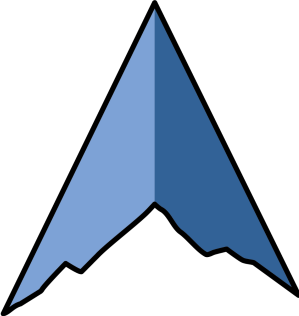




# ALASKA TRAIL STEWARDS HANDBOOK



# ALASKA TRAILS

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## **Welcome**

On behalf of the Alaska Trails' board and staff, allow me to welcome you to the team and thank you for choosing to donate your time and skills to support and care for Alaska's incredible trails. As a volunteer, your contributions not only help us to maintain Alaska's trails but they also improve overall stewardship of public lands. Our volunteer program helps local, state, and federal agencies accomplish trail maintenance that they are otherwise unable to complete because of limited resources. Knowing that your time is very valuable, we try to provide rewarding and challenging experiences for our volunteers. We provide training, tools, and leadership you need to be successful and we also know that we will benefit from your unique background and skills. This handbook provides information that will help orient you to the organization and inform you on what to expect while volunteering on a trail crew, as well as how to plan and prepare for your project. We will provide you with the necessary training and additional information about your specific project and job duties at each event. We hope your volunteer experience enriches your life and provides an opportunity for service and learning. Please let us know if you have any questions or comments about any part of your volunteer experience. Again, our sincere thanks for your help—and welcome aboard!

Happy Trails,

A handwritten signature in black ink that reads "Steve Cleary". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Steve Cleary Executive Director

## **Mission**

Building trails for Alaska's people, communities, and economy

## **About Us**

As a 501(c)(3) tax-exempt nonprofit, incorporated in the state of Alaska, we provide funding ideas and sources as well as technical assistance for on-the-ground trail related projects and programs such as development, maintenance, easement acquisition, safety, education, and more. Our supporters and partners represent a cross section of trail user groups, businesses, government agencies, community organizations, and individuals. Alaska Trails is the only Alaska statewide group providing care for all Alaskan trails.

We recognize that the trails we work on are located on the traditional lands of the Dena'ina and Alu'utiq. We acknowledge the ancestral and present land stewardship and place-based knowledge of the people of this land. We pledge to learn more about the lands we alter and to tread lightly upon them. We work and serve as stewards of this land and its people.

## **Funding**

1. **Donations** – We rely on donors to support our organization and the great work that volunteers do. We receive donations from individuals, organizations, and businesses (including food and refreshments, giveaways, and donated spaces) to support our events, training, and operations.
2. **Fundraising** – We raise funds through events such as our annual Statewide Trails Conference, our monthly Trail Tales storytelling events, silent auction fundraisers, and our Pick. Click. Give. campaign.
3. **Contracts** – We are contracted and subcontracted to help run trails programs and projects through technical assistance. Past contracts include Youth Employment in Parks (Anchorage Park Foundation), Chugach Park Fund, and Chugach Mountain Bike Riders.
4. **Agreements** – We have cost-share agreements with the U.S. Forest Service and a similar partnership with the Bureau of Land Management.
5. **Grants** – we receive both government and private sector grants from organizations such as Alaska’s State Recreational Trails Program (RTP), Conoco-Phillips, Kenai Mountain Turnagain Arm Heritage Association, National Wilderness Stewardship Alliance, the Mat-Su Trails and Parks Foundation, and the Rasmuson Foundation.

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## **Roles**

### **Volunteers**

Volunteers donate their time and labor by participating in organized work days.

#### **Volunteer Expectations**

- All new volunteers must read the Volunteer Info Sheet and sign a liability waiver.
- Be present for the Tailgate Safety Meeting at the trailhead, where tasks are demonstrated, worker competency is evaluated, and hazards are discussed.
- Trail work skills will be demonstrated or explained by the event leader and/or land manager at the worksite.
- Volunteers should communicate with their event leader or Alaska Trails staff about any accommodations they may need to successfully participate in a work day.
- Volunteers are encouraged to take breaks as needed, know their personal physical limits, and to stay properly hydrated, fed, and appropriately clothed for the environment.
- Volunteers are expected to communicate with their event leader or Alaska Trails staff if any pre-existing injury or illness will affect their ability to

work. New injuries or illnesses should be immediately reported to event leaders.

### **Volunteer Crew Leaders**

Volunteer Crew Leaders (CLs) are volunteers who demonstrate a professional level knowledge of trail work and show a strong commitment to Alaska Trails.

#### **Volunteer Crew Leader Requirements:**

- Volunteer Crew Leaders must read the Volunteer Info Sheet and sign a liability waiver each year.
- Attend a two-day trail work leadership training, where topics such as risk management, worksite management, and teaching technical trail skills are covered.
- Volunteer Crew Leaders may receive additional training to perform advanced, higher risk tasks, such as operating gas-powered tools or other mechanized equipment. Volunteer Crew Leaders must receive permission from Alaska Trails before performing such tasks. Alaska Trails may pursue additional liability coverage through individual land management agencies for Volunteer Crew Leaders that have been given permission to perform advanced tasks.
- Commit to leading two events per year
- Upon demonstrating these commitments to Alaska Trails, Volunteer Crew Leaders may qualify for scholarships for professional development opportunities, such as trails workshops and conferences.

#### **Volunteer Crew Leader Duties:**

- Communicate with land management agency partners on site to understand project plans
- Gather and transport tools to work site
- Collect liability waivers from volunteers
- Meet volunteers at the trailhead and engage them in a tailgate safety circle
- Be responsible for the tools used for the day (inventory, maintain and flag any damaged tools used during work days)
- Give a work plan for the day
- Monitor volunteers for safe working procedures and signs that a break is needed
- Designate breaks
- Educate volunteers on trail theory and on tool use techniques
- Redirect volunteers to use proper body mechanics
- Foster an inclusive atmosphere for all volunteers
- Thank volunteers for their service
- Encourage social and community-building events after work days

- Fill out an event report with work accomplishments, number of volunteers and hours, pictures, and any other relevant information
- Debrief with Alaska Trails staff after each event
- File incident reports as necessary

### **Assistant Crew Leaders**

Assistant Crew Leaders (ACLs) are volunteers that have earned Black Hat status (attendance at 5 ATS events in one season) and have expressed a desire to become an ACL.

### **Event Leader**

The Event Leader is the individual leading any particular ATS event. This person must be CL certified.

### **Assistant Event Leader**

The individual assisting the EL. This individual may be CL certified, or may have ACL status.

### **Paid Trail Crew Leaders**

The Paid Trail Crew Leaders direct trail crew members in performing trail projects in coordination with land managers.

### **Paid Trail Crew Leader Responsibilities**

- Oversee the paid crew on project sites for the season
- Plan and prepare for the work including preparation of tools, gear, food, and other necessities
- Work closely with land managers for project planning and preparation and material needs
- Create and foster a culture of safety and inclusion
- Ensure job hazard analysis is delivered to crew and documented
- Ensure all technical work is to standards, including tread construction, drainage structures, and construction of steps, turnpike, and puncheon
- Bring skill and interest to the crew
- Calmly manage emergency situations following ATS emergency response protocols
- Positively represent Alaska Trails' mission, programs, and membership in all interactions with volunteers, trail users, and others
- Report all incidents affecting the safety, health, and well-being of crew in a timely manner

### **Paid Trail Crew Members**

The Paid Trail Crew Members perform trail projects in coordination with land managers under direction of the Paid Trail Crew Leaders.

## **Youth Employment in Parks (YEP) Field Supervisor**

The YEP Field Supervisor spends 10 weeks directly supervising the YEP program. In addition to 10 weeks with the YEP crews, the Field Supervisor will spend two weeks spread between the start and end of these 10 weeks preparing for projects and maintaining tools for winter storage. After these 12 weeks, the Field Supervisor will coordinate with the Alaska Trails Trail Program Officer (TPO) and the Municipality of Anchorage to complete various parks projects either for the municipality or in conjunction with one of the paid Alaska Trail Stewards (ATS) crews.

## **Trails Program Officer (TPO)**

The TPO will work with the staff leading the paid crews and the YEP supervisor to make sure that they have all the tools, safety equipment, and guidance they need to succeed. The TPO will also help train volunteers, work with land managers to organize and conduct trail maintenance projects, and work with other partners to increase the reach and effectiveness of the Alaska Trail Stewards volunteer program.

### **TPO Responsibilities:**

- Coordinate paid trail crew and volunteer work projects and plans with staff, Agency and Non-Government partners
- Work closely with the YEP Program Managers and Anchorage Park Foundation staff for project planning and preparation, site visits, and material needs for all YEP-related projects
- Develop plans and structure specifications for new trail construction, reconstruction, realignment, and trail reroute projects in collaboration with project partners and land managers
- Execute an annual project schedule to meet program goals and objectives
- Train Crew Leaders and YEP Supervisor on how to effectively lead trail crews, lead volunteer events, and complete designated work in a quality and timely manner
- Develop and implement an ATS volunteer training program
- Assure that each volunteer event has the plan, tools, and other necessities for success
- Direct Crew Leaders, volunteers, and YEP Supervisor with job tasks and material needs relevant to each project
- Oversee the YEP Supervisor as they direct projects including: trail construction, park improvements, streambank restoration, and basic construction in a variety of park improvement projects
- Train, motivate, and lead volunteers and crews to complete a variety of trail projects including annual maintenance, repairs, and new construction
- Ensure all technical work is to standards, including tread construction, drainage structures, and construction of steps, turnpikes, and puncheons



- Ensure a Job Hazard Analysis is completed with the crew or volunteers and documented at every event or new work site
- Establish appropriate Risk Management, Emergency Action Plans, and other necessary items to ensure a safe workplace and evacuation procedures

### **Executive Director**

The Executive Director supports the Alaska Trail Stewards program through administrative support, program development tasks, and grant writing.

### **Volunteer and Communications Coordinator**

The Volunteer and Communications Coordinator supports the Alaska Trail Stewards program through administrative support, social media and marketing, volunteer communications, grant writing, fundraising, and outreach to corporate and other groups.

### **Land Managers**

Land managers from various public land management agencies support the Alaska Trail Stewards program by providing funding, identifying necessary projects for work days, and by supporting volunteers through education and worksite management.

#### **Land Manager Responsibilities:**

- Communicate with Alaska Trails Staff and the Event Leader about Work Day logistics prior to the day of the event
- Provide materials necessary to the project or extra tools if needed for large numbers or specific tasks
- Identify work sites and ensure an appropriate project for the number of volunteers expected
- Provide logistical support, such as identifying meetup spots and parking availability
- Educate all volunteers and Alaska Trails staff about Emergency Action Procedures for particular worksites
- Provide background information on projects to volunteers
- Give constructive feedback to volunteers and Alaska Trails Staff to ensure quality, sustainable trail work is completed

### **Contractors**

Alaska Trails Stewards volunteers may work alongside professional trail-building contractors during Work Days.

#### **Contractor Responsibilities**

- Brief volunteers on safety concerns related to their equipment
- Ensure that volunteers maintain an adequate distance from their equipment and that they wear the required PPE at all times

- Stop operations if safety concerns arise

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## **Preparing for a Work Day**

### **What to Wear/Bring**

1. Daypack
2. Work/hiking boots to protect your feet from sharp tools and the elements
3. Sturdy work pants and work shirt (long-sleeve is best for sun and bug protection) that you don't mind dirtying
4. Snacks/Lunch
5. Water: 2+ liters
6. Rain gear - rain jacket and rain pants
7. Warm layers
8. Prescription medications (including epi-pens)
9. Bug spray and sunscreen
10. Gloves and safety glasses if you prefer your own (otherwise provided)

### **What We Provide**

1. Hardhats
2. Eye protection
3. Gloves
4. Ear Protection
5. Light Snacks
6. First Aid Kits
7. Tools

### **What NOT to Bring**

1. Drugs or Alcohol
2. Firearms/Weapons
3. Pets
4. Minors (unless it is an event specified for minors and the proper waiver has been completed)

### **Work Day Schedule**

You can expect the following general schedule for each work day:

#### **Meet at the Trailhead**

- Sign-in and issue Personal Protective Equipment (PPE)

- Introductions of Volunteers and Crew Leaders/Assistant Crew Leaders
- Tailgate Safety Meeting and Job Hazard Analysis
- Crew leaders explain the Work Plan for the day
- Issue Tools (your Crew Leader should take an inventory of what is being used that day)

#### Hike to work site as a group

- The group will stay together
- A “sweeper” will be designated to make sure everyone is accounted for
- Crew Leaders will carry bear spray

#### Arriving at the worksite

- The worksite will be evaluated for site-specific hazards
- A safe storage location for packs, food, the first aid kit and other emergency equipment will be identified

#### Begin Work Project!

- The group will formally stop for morning, afternoon, and lunch Breaks (depending on the scheduled length of the event)
- Water breaks should be frequent

#### Leaving the worksite

- A Tool-up/turn around time will be decided
- Before leaving, make sure you have all the tools you started with
- Hike back to the Trailhead as a group
- Clean, maintain and put away tools
- Debrief

### **Cancellations/Changes**

- Please arrive at the trailhead by the time stated in the informational email.
- If you have signed up for an event and know you will no longer be able to attend, please email [maya.kaup@alaska-trails.org](mailto:maya.kaup@alaska-trails.org) and [office@alaska-trails.org](mailto:office@alaska-trails.org) as soon as possible.
- We cap our work day registrations so that our land management agency partners may plan an appropriate work project for a specified number of volunteers. Please avoid attending an event without first signing up on our website or arranging otherwise with Alaska Trails staff. We need to make sure we have enough work, tools, and leaders to accommodate all of our volunteers.

# **Safety Procedures**

## **Tailgate Safety Meetings**

A “Tailgate Safety Meeting” will be conducted at the trailhead at the start of each Work Day. Working outdoors and performing manual labor is hazardous work, and a tailgate safety meeting is a standard practice used by land management agencies to prevent injuries and incidents. Your Volunteer Crew Leader or Land Manager will lead a 15-30 minute briefing to prepare you for the day.

## **Job Hazard Analysis**

A Job Hazard Analysis (JHA) is a document designed to mitigate the risks of hazards that could be encountered at the work site. The JHA lists both hazards and ways to mitigate the risk of working around these hazards. Land managers may ask each participant to sign a JHA.

## **Hazards and Mitigation**

	<b>Hazard</b>	<b>Mitigation</b>
<b>Environmental</b>	Weather	Wear proper clothing to stay dry and maintain optimal body temperature; adjust through the day as appropriate
	Vegetation	Recognize and avoid vegetation hazards (e.g., cow parsnip, devil’s club, nettles); wear long sleeves when they can’t be avoided and to avoid scratches when brushing (in addition to the standard long pants and gloves)
	Steep and unstable terrain	Wear proper footwear; take time for optimal foot placement
	Wildlife encounters	Make noise and be alert; store packs with food close to the group while working; don’t wander away from group

	Overhead hazards	Wear hardhat; be alert for overhead hazards; when brushing keep adequate distance from others so falling brush won't impact them
<b>Tools</b>	General tool usage	Use each tool properly as per training; use the right tool for each task (e.g., don't use a shovel as a pry bar); use proper mechanics for body movements (bending, lifting, tool usage); wear PPE (hardhat, eye pro, gloves, ear pro as needed)
	Carrying tools	Unless tool can be safely carried in pack: carry tool close to body and below waist; carry working end forward and down; carry on downslope side of body so it can be cast away in the event of a fall
	Storing tools at worksite	Lay flat on ground above trail with working head away; don't lean against trees or rocks
	Loose tool heads and improperly maintained tools	Alert crew leader of damaged, loose-headed and improperly maintained tools so they can be "red-flagged" and set aside; don't use tool until fixed
	Repetitive strain injuries	Use proper ergonomics; stop at first sign of injury
	Flying debris	Wear appropriate eye protection
	Chainsaw hazards	Only properly trained and authorized personnel may use chainsaws; when swamping, wear PPE including ear protection and maintain safe distance from sawyer; get sawyer's attention from their front; don't walk up behind sawyer

<b>Human</b>	Working in close proximity to others	Maintain more than 6 feet distance between people when using tools; do not leave worksite without informing crew leader; when walking past others working on a trail, walk upslope of them and alert them as you approach
	Poor communication	Communicate clearly; understand work plan and emergency response plan; ask questions as needed for clarification
	Improper or inadequate training for the task	Follow event leader instructions; ask for direction when unsure
	Less than adequate physical condition	Warm up; take breaks; rotate work tasks; ingest adequate food and water; don't work beyond your physical abilities
<b>Medical</b>	Serious chronic medical conditions (e.g., anaphylaxis from yellow jacket stings)	Carry appropriate meds; inform Crew Leader if there is a potential for an incident
	Injuries	Inform Crew Leader immediately so first aid can be administered

**Debriefing**

Participants should debrief with their Event Leaders after each event and discuss the day's accomplishments as well as any incidents that occurred. The group should talk about what they would do differently to be more safe and efficient. After an incident or near miss, the group should stop and debrief, evaluating whether or not the work can be continued and what needs to change to prevent another incident.

## Personal Protective Equipment (PPE)

Alaska Trails will provide any required Personal Protective Equipment for work days. While it may be safe to perform some trail work tasks without a given item of PPE, circumstances can change in a moment. Thus the safest practice is to wear all standard PPE at all times.

The following PPE is required at all times:

Hardhat: Required at all times while working and hiking to and from the work site. If overhead hazards are present during breaks, hard hats must be worn. Hard hats must fit properly.

Gloves: Required for all trail tasks and anytime handling, transporting, or maintaining tools.

Eye Protection: Required at all times while working and while hiking through brush. Eye protection must be ANSI approved; sunglasses and eyeglasses do not provide sufficient protection. Over eyewear eye protection is available.

Long pants: Required at all times to prevent scratches and cuts on legs.

The following PPE is required during the following circumstances:

Ear Protection: Required when operating or working around gas-powered tools, prolonged use of power tools, hammering rebar, rocks, or nails, and in the presence of heavy equipment.

Chaps: Required when operating a chainsaw or brush cutter. (Please see Chainsaw and Brush cutter policy).

Face Shield: Required for operating a brush cutter (See Brush cutter policy).

## Footwear

Boots: Sturdy hiking/work boots with ankle support strongly recommended.

Rubber boots: Are acceptable for work days with wet/muddy conditions.

Low-cut hikers or tennis shoes: Are acceptable for tasks such as lopping and hauling materials but not for swinging, chopping, or grubbing.

Open-toed shoes: Not permitted for work days.

## First Aid

It's everyone's responsibility to avoid medical emergencies. It's about situational awareness, self-awareness, and accident prevention. Some project sites may be several hours away from definitive medical care, and weather conditions could potentially delay an evacuation for even longer. Accidents can take on a much more serious nature in these settings and accident prevention is the highest priority.

A First Aid Kit will be carried at all work days; its location will be designated by the Event Leader and made known to all participants. Participants with First Aid training will be identified in the Tailgate Safety Meeting at the beginning of each work day.

### **Health Concerns**

If you have health concerns or your physical condition affects your ability to perform specific types of work, please notify the Alaska Trails staff before the event ([maya.kaup@alaska-trails.org](mailto:maya.kaup@alaska-trails.org) and [office@alaska-trails.org](mailto:office@alaska-trails.org)). If you rely on medications (including epinephrine) or orthotic devices, make sure you bring them to the project site.

### **Communication**

The Volunteer Crew Leader will carry a cell phone. Land managers will carry radios, satellite phones, or InReach devices if cell service is unavailable at the worksite.

### **Emergency Action Plan**

An Emergency Action Plan (EAP) is a resource in case of emergency. It will be stored in the First Aid Kit. The EAP contains emergency contact information (Alaska Trails staff and land management agency contacts, phone numbers for local authorities and Dispatch, radio channels and frequencies, and instructions for using other available emergency communication devices such as a Personal Locator Beacon or InReach device) as well as evacuation information (such as map of trails system, location of helicopter landing zones, and evacuation time to nearest hospitals).

### **Culture of Safety**

All Alaska Trails employees and volunteers should work to foster a culture of safety, where following safe working procedures is the norm. Any participant in an Alaska Trail Stewards event should feel empowered to speak up if they feel conditions are unsafe. Any participant has the right and responsibility to report safety concerns, to refuse any task they feel uncomfortable with, and to stop operations if they feel conditions are unsafe.



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## Trail Work Basics

### **Terminology**

Tread - Tread is the actual travel surface of the trail. This is where the foot or wheel meets the trail.

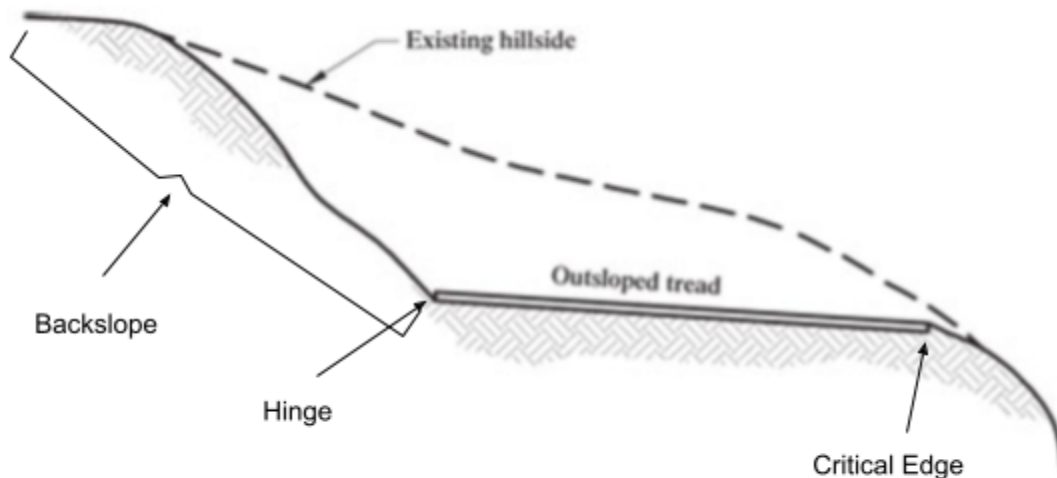
Corridor - Corridor includes the tread itself and the area above and to the sides of the tread. We maintain an open corridor by trimming back vegetation and removing obstacles such as boulders and fallen trees. The “clearing limits” for a corridor can vary based on how the trail is used, how often it sees maintenance, and the type of vegetation present.

Brushing - Removing vegetation from a trail corridor.

Grubbing - Decompacting soil or removing vegetation at its roots to create a tread surface.

Full Bench- A type of sustainably built trail that is constructed by cutting the full width of the tread into the hillside and casting the excavated soil as far from the trail as possible.

### **Full Bench Trail Construction**



**Figure 26—A full-bench trail is constructed by cutting the full width of the tread into the hillside. The tread needs to be outsloped at least 5 percent.**

Backslope - The backslope is the excavated, exposed area on the uphill side of the tread surface. A backslope has an angle, generally 45 degrees or 1:1 rise over run. The

backslope must not be too steep, or loose material from the hillside will “slough” onto the tread.

Hinge - The inside edge of the trail where the tread meets the backslope.

Critical Edge - The outside edge of the tread, where water sheets off the trail.

Outslope - An outsloped tread is one that is lower on the outside or downhill side of the trail than it is on the inside or hinge. Outsloping lets water sheet across the trail naturally. The tread should be outsloped at least 5 percent.

Grade - The “steepness” of a trail. “Percent Grade” equals the *rise* (change in elevation) divided by the run (horizontal distance) multiplied by 100. A grade of 10% or less is considered a sustainable trail grade. Long stretches of trail with very steep grades are prone to erosion.

## Sustainable Trails Principles

1. Planned and designed: Trail development is guided by trail management objectives (TMO) and constructed to design parameters that support intended use with low impact to the surrounding environment.
2. Contour curvilinear alignment: Build trail side-hilling with topographical contour lines, not perpendicular to them (reduces “fall-line” trails & over-steep grades and promotes even sheet flow of water off of the trail).
3. Controlled grade: Through careful planning, design, and trail layout, controlled grade – at an average of 8-10%, can help limit erosion of the tread surface. The percent grade of the trail should also not exceed half of the grade of the side-slope (otherwise known as the half-rule).
4. Integrated water control: Use alignment, not structures, to shed water off the tread surface and maximize sheet flow; water control designed into the alignment reduces dependence on water bars or drains, which can fail. Examples include “grade reversals” and outsloped tread.
5. Full bench construction: Full bench trail on a side-hill provides the most compact tread surface possible, encourages sheet flow, does not trap water on trail, and eliminates the potential for tread slump failure.
6. Durable tread surface: Ensure long-term durability of tread surface by utilizing on-site native material or importation of material (i.e. gravel) to rectify poor drainage or tread surface, especially on flat ground and when full bench is not possible.
7. Regular maintenance: Being able to accurately predict maintenance tasks allows land managers to plan for volunteer, service learning or professional crews to fill the need.
8. Integrates well into the environment: Trail does not destroy the feel, aesthetics or ecological integrity of the environment that it becomes a part of. Its character should strive to enhance natural features rather than destroy them. Trail draws user into the landscape.
9. Satisfies its intended user: Trail is enjoyable, safe, and appropriately challenging for its intended user group (walkers, runners, hikers, bikers, wheelchairs, horses) and holds up to the impact of this travel over time.

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## **Common Hand Tools**



### **PULASKI**

A wildland fire tool with an axe and an adze. The axe side can be used for chopping wood or roots, and the adze side can be used for decompacting soil and digging tread.



### **McLEOD**

A rake-like tool with tines on one side and a sharpened edge on the other. Can be used for moving material, cutting backslope, or fine tread shaping.



### **PICK MATTOCK**

A tool with a "pick" on one side and a "mattock" on the other side. The pick can be used to decompact hard or rocky soils and the mattock for removing materials.



### **SHOVEL**

Spade or flathead. Used primarily for moving loose material—not for decompacting. A spade shovel can be sharpened and used to finely shave compacted soil.



### **LOPPERS**

Used to cut limbs or woody vegetation while brushing, or used to cut fine roots out of the trail tread. Should not be used to cut materials larger than one inch diameter.



### **DOUBLE JACK**

Also called a sledge hammer. Used for breaking rock or pounding rebar into timber structures. The smaller version is called a "single jack."

## **Carrying Tools Safely**

Tools should be carried at your side, with the most dangerous edge of the tool pointing down. If you have a choice, carry the more dangerous tool on the downhill side of the trail. Resist the urge to carry tools over your shoulder, which poses a risk to your neck and the people hiking behind you.

## **Storing Tools at the Worksite**

Take care to store tools out of the way of the trail in order to prevent tripping hazards. It is easy for tools to become buried or lost at a worksite, but storing them on the uphill side of the trail in a central location will prevent this.

## **Tool Maintenance**

Maintaining tools regularly makes them safer and more pleasant to use. It also saves costs to the organization and promotes conservation. Tools should be maintained on the following schedule:

### **At the end of each Work Day:**

- Wash or brush the dirt off of the tool heads as needed. If there is a stream nearby, rinse them. If the soil on tools is relatively dry, it may be easier to remove it using a wire brush. Use rags to dry the tools or air dry.
- Apply a fine coat of motor oil to metal tool heads.

- Sand wooden handles and apply a fine coat of linseed oil. Gloves are required.
- Flag any tools with broken handles or loose heads and take them out of service.
- If weather or time prevents you from cleaning tools after a work day, make a plan to take care of this as soon as possible so the tools don't rust.

At the end of each season:

- Trained individuals can use a bench grinder to reshape blades. This must be done slowly and with care; grinding an edge too long can heat up the steel and destroy its temper.
- Remove any rust from toolheads using steel wool and wire brushes. Afterwards, wash and dry tools and apply motor oil.
- Re-handle any broken tools or tools with loose heads.

**Body Mechanics**

Volunteer Crew Leaders will demonstrate proper body mechanics for trail tasks.



**SWINGING + CHOPPING**  
 -Start with your hands spread apart on the tool handle  
 -Bring the tool behind your back and over your shoulder  
 -As the tool rotates over its center of gravity, your top hand slides down the handle  
 -Let the tool do the work.



**GRUBBING**  
 -Grubbing is decompacting material in the ground using the adze end of a pulask or another grubbing tool  
 -Bend at the knees and keep a straight spine  
 -Stop work if you notice pain, numbness, or tingling in hands



**LIFTING**  
 -Bend at the knees  
 -Keep a straight spine. Looking up slightly helps to do this.  
 -Use this form to pick up objects as well as put them down  
 -Ask for help, even if its something you can lift yourself  
 Communicate clearly



**SHOVELING**  
 -Use a grubbing tool to decompact material before moving it with a shovel  
 -Avoid twisting and extending the shovel far from your core  
 -Step towards your offloading site rather than flinging materials long distances

**Preventing Repetitive Strain Injuries**

- Take care of your body by knowing your personal limits. If you know a particular trail task will exacerbate an injury you have, please don't do it. Notify your event leader of your condition. There are many different types of tasks on each worksite and they will be happy to find you an alternate job.

- Switch up tasks throughout the day to avoid overworking certain muscle groups and reduce impact on joints. Your knowledgeable Volunteer Crew Leader may suggest you switch out tools with someone to help keep you healthy.
- Use the right tool for the job.
- Make sure your tool is sharp to get the job done faster and reduce impact to your joints.
- Ask for help when lifting and moving heavy objects. Go slowly and use good communication.
- Stretch when needed. A post-lunch stretch is a great idea.
- Focus on using proper body mechanics and listen to feedback from your Crew Leader.

## **Advanced Tools**

**Corded/Cordless Power Tools** such as drills, impact drivers, and sawzalls are frequently used to construct trail structures such as turnpikes, boardwalks, and bridges. Power tools, batteries, and generators should be kept as protected and dry as possible.

**Gas-Powered Tools** such as gas-powered augers and Cobra Combi rock drills, while simple to operate, are expensive and sensitive. They require a specific fuel mix and require training for proper starting procedures.

**Brushcutters** are commonly used for removing herbaceous vegetation from the trail corridor. You must undergo specific training and obtain written permission from Alaska Trails to operate a brush cutter, as they are expensive, sensitive, and dangerous tools. Brush cutters require a specific fuel mix and training for proper starting procedures. They require proper PPE (chaps, helmet, face shield, ear protection, long sleeves, gloves, and harness). Great care must be taken while operating them around other workers, as they can send woody debris flying.

**Chainsaws** - are a highly effective trail tool, but also extremely high risk. You must undergo explicit training and obtain written permission from Alaska Trails to operate a chainsaw for our organization. Additional rules for different land management agencies or restrictions set by land managers will also apply. Please see the appendix for our Chainsaw Policy.

**Mechanized Loaders** - are gas powered tools that can be used to tote materials (such as gravel or lumber) to worksites. Mechanized loaders are expensive and unruly to operate on uneven terrain and steep slopes. They require training for proper starting and operating procedures.

**ATVs and Snow Machines** - Alaska Trails volunteers will in general not operate ATVs or snow machines for work. Alaska Trails may make exceptions for specific projects if a land management agency can provide the volunteer with safety training, helmet, and workers' compensation coverage through the proper forms.

**Heavy Equipment** - Alaska trails volunteers will not operate heavy equipment. However, they may find themselves working around contractors using heavy equipment. If so, they

should wear high visibility clothing and ear protection, and maintain an adequate distance from the equipment as specified by the operator.

## **Chainsaw Policies**

### **Training Requirements**

In order to operate a chainsaw for Alaska Trails, volunteers, crew leaders or staff must attend a two or three day USFS S212 course or S212 curriculum-based chainsaw course and be deemed competent by a qualified instructor. The sawyer must verify their certification or a copy of the course curriculum with Alaska Trails staff prior to operating a saw for Alaska Trails.

The training course must have been completed no longer than two years prior to the current season. Sawyers must be observed by Alaska Trails Staff or a chainsaw instructor each year before receiving permission to saw.

### **Prohibited Tasks**

No falling of trees is allowed by Alaska Trails volunteers.

### **Required Personal Protective Equipment**

*Hardhat*

*Eye protection*

*Ear protection*

*Chaps*—Must extend below the top of the boot, leaving no part of the leg exposed.

*Long sleeves*

*Boots*—Full grain leather boot (no synthetic mesh) that extend above the ankle

*Gloves*—Well-fitting

### **Swamping**

Swampers must also wear all PPE required for chainsaw operators, with the exception of chaps.

### **Oversight**

No Alaska Trails volunteer or employee may saw alone. Volunteer sawyers may only operate a saw in the presence of an Alaska Trails Staff or chainsaw instructor with equivalent or greater level of training.

**First Aid Kit**

A first aid kit with materials for bleeding control and tourniquets must be carried in each saw team.

## **Brushcutter Policies**

**Training Requirements**

In order to operate a brushcutter for Alaska Trails, volunteers must attend a one-day training course from Alaska Trails staff or an approved land manager.

**Personal Protective Equipment**

*Hardhat*

*Face shield*

*Eye protection*

*Ear protection*

*Chaps*—Must extend below the top of the boot, leaving no part of the leg exposed.

*Long sleeves*

*Boots*—Full grain leather boot (no synthetic mesh) that extend above the ankle

*Gloves*—Well-fitting

**Swamping**

Swampers must also wear all PPE required for brush cutter operators, with the exception of chaps.



# **Volunteer Rights & Responsibilities**

## **As a Volunteer, you have the Right:**

- To a safe workplace where hazards are avoided and risks are mitigated as thoroughly as possible
- To a fair and comfortable work place where harassment and discrimination are not tolerated
- To decline participation in any task you are not comfortable with
- To a positive learning environment
- To be given suitable assignments after informed consideration of your preferences, skills, experience, and training and to receive a clear description of duties
- To a variety of assignments and increasing levels of responsibility and challenge
- To have your time used effectively and efficiently
- To receive supportive guidance and supervision, and fair and regular evaluation
- To work with a Crew Leader who is experienced, well informed, patient, thoughtful, and invested in helping you improve your trail work skills
- To be acknowledged for your contributions and accomplishments

## **As a Volunteer, you have the Responsibility:**

- Follow the policies and procedures outlined in this handbook
  - Accept the guidance and decisions of your crew leader
  - Take responsibility for your own safety and report unsafe conditions
  - Serve the public well and represent Alaska Trails in an appropriate manner
  - Inform Alaska Trails of any problems that arise with fellow volunteers, Crew Leaders, Alaska Trails staff, land managers, or contractors
  - Inform us if you can no longer attend a Work Day you registered for
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# **Policies**

## **Minors**

Volunteers must be eighteen years of age or older to participate in a Work Day, although exceptions may be made on an individual basis. Alaska Trails may at times organize youth-oriented events or work with established youth programs with their own leadership. Any person under eighteen years of age must have a parent/guardian sign a waiver before participating.

## **Drugs & Alcohol**

Illegal drugs, alcohol, and marijuana are prohibited at Alaska Trails work days. Participating in a Work Day while under the influence of these substances is also prohibited. Failure to adhere to this policy is grounds for dismissal from the work site. Notify your Crew Leader if you are taking any medication that compromises your ability to safely participate in trail work.

## **Harassment & Discrimination**

Alaska Trails is committed to providing an environment that is free from discrimination and harassment. We strive to create a safe and inclusive environment for all volunteers and employees during Alaska Trail Stewards Work Days and at all other events.

Actions, words, hate speech, jokes, or objectifying or hostile comments based on an individual's gender identity, sexual orientation, race, ethnicity, age, religion, ability, language, socio-economic status, level of education, or any other personal identity factor will not be tolerated.

Physical violence, unwanted physical contact, quid-pro-quo sexual harassment, and verbal harassment through e-mail, text message, or on social media will not be tolerated.

Discrimination of any particular group through inequity in training and promotion opportunities will not be tolerated. Discrimination of any particular group through inequity in delegation of job assignments will not be tolerated.

Alaska Trails encourages volunteers to bring any incidents of any type of harassment to the immediate attention of an Alaska Trails employee or board member.

When an Alaska Trails employee or board member receives a complaint of harassment, they will:

- immediately record the dates, times and facts of the incident(s)
- ascertain the views of the victim as to what outcome he/she wants
- ensure that the victim understands the organization's procedures for dealing with the complaint

- discuss and agree on the next steps: either informal or formal complaint, on the understanding that choosing to resolve the matter informally does not preclude the victim from pursuing a formal complaint if he/she is not satisfied with the outcome
- keep a confidential record of all discussions
- respect the choice of the victim
- ensure that the victim knows that they can lodge the complaint outside of the organization through the relevant country/legal framework

Alaska Trails recognizes that subconscious bias exists and strives to reduce it on an organizational level through trainings in Justice, Equity and Diversity so that all may experience equal opportunity in the volunteer workplace.

### **Rules Enforcement**

Our policies exist to keep you and others safe. We are happy to clarify specific policies. Failure to adhere to policies will result in the volunteer being asked not to participate.

# **Volunteer Recognition**

## **Social Events**

You, as volunteers, are what drive the Alaska Trail Stewards program and we value your service immensely. All volunteers will be recognized at the end of season Volunteer Appreciation Night.

Throughout the season, please join us for socials after our work days. Local businesses appreciate your volunteerism and love our trails too. Refreshments are often donated!

## **Core Volunteer Hard Hats**

Volunteers who participate in a minimum of five work days over the course of a season will earn a Core Volunteer personalized hard hat, aka Black Hat. The hard hat is our way of saying thank you for your dedication, and also a way of visually identifying you as an experienced and knowledgeable worker who new volunteers can learn from.

## **Becoming a Crew Leader**

Leading an Alaska Trails work day requires strong understanding of trail theory and trail construction and maintenance techniques, which can take years to acquire. It requires demonstration of good risk management and communication skills. Finally, leading for Alaska Trails requires a significant time commitment. We ask that in most circumstances you spend a season earning your Core Volunteer hard hat before you pursue a Volunteer Crew Leader role. If you believe you've got what it takes to lead for us, come show us your passion for trails and education.

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## **References**

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