater	
1	Rolling Pin	
	Measuring Spoons	
	Misc. Kitchen Tools	
<u>Dishwashing Equipment</u>		
1	Dishwashing Canopy	
1	Tall Steel Grill Table/Legs	
1	Short Steel Grill Table/Legs	
2	Galvanized Water Buckets	
4	Dishpans	
2	Drainers	
<u>Cleaning Supplies Box (Small storage box)</u>		
1	Dish Soap, 14-oz. bottle	
1	Clorox, 64-oz. bottle	
1	Hand Soap Dial, 9-oz. bottle	
1	Hand Sanitizer	
1	Ajax or equivalent	
3	Sponges	
3	Green Scrubber Pads	
5	SOS Pads	
2	Copper Scratchers	
3	Dish Brushes	
1	Box Disposable Gloves	
6	Dish Towels	
6	Hot Pads	
1	Container Matches	
7	Trash Bags, 33-gal. bags	
<u>Trail Tools</u>		
2	Bowsaw – 21" with spare blades	
2	Bowsaw – 30" with spare blades	
10	Buckets - 5-gallon plastic	
6	Buckets – 3-gallon canvas	
2	Buckets – 1½-gallon canvas	
1	Come-along - 2-ton cable	
1	Crowbars – std	
1	Crowbars – Gorilla	



2	Cutter mattock - 5 lb	
1	Chain/Hooks	
6	Goggles	
25	Hardhats and sweatbands	
2	Loppers - 2" anvil	
12	McLeods	
15	Pick mattocks - 5 lb	
4	Pick mattocks – 2 ½ lb	
2	Pick mattocks – mini	
1	Pole saw	
10	Pulaski	
1	Pruning saw - non-folding	
3	Pruning saw - folding/sheath	
2	Rock bar - 6', 17 lb	
2	Rock bar - 5' 14 lb	
2	Rock sling – chain	
1	Rock sling – webbing	
3	Shovel – round point	
1	Shovel – transfer (square point	
2	Sledgehammer - 4 lb	
2	Sledgehammer - 10 lb	
1	Two-person saw - 36"	
2	“Trail Work Ahead” signs	
24” Steel Tool Box		
1	Tape measure - 25 ft	
1	Tape measure - 100 ft	
1	Hammer - 20 oz claw	
4	Screwdrivers - philips/slotted	
1	Pliers	
1	Wire cutters	
1	Hacksaw	
1 each	Crescent wrench - 8" & 10"	
4	Hacksaw blades - 10"	
1 roll	Duct tape	
1 roll	Electrical tape	
1 roll	Teflon tape	
1 roll	Wire	
1	Box/nail & screws	
1	Level - 9" torpedo	
1	Level – line level	

Ice cream maker and salt provided upon request.

Additional numbers of standard trail tools can be provided, depending on the nature of the project and crew size. In addition, specialized tools can be provided for specific projects, as necessary, including include timber tongs, draw knives, string line, speed square, chalk line, carpenter’s pencil, cordless drill and batteries (non-wilderness), drill bits, line level, torpedo level, posthole digger, drain spade (narrow shovel).

Appendix D: Standard Equipment and Tools for Backpack Crews

Below is a list of the standard equipment and tools provided for multi-day backpack crew of 15 volunteers. Specialized/additional tools can be included to address the nature of the crew project(s); number of tools will be adjusted for smaller crew size, as needed.

Qty	Item
Camping Equipment	
2	15 ft x 15 ft nylon tarps and misc guy lines
8	Food hang lines w/carabiners and haul lines
2	33-gal garbage bags and assorted paper lunch sacks for toilet paper
Trail Tools	
6	Buckets – 3-gallon canvas
2	Buckets – 1½-gallon canvas
15	Hardhats and sweat bands
2	Loppers - 2" anvil
5	McLeods
7	Pick mattocks - 5 lb
2	Pick mattocks – 2 ½ lb
1	Pick mattocks – mini
2	Pulaski
1	Pruning saw - folding
2	Shovel – round point
2	Sledgehammer - 4 lb

Additional numbers of standard trail tools can be provided, depending on the nature of the project and crew size. In addition, specialized tools can be provided for specific projects, as necessary, including include timber tongs, draw knives, string line, speed square, chalk line, carpenter's pencil, cordless drill and batteries (non-wilderness), drill bits, line level, torpedo level, webbing rock sling, transfer (square end) shovel, posthole digger, drain spade (narrow shovel)goggles, pole saw, rock bars, and plastic buckets.

Appendix E: Example Project Plan

The Colorado Trail Foundation 2019 Trail Crew Project Plan



PROJECT PLAN			
Project:	Crew 0419 Buffalo Creek	Dates:	June 1-8, 2019
Crew Leader(s):	Cindy Johnson	ci_johnson@msn.com	(303) 507-7762
Project Location:	Approx. 3 miles due south of the town of Buffalo Creek where the CT crosses FS Rd 550.		Lat. 39.3428° N Long. 105.2654° W
Description of Work:	Construct approx. 900-ft realignment on both sides of FS Rd 550 crossing, including installation of culverts on either side of road, rock retaining walls where required, and rehab of abandoned trail section. South Platte RD to provide culvert pipe.		
Forest:	Pike	Ranger District:	South Platte (303) 275-5610
Primary RD Contact:	Scott Dollus	scott.dollus@usda.gov	
Secondary RD Contact:	Brandon Mitchell	brandon.mitchell@usda.gov	
County:	Jefferson	Sherriff Contact (Search and Rescue):	911 or (303) 277-0211
Trailhead Location:	Approximately 400 ft west of CT crossing of FS Rd 550 on south side of road.		Lat. 39.3430° N Long. 105.2669° W
Camp Location:	Approximately 300 ft south of FS Rd 550 on Morrison Creek 2-track.		Lat. 39.3375° N Long. 105.2865° W
Water Source:	Water trailer provided by CTF; trailer to be filled at FS facility at Buffalo Creek.		
Toilet Facilities	Portable toilets provided by CTF.		
Driving Route to Campsite:	From the signalized intersection on Hwy 285 at Pine Junction (approximately 7 miles west of Conifer and approximately 7 miles east of Bailey), turn south on Jefferson County Road 126/Pine Valley Road. Proceed on CR 126/Pine Valley Road, passing through the towns of Pine and Buffalo Creek. Approximately 13 miles from Hwy 285, turn right (west) on FS Road 550, signed "Buffalo Creek Recreation Area." Travel 2.2 miles on FS Road 550 to a gated 2-track on the left. The gate will be unlocked. Turn left (south) and drive up the 2-track into a meadow, crossing Morrison Creek soon after leaving FS Road 550. The campsite will be in the meadow.		
Driving Route from Campsite to Vehicle Parking Location:	Leave the campsite by crossing Morrison Creek, passing through the gate, and turning right (east) on FS Rd 550. Travel 1.7 miles on FS Rd 550 and park on the right (south) side of the road in a campsite pullout.		
Hiking Route from Vehicle Parking Location to Project Site:	Travel east approximately 400 ft on FS Rd 550 to where the CT crosses the road. The project site is located either side of the road.		
Cell Service:	Potential, depending on carrier and location.		

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2019 Trail Crew Project Plan

EMERGENCY PROCEDURES			
Emergency Communications:	Garmin inReach Satellite Communicator	CTF inReach Unit #3	Text: 1-206-939-6416
Emergency Contacts:	Brent Adams CTF Field Operations Mgr	brent@coloradotrail.org	(719) 530-1028 (c)
	George Miller CTF Field Operations Director	glmctf@comcast.net	(719) 641-8968 (c)
	Bill Manning CTF Executive Director	bill@coloradotrail.org	(303) 384-3729 (o)
Potential Helicopter Landing Site(s):	None known near project site due to heavy timber and rocky terrain; possible site located in meadow approx. 700 ft east of project site (Lat. 39.3432° N, Long. 105.2628° W) and at campsite (Lat. 39.3375° N, Long. 105.2865° W).		
Emergency Medical Facility Location:	UCHealth Emergency Room - Littleton	13351 W. Bowles Avenue Littleton Lat. 39.6101 N, 105.1498 W	911 or (720) 922-4120
	Driving Route: Travel east on FS Rd 550 (0.5 miles from the project site/2.2 miles from camp) to reach CR 126. Turn left (northeast) and follow CR 126 for 11.8 miles to the signalized intersection with Hwy 285. Turn right (east) on Hwy 285 and travel 20.7 miles then exit right to CO 470E to I-25 and Colorado Springs. Follow CO 470E for 2.0 miles, exiting at Bowles Avenue (Exit 7). Turn left (east) and travel 0.2 miles on Bowles Avenue, then turn left (north) onto an unnamed road with the ER visible on your left. Take the next left and left again to reach the facility entrance. Est. driving time: 1 hour		
Non-Emergency Medical Facility Location:	Conifer Medical Center (8:00 am to 6:00 pm M-F, 8:00 am to 5:00 pm Sat)	26659 Pleasant Park Road Conifer Lat. 39.5189 N, 105.3034 W	(303) 647-5300
	Driving Route: Travel east on FS Rd 550 (0.5 miles from the project site/2.2 miles from camp) to reach CR 126. Turn left (northeast) and follow CR 126 for 11.8 miles to the signalized intersection with Hwy 285. Turn right (east) on Hwy 285 and travel 6.8 miles to the exit for Hwy 73 (Evergreen) and Pleasant Park Road. Turn sharply right onto Pleasant Park Road and proceed south 0.2 miles, turning left (east) onto the third business drive on the left (before Pleasant Park Road curves sharply to the left). Follow the business drive as it curves left and then enters the Conifer Medical Center. Est. driving time: 40 minutes		

Appendix F: Shower Enclosure Assembly Instructions

Appendix G: Basecamp Crew Food Planning and Kitchen Management

Food Planning

- Create menus from The Colorado Trail Crew Food Handbook, other crew leaders or develop your own. Plan the menu to use perishable items early in the crew and/or the feasibility of resupplying perishable items mid-crew on longer crews.
- Scale menu quantities for registered number of crew members.
- Develop a total food budget. The CTF recommends budgeting \$8-9 per person per day. Try to stay within this budget amount and contact the CTF office for staff approval if the costs will be significantly higher.
- Use the CTF tax-exempt certificate (see Appendix L) when purchasing food and supplies. City Market and Safeway require completing a form at checkout; the Walmart service desk issues a tax-exempt card that must be presented each time; other stores likely have their own system for tax-exempt purchases.
- Keep all receipts for reimbursement. Complete the Expense Reimbursement Request form on the CTF website. Submit receipts with the form.
 - **Alcoholic beverages of any kind are NOT reimbursable.**
- Purchasing items on sale provides a nicer food experience and staying within the budget. Canned and dry goods, paper products, and other non-perishable products can be purchased when they are on sale well in advance of the crew. If you have freezer space, consider purchasing items during seasonal sales, such as whole turkeys at Thanksgiving, spiral hams at Christmas time or Easter, or a full brisket when it's on sale.
- Lots of items can be cooked prior to the crew. Examples include turkey, brisket, bacon, chicken for a stir fry, brownies, etc. You may want to cook ahead and freeze.
- Purchase non-perishable foods. These can be purchased any time after you have the menu planned, watching for items on sale, although quantities will be dependent on crew registration, which you won't know until closer to the crew dates.
- If you are leading multiple crews, consider buying items in bulk that can be used on multiple crews. Examples, paper towels, pancake mix and syrup, coffee, tea, peanut butter. This may cause you to go over budget on the first crew but then you should be under budget for a later crew. Contact other crew leaders after crew is over to see if they can use leftover non-perishable food and other items.
- Balance convenience with the amount of waste and trash. For example, consider sliced cheese but not individually wrapped slices or large bags of chips and snacks instead of individual packets.
- The crew trailers include a kitchen box that contains a spice box and some basic staple items (see Appendix C). If your menu requires a spice not included or a larger quantity of a staple item, plan to bring them. If you need only a small amount of spice not included, consider bringing it from your personal stock instead of buying it so there won't be leftover at the end of the crew.
- Buy perishable items no sooner than the day before the crew.

Kitchen Management

- Prepare food preparation instructions for crew members to follow for each meal. Place in plastic sleeves and in a 3-ring binder in the order of meals for the crew.

- If shopping mid-week during your crew is a reasonable option, you can plan to replenish ice and perishables mid-week. This will reduce the amount of food and ice you need to transport.
- Don't forget cubed ice if you're planning on making homemade ice cream. Coordinate with the Field Operations Manager for inclusion of the ice cream maker and rock salt.
- Coolers
 - Two coolers are provided in the crew trailers. If additional coolers are needed, use personal coolers or ask if crew members have extra. If you can't get enough this way, contact the Field Operations Manager for more coolers.
 - Use block ice. Drain as needed; if cooler contents can get wet, don't drain the water as it provides additional cooling capacity. If you have the freezer capacity at home, fill large (gallon or 2-liter) plastic bottles with water and freeze them. Block ice may not be available in small towns; if purchasing cubed ice, leave ice in the plastic bag so it lasts longer.
 - Use frozen food to supplement the ice.
 - Food can be distributed and organized into the extra coolers after arrival at camp, although doing it beforehand, if possible, is advantageous.
- The crew trailer can be used for storage of food and coolers after the crew equipment has been removed and the trailer is emptied. Organization of food and coolers is very important to minimize searching for items and unnecessary opening of coolers. Possible strategies include:
 - Inventory and label each box and cooler; put labels on the face of boxes and coolers for visibility when stacked. Use no-residue "Frog" tape for labeling so no tape residue is left on coolers or trailer shelves.
 - Organize the non-perishables into logical categories: e.g., bread, canned goods, breakfast, lunch items, condiments, etc. Alternatively, organize by meal or day of the week.
 - Organize and label coolers so opening the lids is minimized.
- Sanitize food preparation and serving surfaces (tables and cutting boards).
 - Prepare a sanitizing solution with $\frac{1}{4}$ to $\frac{1}{2}$ teaspoon of Clorox in 1 quart of water in the disinfecting spray bottle included in the kitchen box.
 - Sanitize surfaces by cleaning thoroughly first, then spraying the disinfecting solution on the surfaces and waiting 1 minute. Let air dry or wipe down with paper towels or single use cloth (no sponges).
- Food preparation and serving hygiene:
 - Wear disposable food handler gloves when handling any food not cooked and when serving food (cooked or uncooked). Wash hands before putting on gloves and change gloves between tasks.
 - Tie long hair back and wear a hat or hair net when preparing or serving food, regardless of hair length.
 - Aprons are recommended when preparing or serving food to keep food off of volunteers' clothes and dirt and other debris from volunteers' clothes off of food.
 - Place large spoons in bulk lunch or snack items and instruct crew members to not use their hands. Put forks out for getting slices of cheese and meat for lunch.

- Close valves on propane tanks after each meal.
- Dispose of all food waste in trash bag. Ensure all trash bags, recycle bags, coolers, and all food, including kitchen box with spices, are stored in the crew trailer each night and during the day when no one is in camp.

Appendix H: Food and Trash Protection Methods for Backpack Crews

It is essential that CTF backpack crews protect their food and trash from bears and other animals so that we are not responsible for creating problem animals. Fortunately, bears are not as significant of a problem along the CT as in other high-use areas where bears associate people with the food that they bring along, but protection of food and trash is still critical. Many different methods can be used to protect food and trash, each with their advantages and disadvantages. The CTF does not endorse or require a particular method, only that we keep food and trash away from animals.

Food Protection Methods

- Bear canisters
 - Generally most fool-proof method, waterproof.
 - Weight and bulk penalty.
- Ursacks
 - Accepted by some agencies as bear-proof, but not as fool-proof as canisters.
 - Lighter and less bulky than canisters.
 - Not waterproof.
- Food hangs
 - Lightest weight method.
 - Waterproof if stuff sack is waterproof.
 - Can be relatively easy in mature ponderosa pine forest with few stout, long branches; more challenging in spruce forest with typically many smaller branches.
 - Not feasible at or near timberline.

Articles discussing different means of protecting food from bears and other animals:

<https://lnt.org/hanging-a-bear-bag/>

<https://www.outsideonline.com/2386146/bear-bags-ineffective>

https://backpackinglight.com/turbo_bear_bag_hanging/

Food Hangs

Below are illustrations of various food hang methods. Considerations include:

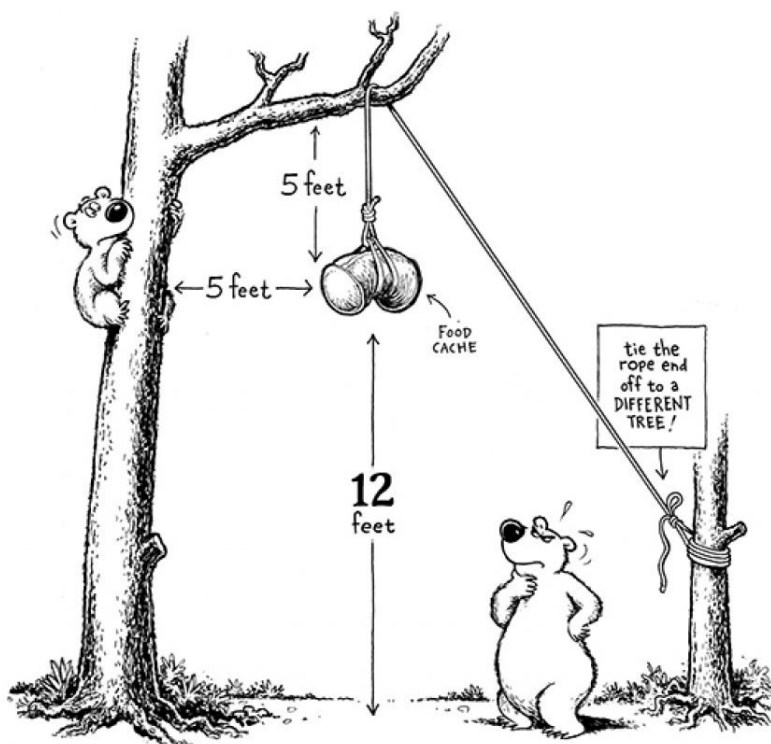
- Recommended distances from ground and tree. Leave No Trace recommends 12 feet above the ground, 6 feet from the tree trunk, and 6 feet below the branch; illustrations below show generally comparable distances.
- Suitability of trees. All of the illustrations below show hanging over a single branch; this is frequently not possible along the CT due to the lack of trees with stout branches that are long enough to get the hang away from the tree trunk. In this case, a hang line will need to be set up between two nearby (15 to 25 feet apart) trees, making sure that the middle portion of the hang line has sufficient clearance from any stout branches on the trees. Depending on the hanging system, the hang line should use branches 15 to 25 feet off the ground to allow for sag.
- Add a weight to the end of the line to aid in throwing the end of the hang line over a tree branch. The weight can be a rectangular rock tied securely or a small stuff sack filled with a single or multiple rocks or sand/gravel. The advantage of a stuff sack is that it can be tied more securely while rocks are more prone to slip out. The disadvantage of a stuff sack is that it might be harder to dislodge if the hang line wraps around a tree branch one or

more times whereas it might be possible to dislodge the rock. Make sure that everyone is clear when throwing the hang line over tree branches. Throwers tend to miss what they are aiming at, the weight can bounce back after hitting the tree trunk, and rocks dislodge from the end of the line.

- The hang line currently provided for backpack crews is the orange small diameter (2.2 mm), low stretch, Jet Set Dyneema throwline in 60-ft lengths. **Please do not cut the hang line for other uses!**
- Carabiners are provided so to reduce abrasion on the hang line and eliminate the need for knots in the hang line (food bags can be positioned on the hang line by the direction that the haul line.
- If the preferred hang system requires knots in the hang line, use the alpine butterfly or similar knot that can be readily untied even after being under tension. If knots are tied in the line, please remove them at the end of the crew.
- The haul line currently provided for backpack crews is either orange or yellow 3/16" nylon parachute cord in around 15-20 ft lengths. **Please do not cut the haul line to use for other uses!**

Traditional Hang

- Easiest hanging system and requires least height above ground when using a hang line (stuff sacks don't need 5-6 foot clearance below tree branch).
- When tying haul line to a tree, wrap line multiple times around tree to provide friction so that the knot doesn't become excessively tight. Tie the haul line to the tree as high as you can reach to ensure that a bear (or people) doesn't run into the line.
- Haul line can be weak point in hang if bears develop interest in it.



Source: <https://www.outsideonline.com/2386146/bear-bags-ineffective>, (Illustration: Mike Clelland via NOLS Cookery Kindle Edition/Stackpole Books).

Counterbalance Hang

- Somewhat more complicated than traditional hang but doesn't have potential weakness of haul line tied to tree.
- Requires similar height as traditional hang when using tree branch, higher height than traditional hang when using hang line.
- Somewhat less secure as bear bouncing on branch can dislodge food bags if they are not closely equal in weight; not an issue if using hang line between trees.
- Requires two stuff sacks and reasonably close balancing of weights
- Counterbalance accomplished by tying one stuff sack to end of haul line, raising it to the maximum height possible, and tying the counterbalance stuff sack on as high as possible on the other end of the haul line; tie a loop below the second stuff sack to aid in retrieval. Use a stick to push the counterbalance stuff sack up while the first stuff sack descends until they are even. Use a stick to hook the loop or push up on one of the stuff sacks to retrieve the stuff sacks.
- Bags can twist together making retrieval potentially more difficult.

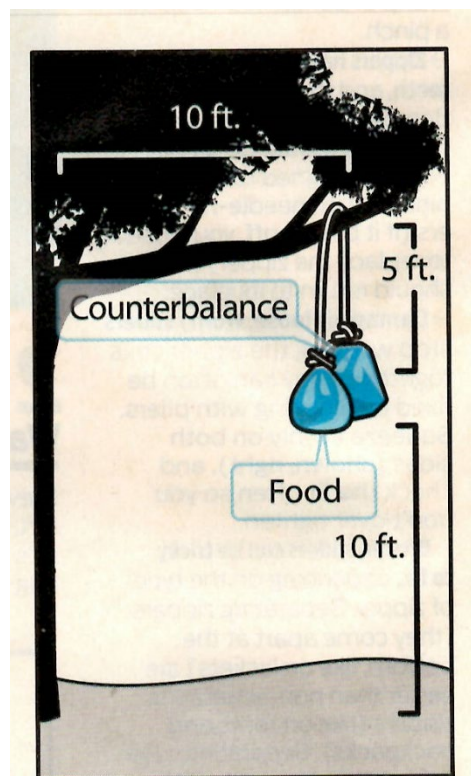


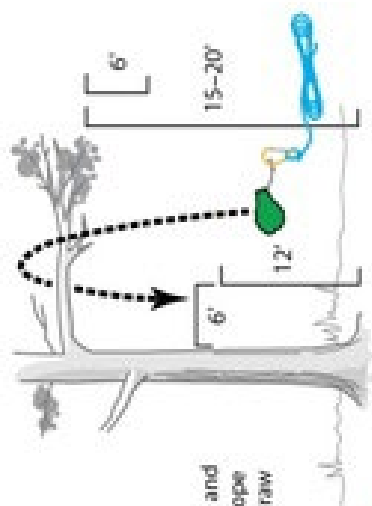
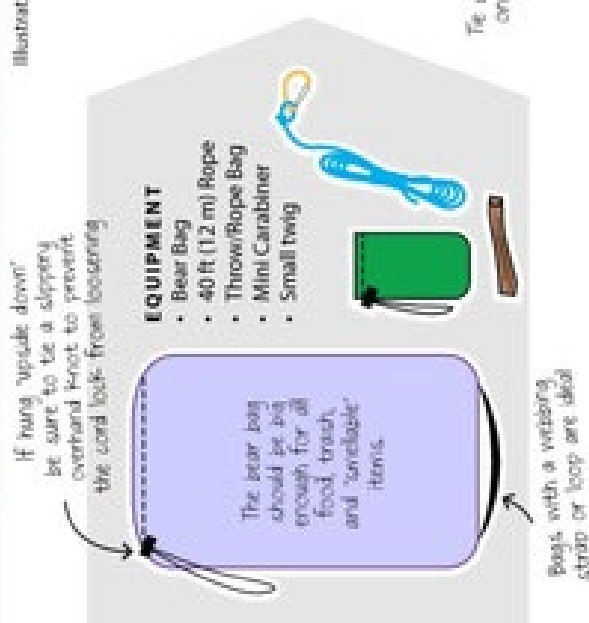
Illustration source:
Backpacker, March 2014

PCT Hang (See illustration next page)

- Somewhat more complicated than traditional hang but doesn't have potential weakness of haul line tied to tree.
- Requires similar height as traditional hang when using tree branch, higher height than traditional hang when using hang line.
- More secure than counterbalance hang.
- Requires two carabiners when using hang line.
- Tie stuff sack to one end of the haul line, attach a carabiner at the stuff sack attachment point, and clip the long end of the haul line through the carabiner. Pull on the long end of the haul line to raise the stuff sack to the maximum height possible. Reach as high as possible and tie a clove hitch on the haul line around a short section of tree branch (2 - 3 inches long and ¼ - ½ inches in diameter) to create a toggle. Let the haul line out slowly until the toggle reaches the carabiner, stopping the descent of the stuff sack. Leave the remaining haul line hang loosely (very difficult for a bear to grab).

HANGING A BEAR BAG—THE “PCT” METHOD

Illustration ©2013 by Derek Hansen, TheUltimateHang.com

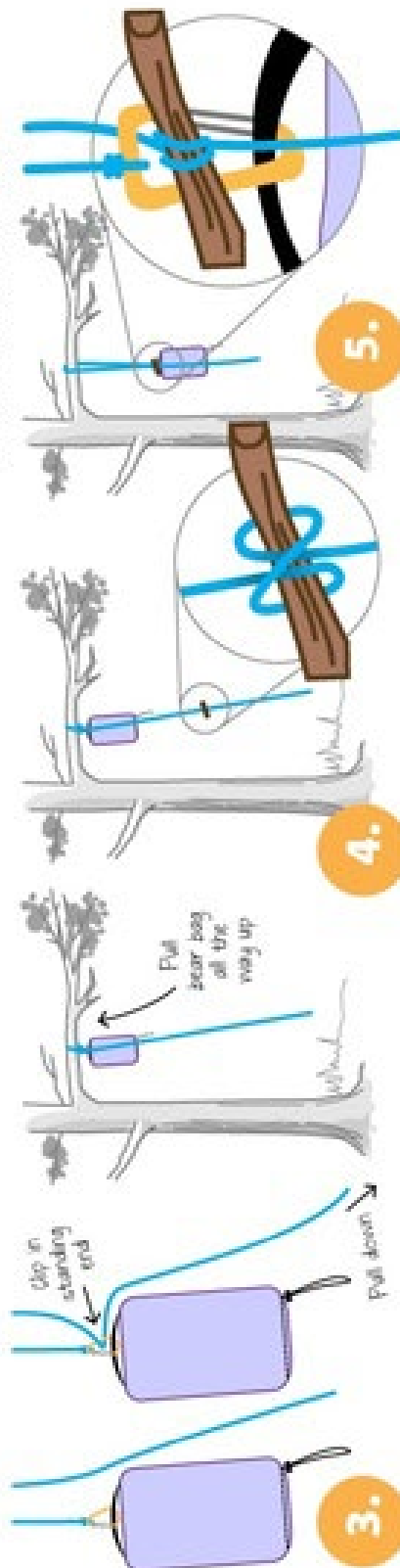
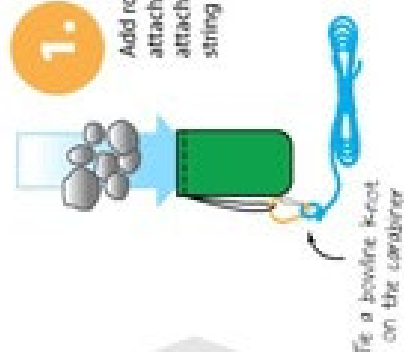


Toss the throw bag over a sturdy branch that is 15–20 ft (4.5–6 m) above the ground.

NOTE: When properly hung, the bear bag should hang at least 12 ft (4 m) above the ground and 6 ft (~2 m) down from the branch and away from the tree trunk.

(See <http://bit.ly/blog/hanging-bear-bag>)

2.



Source: <http://theultimatehang.com/2013/03/19/hanging-a-bear-bag-the-pct-method/>

Appendix I: Basecamp Crew Task Signup Sheet

TASK CHART										
Team	Task	Number on Team	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	First day (Saturday)	Everyone	Unpack trailer kit, erect cook and common tents, set up kitchen, Erect shower tent(s), Dig garbage and water pits, Set up toilet and shower enclosures, Setup hand and dishwashing stations, trash stations.							
2	Last day (Saturday)	Everyone								Disassemble all community camp, make sure all trail is packed up, load trailer, empty cooler.
3	Fire and water team Prepare fire pit and ring. Start and maintain fire AM and PM. Make sure water supply is adequate for cooking, dishes and hand washing station.	1 or 2	AM- None	AM	AM	AM	AM	AM	AM	AM
			PM	PM	PM	PM	PM	PM	PM	PM- None
4	Breakfast team Assist and cook. Slow food.	2 or 3								
5	Breakfast Cleanup team Wash dishes, and cleanup area	2 or 3								
6	Lunch setup team Set out food before breakfast. Cleanup	2		Lunch in camp						
7	Dinner team Assist and cook, slow food when finished.	3 or 4								
8	Dinner Cleanup team Wash dishes and cleanup area	2 or 3								
10	Leaders Choice									

1. PLEASE ENTER YOUR NAME OR INITIALS IN THE BOXES YOU CHOOSE.

2. IF YOU WANT/NEED TO CHANGE, PLEASE FIND A REPLACEMENT.

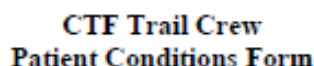
3. LEADER WILL DETERMINE THE NUMBER OF SLOTS EACH VOLUNTEER WILL SIGN UP FOR.

Appendix J: First Aid Kit Contents and Patient Conditions Form

CTF First Aid Kit Contents	Basecamp Crew	Backpack Crew	One-Day or Weekend Crew
Item	Qty	Qty	Qty
<u>Antiseptics</u>			
Povidone Iodine (1/2 fluid oz bottle)	1	1	1
Povidone Iodine Swabs	9	6	6
Antiseptic Towelettes	8	8	4
<u>Gauze Pads and Dressings</u>			
Regular Gauze Pads/Sponges			
Gauze Pads/Sponges (2" x 2")	10	6	6
Gauze Pads/Sponges (3" x 3")	10	6	6
Non-Stick Pads			
Non-Stick Pads (2" x 3")	6	4	4
Non-Stick Pads (3" x 4")	6	4	4
Bandage Compress	2	1	1
Combine Dressing	2	2	1
<u>Bandages and Tape</u>			
Elastic Bandages			
Elastic Bandage (2" x 5 yd)	2	2	2
Elastic Bandage (3" x 5 yd)	1	1	1
Elastic Self-Adhering Bandage (1" x 5 yd)	2	2	1
Elastic Self-Adhering Bandage (2" x 5 yd)	1	1	1
Adhesive Tape			
1/2 in. x 5 yd. roll Waterproof Adhesive Tape	2	1	1
1 in. x 10 yd. roll Cloth Adhesive Tape	1	1	1
1-1/2 in. x 10 yd. roll Athletic Tape	1	1	1
Safety pins (large)	6	6	6
<u>Immobilization/Support</u>			
2 in. x 5 yd. roll Elastic support ("Ace" bandage)	1	1	1
Triangular Bandage	2	1	1
Splint	1	1	0
<u>Barriers</u>			
Nitrile Gloves	4	2	2
Mouth-to-mouth barrier	2	2	2
<u>Adhesive Bandages</u>			
Adhesive Bandages			
Flexible Fabric Adhesive Bandage (3/4"x3")	6	6	6
Flexible Fabric Adhesive Bandage (1"x3")	20	16	8
Knuckle Fabric Adhesive Bandage (1-1/2" x 3")	8	8	4
Misc Fabric Adhesive Bandage			
Wound Closure			
Butterfly Bandage (3/8" x 1-3/4")	5	5	3
Butterfly Bandage (1/2" x 2-3/4")	10	10	10
Steri-Strips (1/4x4)	10	10	10
<u>Pain Medications</u>			
Ibuprofen (2-tablet packets)	24	16	8
Acetaminophen (2-tablet packets)	24	16	8



CTF First Aid Kit Contents	Basecamp Crew	Backpack Crew	One-Day or Weekend Crew
Item	Qty	Qty	Qty
Miscellaneous			
Cold Pack, Chemical	2	1	1
Eye Wash Solution (1 oz bottle)	2	2	2
Forceps	1	1	1
Paramedic Shears	1	1	1
Emergency Blanket	2	2	1
Patient Condition Form	4	4	2
Lead Pencil	2	2	2
Contents List	4	4	4



Vital Signs

Additional Notes:

Appendix K: Garmin inReach Satellite Communicator Instructions

The Colorado Trail Foundation Garmin inReach Explorer+ User Instructions




The Colorado Trail Foundation issues Garmin inReach Explorer+ satellite communicators to crew leaders to provide emergency communication ability for crews in remote locations without cell phone service. These units use the Iridium satellite network, which provides the ability to communicate worldwide, including in locations where there is no cell service. These units are to be used for emergencies or urgent needs, only. While they are capable of much more, we will be using them only for the SOS and texting capabilities. The SOS function notifies the local emergency responders and they will communicate with you by text. You can also use them to text with CTF staff, family, or others, as needed. Our service plan provides a limited number of free texts per month; therefore, please refrain from texting if it is not important. Below are figures and tables showing the function of various keys and indicators.

Device Overview



①	Internal Iridium® antenna
②	SOS key (under protective cap)
③	Status LED
④	Keys
⑤	Power key
⑥	Mounting spine
⑦	Micro-USB port (under weather cap)

Turning On the Device








Hold  (the power key). A warning screen will appear with **Cancel** highlighted green; to turn the unit on, use the “joystick” key to move the green highlight to **Turn On** and use the checkmark key to select.

Status LED











LED Activity	Status
Flashing green	You have an unread message.
Flashing red	The device does not have a clear view of the sky. The device is below 10% battery power.
Alternating red and green	The device is in SOS mode.
Alternating red and green rapidly	The device is canceling an SOS rescue.

Keys



	Select to cancel or return to the previous page.
	Select to open the shortcut menu.
	Select to zoom out on the map.
	Select to zoom in on the map.
	Select to open the menu for the current page. Select twice to open the home page.
	Select to choose an option or to acknowledge a message.
	Select to view menu options or to move the map cursor.

Status Icons

	3D GPS signal acquired
	2D GPS signal acquired
	Searching for GPS signal
	Sending and receiving data
	Unable to send and receive data
	Unread messages
	Tracking enabled
	Bluetooth® technology status
	Charging battery
	Charging complete


The main intended function of these units is to send a text to CTF personnel or initiate SOS procedures. Be aware, these units are not user-friendly. In particular, composing a text is tedious because you have to use the joystick to move around and select letters one at a time via an on-screen keyboard. It is possible to link your phone to the satellite communicator and use your phone to compose texts, but given the intended use of these units, that should not really be necessary. In addition, while preset or quick text messages are free, the CTF is charged for custom texts exceeding our monthly allotment.

The following CTF contacts are programmed in the units for communicating messages:

- Darin Radatz CTF Field Operations Manager: darin@coloradotrail.org or (810) 990-9748
- Brent Adams CTF Field Operations Committee: brent.adams261@gmail.com or (719) 641-8968
- Bill Manning CTF Executive Director: email bill@coloradotrail.org
- George Miller CTF Field Operations Committee: glmctf@comcast.net or (719) 641-8968

The principal contact should be Darin. Backup for field questions should be Brent and George. Backup for office is Bill


The keys that will be used most frequently include:

- ✓ The checkmark key selects the highlighted item
-  The "joystick" key is used to move the cursor position in the desired direction or to change the highlighted item; pushing the center of the key selects the highlighted item
- ✕ The "X" key returns you to the previous menu


Screen Timeout

The screen may timeout if you delay in typing, etc. To turn the screen back on, press the checkmark key or power key and select **Unlock**.

Sending a New Message

After the unit is turned on the main screen appears. To send a message, select **Messages > New Message**. A subdivided screen with **To:** and **Message:** sections will appear. To select a recipient from the CTF contacts, use the joystick to navigate to the right and select . A list of contacts will appear; scroll down and select each recipient of the message by highlighting the contact and using the checkmark key to select. Multiple recipients can be selected for a message. Messages can be sent to email addresses (envelope symbol to the right of the contact) or to cell phones ("SMS" to the right of the contact). To add the selected contacts to the message, push the "X" key, which also returns you to the **To:** screen.

Messages can also be sent to contacts not programmed in the unit. To enter a contact's email or cell phone number, highlight the **To:** section and push the checkmark key. A keyboard will appear on the screen; use the joystick and checkmark key to move to and select letters or numbers (add a "+1" before a cell phone number, no hyphens are needed in the phone number).

You can send either a custom message or select from a list of pre-programmed Quick Text Messages. To send a programmed Quick Text Message, use the joystick to navigate to the **Message:** section and then to the right and select . A list of programmed text messages will appear. The default messages include the following:

- I can't reply now, I'll write later.
- I'm checking in, everything is okay.
- I'm starting from here. (you would need to add location coordinates to this message; see below)
- I'm stopping here. (you would need to add location coordinates to this message; see below)
- I'm having a great time!
- I'm on my way.
- I'm going to be late.
- I wish you were here!
- Yes

- No

We can change the default messages if you have a suggestion for more useful messages.

To send a custom text message, highlight the **Message:** section and push the checkmark key. A keyboard will appear on the screen; use the joystick and checkmark key to move to and select letters or numbers to complete the message. Messages are limited to 160 characters.

To include your location coordinates in the message, select  while in the **Message:** section. Do this after you have entered the message text.

To send the message, select **Send Message**.


Replying to a Message

- 1 Select **Messages**.
- 2 Select a conversation.
- 3 Select an option:
 - Select **Type Reply** to create a new message, enter the message, and select **Done**.
 - Select **Quick Reply** to select a quick text message.

Checking for Messages

The device listens for new messages at regular listen intervals; the default interval is 10 minutes. You can force a check for messages by manually checking for messages. To do this, go to the home screen and select **Check > Check Now**.

Turn off the unit when not sending or expecting to receive a message.

To turn the unit off, hold down on the power key () and select **Turn Off**.

SOS

During an emergency, you can contact the GEOS International Emergency Rescue Coordination Center (IERCC) to request help. Pressing the SOS key sends a message to the rescue coordination center, and they notify the appropriate emergency responders of your situation. You can communicate with the rescue coordination center during your emergency while you wait for help to arrive. You should only use the SOS function in a real emergency situation.

Initiating an SOS Rescue

NOTE: While in SOS mode, the status bar is red and the device cannot be turned off.

- 1 Lift the protective cap  from the **SOS** key .

- 2 Hold the **SOS** key.

- 3 Wait for the SOS countdown.

The device sends a default message to the emergency response service with details about your location.

- 4 Reply to the confirmation message from the emergency response service.

Your reply lets the emergency response service know that you are capable of interacting with them during the rescue.

For the first 10 minutes of your rescue, an updated location is sent to the emergency response service every minute. To conserve battery power after the first 10 minutes, an updated location is sent every 10 minutes when moving, and every 30 minutes when stationary.



Canceling an SOS Rescue

If you no longer need assistance, you can cancel an SOS rescue after it is sent to the emergency response service.

- 1 Lift the protective cap, and hold the **SOS** key.

- 2 Select **Cancel**.

Your device transmits the cancellation request. When you receive a confirmation message from the emergency response service, the device returns to normal operation.

Appendix K: Basecamp Crew Trailer Packing Instructions

Trailer Packing Instructions



Bottom Side: Canopy poles, rock bars, shower canopy poles, rock sling bars, shower fill pipe. Stack canopy poles neatly, arranging them so there is very little open space between bundles to maximize what fits in this space.

Middle Side Shelf: Three plastic tables, one wooden table, and dishwashing table top. Orient tables as shown and more long items (shower canopy poles, broom, etc.) that don't fit below can be slid above the dishwashing table top.



Top Front Shelf: One canopy in duffel, trash bag frames, insulated drink jug, shower floors, hand washing buckets and assembly, aluminum shower frame, shower fill hose, shower enclosures and/or extra tarps.



Middle Front Shelf: One canopy in duffel, canopy floors, dishwater screen, dirty dishes pan (with dish drying racks and first aid kit covered with inverted dish washing pans), kitchen utensil box and PVC shower frame parts box or eye protection box.



Bottom Front: Oven, four stoves and table protector pads, galvanized blaster buckets (behind bag of canopy stakes), and ice cream maker.



Top Side Shelf: Four shovels (two each direction), pole saw, dishwashing table legs, folding stove stand, broom and dustpan, extra tarps. Note bungees securing items.



Wooden Tool Box: Crow bars, saws and spare blades, loppers, come-along and chain, webbing and chain rock slings, canvas dirt bags.



Forward Main Compartment: Wooden tool box, large kitchen storage box, plastic kitchen shelves, dishwashing canopy (standing vertical on top of wooden tool box), and bag of hard hats.



McLeods: Load after forward main compartment is complete. You should be able to load two stacks of five McLeods each. As you get to the last one or two, it helps to rotate the head to the left, align the teeth over the shaft on the McLeod below, and then rotate the head to vertical. They can be loaded teeth up or teeth down. Secure handles with a bungee cord.



Middle Main Compartment: Water jugs on plastic kitchen shelving, canopy fitting bins and propane hoses/blaster/lantern bin on left, two propane bottles in center with tool box above, two coolers (one with two coffee pots, one with one coffee pot and two air pots), kitchen spice box, cleaning supplies box, and bucket of table shims.



Rear Main Compartment: Additional propane bottle, buckets (one with canopy staking lines), additional hard hat bags, crew banner (**ROLLED, NOT FOLDED**), PVC shower frame.



Tool Rack: Load 5-lb pick mattocks first, 5 per compartment, alternating pick directions (picks hanging from rails cannot have much of the handle sticking through the head of the tool – not enough space above). Load two doublejacks (sledgehammers), then two mini/micro picks, then two singlejacks on left side rails. Load two cutter mattocks, then 2.5-lb/pixie mattocks on rails center right. Then load 10 Pulaskis, alternating head directions in center. Secure bungee straps to hold tools in place.

This rack is a bit of a pain, but it accomplishes two goals – all tools needing sharpened are readily available (instead of in a box at the bottom of the trailer) for removal, sharpening, and replacement and secondly, it eliminates the need to figure out which tool heads fit on which handles. If you can figure out a better way to accomplish these goals, please let me know.

This is not the only way to load the trailers, just one way that I've figure out. If you think of a different way that you think is easier and everything fits, document with photos and I'll consider redoing these instructions.

Appendix L: CTF Tax-Exempt Certificate

DR 0160 (07/03)
COLORADO DEPARTMENT OF REVENUE
DENVER CO 80261-0013

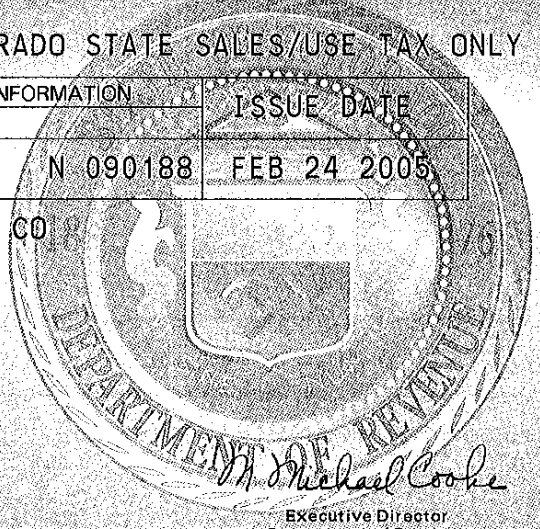
CERTIFICATE OF EXEMPTION FOR COLORADO STATE SALES/USE TAX ONLY

**THIS LICENSE IS
NOT TRANSFERABLE**

USE ACCOUNT NUMBER for all references	LIABILITY INFORMATION		ISSUE DATE
98-07662-0000	11 042	N 090188	FEB 24 2005

710 10TH ST, SUITE 2 GOLDEN CO

COLORADO TRAIL FOUNDATION THE
 COLORADO TRAIL FOUNDATION THE
 710 10TH ST SU 210
 GOLDEN CO 80401-5835


Michael Cooke
 Executive Director
 Department of Revenue