



GREAT OUTDOORS CALIFORNIA
OUTDOOR EXPERIENCE EDUCATION

SECTION I

DAY HIKE LEADER

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INTRODUCTION

Climb the mountains and get their good tidings. Nature's peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy, while cares will drop away from you like the leaves of Autumn.
--John Muir

Novice hikers will set out with their friends to be a part of John Muir's world. Will they have the necessary permits? Will they find the trailhead? What impacts will they have on the environment? Will they always know where they are?

More seasoned trekkers know from experience that it takes planning and organization to lead a group safely in the wilderness. Careful preparation before departure eliminates potential problems that can plague a group from the start.

The hike leader is responsible for the overall organization of the hike. This person will scout the trail prior to the hike. When practical, this involves actually hiking the trail. Before heading out on the trail, the hike leader will conduct a survey of the group's level of hiking experience, level of physical conditioning, adequacy of equipment, first-aid background, and specific medical information that might be important in the event of an emergency (allergic reactions, etc.)

Goals/Objectives

- Develop skills and knowledge to lead a day hike
- Learn more about outdoor recreation
- Lead and manage experiences safely
- Enjoy and protect the environment

GREAT OUTDOORS (GO)

California Great Outdoors, Inc. is our parent or “Corporate” entity. It was started in 1977 and became a nonprofit California Corporation (1981) in Palm Springs, California. We are governed by a set of [By-Laws](#). We currently have five (5) Chapters. The defined purpose of the Corporation:

- GO is a voluntary organization which provides low-cost outdoor activities, programs, education and leadership training to its members.
- GO provides a network for sharing in outdoor and other healthy recreational activities with other similar organizations throughout the country.
- GO seeks to instill in its members a respect and appreciation for the environment and a desire that it be protected for this generation and for many to come.

GO conducts Outdoors Experience classes offering:

- Day Hike Leader Training
- Trip Leader Overnight Event
- Backpacking
- Camping Techniques

History of GO - [click here](https://greatoutdoors.org/about-history) : <https://greatoutdoors.org/about-history>

All five GO Chapters are on a consolidated website powered by Wild Apricot (WA). We use that system to publish our hike descriptions, send announcement emails, registration confirmations and cancellations.

SELECTING A HIKE

What Makes A Good Hike?

- It's interesting to you and others, perhaps a favorite place
- Great scenery or beauty - views, mountains, washes, rivers, waterfalls, woods, canyons
- Important natural features - earthquake fault, mountain pass, meteor showers, full moon walk
- Representative or unusual flora or fauna
- Ecological interest - wetlands, dunes, oasis, preserves
- Environmental importance - new preserves, areas of current interest
- Historical interest - mines, ghost town, prehistoric sites, early ranching, archeological sites
- An especially challenging hike
- An easy walk for elderly, physically challenged, etc.
- Exercise

Activities Other Than Hiking

- Bird watching at your favorite wetland
- Movie night with an environmental focus
- Plan a creative celebration of the equinox or solstice
- Organize a docent-led tour of museum or park
- Take a docent tour and then lead a similar one yourself for Great Outdoors
- Attend a conservation lecture with other members
- Organize a service trip to repair or build trails or weed out exotic plants
- Set up a potluck brunch organized around a letter-writing campaign
- Photography hike and follow-up potluck to review photos
- Tour city dump or county watershed
- Tour a sewage treatment plant
- Tour little known public parks or open space
- Bicycle ride
- Mountain biking
- Old-fashioned potluck picnic
- Special events or exhibits
- Ride horses
- Planetarium or museum or zoo visit on free day
- Anything that broadens our awareness of our environment is a valid outing

PLANNING YOUR HIKE

Members are relying on you to make sure they are safe, well-prepared, reasonably comfortable, and home on time. Some may have important health concerns or may be novice hikers very much in need of your good leadership. Show them a good time and don't violate their trust

Define Limitations - Purpose

- Hike profile - Type of activity, rigor, and duration
- GO does not lead technical outings requiring special equipment such as ice axes, crampons, climbing gear.
- Participant profile - How many participants can safely and legally take part in the hike; do they need special outdoor skill or experience, are all welcome? Strenuous or more leisurely? The hike leader and/or VPO will need to decide who may participate in the hike. E.g., GO members only, any adult, any person (including minors). Are animals allowed?

Scout the Hike

- Generally, you will **scout your hike** before you offer it. If you don't, you should reveal that in your write-up describing the hike. For example, you can describe it as "This will be an exploratory hike." If scouting is not feasible, use maps, guidebooks, other leader, local sources to obtain as much information as possible
- **Walk the route** - How long does it take you in its entirety and from point to point? How rough and rutted is the trail? Are there any extremely steep sections? Do loose stones make it slippery? Any other features requiring special ability, attention, or warning? Where is the trail ambiguous? What landmarks will help you remember important turnoffs? At what points should you stop to make sure everyone is together before you go on? If there is a hazard, what alternative route will you take? Any required bouldering, stream fords, or mud to walk through? Are rattlesnakes likely? Consider the environmental impact. It is important to note where the difficult portions of the trip are. Do they come early or late in the hike?
- **Timing - Set a schedule.** Most people average about 2 M.P.H. so is your pace realistic? Leaders generally move faster than participants. Add time for unforeseen delays (environmental and human), breaks, hydration stops, and elevation gain and/or loss. It may be easiest to calculate backwards: ending time, hiking time, lunch & rest time, starting time, meeting time. When do you want to finish? How long does the actual hiking take? How much rest and lunch time is appropriate? If you intend to be out late, you should let participants know in the write-up

- **Lunch Location** - Where will you eat lunch? Will you be able to get there at a reasonable time?
- **Stay On Schedule** - It helps to know how much time it takes to get between major points in the hike
- **Interesting Features** - Can you point out some geological formations, identify plant or bird life, explain where the trail name came from, or the history of the place? Trail guidebooks or online sources may be helpful.
- **Loop** - Can you make the trip a loop rather than just retracing steps?
- **Side Trails** - Are there side trails worth exploring? They may lead to terrific viewpoints.
- **Know The Trail Well** - It's hard to win the confidence of your group if you haven't scouted your hike recently and aren't sure where you are going. Try not to get lost or even look lost on a hike. The issue here is more than your embarrassment: if you get lost, your hikers might not want to participate again

Important Considerations

- **Group Size** - The ability of the leader to safely and enjoyably manage a group in this terrain, the land agency restrictions and legal limits, number of leaders, and the environmental impact of the group size
- **Route Change Considerations** - When considering any changes to the planned route, either before or during the outing, be sure to consider the impact on the difficulty and the expectations and capabilities of participants. Participants must be notified, screened and/or discussion should be considered
- **Permits and closing times** - Obtain any required permits
- **Identify any fees**
- **Transportation**
 - Will carpooling be feasible?
 - How long does it take to get to the trailhead from carpool site?
 - Adequate parking at trailhead? How many? Parking fee?
 - Road conditions: Will drivers have to take rutted dirt road?
 - Do they need a high clearance vehicle?
 - Is a car shuttle necessary to get back to trailhead?
 - Are there toilet facilities at the trailhead?

Potential Problems

- **Weather Concerns** - Are dustiness or excessive heat likely to be a problem on the day of the hike? Is fog likely to kill the views on the day of the hike?
- **Changing Conditions** - Are trail conditions likely to change between the date you scout and the time you lead the hike? You can call that agency's ranger office to ask about conditions on particular trails shortly before the hike.
- **Scheduling Conflicts** - Avoid traffic for events. Consider that hiker turnout may be light around certain holidays or special local events.
- **Legal Hassles** - Are you on public property that will be open to the group? Stay off private property unless you have written permission. If you are leading a dog hike, have you checked that dogs are allowed on ALL the trails on your route? Must they be leashed? List in hike description.

- **Emergency Aids** - Note the location of the nearest facilities for emergency aid, such as telephone, ranger station or road.

Cancelling

- If you need to cancel your hike due to weather, illness, etc., contact the Day Activities Coordinator or VPO immediately. They will send an email to all registered participants and update the website. Do not hesitate to cancel a hike if safety is an issue.
- You may also consider a date to reschedule the hike for the cancellation email that goes out.
- If cancellation is done at the last minute, you or a representative should go to the meeting location to advise anyone that shows up

WRITING UP YOUR HIKE

THE ART OF ATTRACTING WHILE SCREENING PARTICIPANTS

Basics

- Your write-up is your invitation for participants to join you. Be sure to give all the details they need to understand the nature of the hike. Include who, what, where, when and how.
- Spell it out - Even if you rate your hike accurately, people may not understand the rating. Thus, describe length and difficulty in your write-up to make sure people grasp it.

Screening

- The write-up can also screen out those who are not suited for your hike. Include descriptors indicating the fitness level required. You may include indicators such as “fast pace, or slow pace”.
- Screening criteria to consider in your description:
 - Fitness - Participants should be physically (conditioning and stamina) and medically fit enough to enjoy the outing and not compromise their or the group's safety
 - Experience - Participants should have the technical expertise appropriate for the type of outing, such as off-trail travel, climbing, or bouldering
 - Equipment - Participants should also have the necessary equipment to participate in the outing safely such as a day pack, food, water, sturdy footwear, and clothing

Description

- Share your enthusiasm - make it sound fun.
- Come up with a catchy, provocative title.
- Include a geographical reference to help people understand location of hike
- Describe interesting/unusual features to attract members.
- Include a photo.
- Include meeting place and time. If the meeting place is not at the trailhead, specify an alternate meeting location and time such as at the visitor center option.
- Directions. Most people have a GPS device but sometimes it fails when you most need it. Exactly how do you get here? A map with directions may be useful with your cell number.
- Indicate your expected time of return. Qualify: This is an estimate. Things happen. You might be delayed.

- All participants should register online. You have the option to **not** identify the meeting location in your write-up. People may just show up without calling or reserving, whether there is space for them or not. You can identify the meeting location(s) in the WA reservation confirmation email.
- List of what to bring examples: Day pack, lunch, snacks, water, money for all anticipated expenses including a share of transportation costs, sturdy hiking footwear with good tread, layered clothing, windbreaker, long pants, shorts, hiking poles, sun protection, insect spray, flashlight, swimsuit/towel, hiking poles and [The Ten Essentials: www.rei.com/learn/expert-advice/ten-essentials.html](http://www.rei.com/learn/expert-advice/ten-essentials.html)
- Carpooling - **GO does not arrange carpools for liability reasons**. Example: “Carpooling is encouraged and may be available if offered by a driver. You are responsible for arranging you own transportation or ride share. If you do carpool, consider contributing to the driver's round trip gas cost.”
- Warn of particularly difficult aspects (e.g. “Includes a very steep climb or descent” or “hike will be conducted with a brisk pace”, off trail route, bouldering, stream crossing, etc.). Scrambling involves use of hands and feet at the same time to overcome rocky obstacles.
- GO hikes as a group, either as one big group, or two smaller groups, but nobody will be left alone or behind. Faster hikers are expected to stay with a group to maintain safety and social cohesion.

Hike Rating General Guidelines

Difficulty	Expectations
EASY	Leisurely to moderate pace up to 3 miles per day through relatively flat terrain with frequent stops.
MODERATE	Moderate steady pace up to 6 miles per day with some elevation gain and loss through some rocky or uneven terrain.
STRENUOUS	Longer rigorous hikes at a moderate to brisk pace up to 12 miles per day with significant elevation gain and loss up to 3,000 feet through rough steep terrain, with possible rock scrambling.
EXTREME	Course includes rock scrambling throughout a significant portion of route, good balance, full range of motion, and three points of contact while scrambling are necessary.

You may modify the description based on the following variables:

- Difficult footing or involves climbing boulders, sandy washes, or vegetation
- The elevation gain and loss, exposure to the elements, steepness and the natural obstacles (boulder field, creek crossings, etc.) figure prominently in the hike difficulty equation
- High or low temperatures and climatic conditions
- Steep narrow drop-off or exposure

The “degree of difficulty” for a particular hike is inevitably subjective (*when in doubt, increase the difficulty level*).

You may include in your write up the following guidelines:

Example: “This hike requires agility, flexibility and some scrambling experience to negotiate the boulders and vegetation that crowd sections of this remote canyon.”

- **Hiking guidelines** - Participants must be in good physical condition for hiking/activities in an environment that may be hot, dry, windy, and sometimes surprisingly cold. Appropriate clothing, footwear, and sun protection are very important. (A link is available with this information available to include in your hike description)
- **Fitness levels** - In rating the difficulty of each hike, consider elevation gain and loss, distance, time of year, pace, and terrain. Please review and select a hike that matches your fitness level. We want to ensure that your skills and abilities match those of your fellow participants. Note that the ratings are guidelines. For a person who is very active a hike rated ‘strenuous’ might not pose a challenge or a ‘moderate’ rated hike could be very difficult for someone not used to walking outside in the described environment at moderate elevation.

Trip Types

- **Out-and-back** - trip leaves from a beginning destination (trailhead) and continues to a designated turn-around location before returning on the same trail to your vehicles
- **Loop** - trip goes out by one route and returns by another with relatively little or no retracing of the same trail
- **Shuttle** - trip starts at one trailhead and ends at another. Usually, the trailheads are too far apart for you to walk between them, so you will need to leave a car at the ending trailhead.
- **Key exchange** - hikers start from two different trailheads and exchange car keys when they meet

Trail Description

- **Mileage** - State as round-trip total miles
- **Time** - Average time of leisure hiker (average is 2 MPH)
- **Elevation extremes** - Lowest and highest
- **Total elevation** - Total ascent in the trail profile

Route Description

- **Trail** - marked and maintained
- **Road/Trail** - old road now a trail
- **Cross-country** - may be in washes, along ridges, saddles, or open desert

Approval-Submission

- Send your hike description to your Chapter VPO or Day Activities Coordinator. Hikes are posted on the WA website and email announcements are sent out to those who registered
- Ask in the pre-trip email:
 - > Are you still in?
 - > Where will you meet us?
 - > Do you have any medical conditions that might affect your participation on this trip? (ensure them that this will be kept confidential)
 - > Current weather forecast
- Insist that everyone gives you this information
Acts as a double-confirm. Reduces no-shows

Publicity

- Write an article for your Chapter's newsletter
- You may wish to "talk up" your future hike at a monthly meeting
- Hike leaders may post their approved hikes on your Chapter's Facebook page.
- Hike leaders may post their approved hikes on the GO "Corp" [Facebook page](#).

CONDUCTING THE HIKE

What Hike Leaders Should Bring

- Copy of the hike roster from WA that includes Emergency Contact information. If Emergency Contact information isn't listed, ask for it privately, or check roster ahead of time and make inquiry. You may want to print the roster on the back of Sign-In Sheet/Liability form which has the Sign-Out in case someone must be signed out early. You can also have anyone that shows up that did not sign the electronic waiver sign the printed waiver form if you add them to your hike.
- Trail map and navigation aids. Extra map for trail sweep if available
- Hike Leader Checklist (pdf. file on website)
- Printed directions/maps to hand out to drivers
- [Sign-In Sheet/Liability Waiver Form](#), pen
- [Ten Essentials](#) with first aid kit

Preliminaries At Meeting Place

- Arrive 15 minutes early to greet hikers and reassure them they are in the right place. Introduce yourself and others in a friendly, informal way. It is a good idea to have a name tag or to wear a GO T-shirt so people can identify you. Offer Club brochure/business card to non-members if available. Check with VPO for form.
- Everyone that registered for the hike should have "signed" the electronic waiver and should be on the roster. If anyone shows up that has not pre-registered, the hike leader has discretion to have them sign the printed [Sign-In Sheet](#) and join the hike or not allow them to join. This would usually be based on the maximum size limit restrictions.
- Check-in participants. Count the number of people present and compare it to the Sign-In Sheet. Keep the Sign-In Sheet with you on the hike. If anyone leaves the hike make sure they sign out (this is discussed below)
- You may delay some of the hike overview and briefing until you reach the trailhead, especially if you have hikers meeting you there.
- If carpooling, give directions, verbal or printed, mileage, and count cars. Let people find their own ride. You may help identify drivers that are offering rides at the meeting location. You may mention that it is an important courtesy to reimburse drivers for expenses. **For liability reasons, GO does not organize carpools.**

Screening

Pre-outing communication is an opportunity to screen potential participants in terms of the appropriateness of the outing. Potential participants should be screened on the basis of group and individual safety. The goal is to determine whether the outing is appropriate for the participant. Screening is best done in advance but can also be done when the group meets at the meeting location or trailhead.

- Screening criteria
 - **Fitness** - Participants should be physically (conditioning and stamina) and medically fit enough to enjoy the outing and not compromise their or the group's safety
 - **Experience** - Participants should have the technical expertise appropriate for the type of outing, such as off-trail travel, climbing, or bouldering
 - **Equipment** - Participants should also have the necessary equipment to participate in the outing safely such as a day pack, food, water, sturdy footwear, and clothing
- Screening - Check everyone for
 - **WATER**
 - **ABILITY**
 - **EQUIPMENT**
- Observe the participants and their equipment as you gather. If you think someone is not in good enough shape to keep up with the group, talk to that person privately and ask about their previous hiking experience. Be sensitive and tactful. Don't make automatic judgments about a person's hiking experience and ability based simply on that person's appearance, but if the hike is strenuous and the pace is brisk, you need to make sure all participants can keep up.
 - Equipment - Participants should have the necessary equipment to participate in the hike safely, such as a pack, food, water, sturdy footwear, and clothing. Did they bring the 10 Essential items? Not necessary to verify they have the 10 essentials. Tennis shoes may be okay for an easy hike, but sturdy trail shoes with good tread should be a minimum on more extensive hikes. Sturdy boots may be required for loose spree, rocky areas and off trail routes
 - Screening Questions (do this privately):
 - What is your hiking experience?
 - How long have you been hiking? How often?
 - What is the longest hike you have done?
 - What and when was your last hike?
 - How often do you hike (if never, what sort of exercise do you do?)
 - Have you done a hike of this length and duration before?
 - What kind of pack do you have?
 - How is your general physical condition?

It is best to get the participant invested in screening him or herself off an outing. The leader should emphasize the real challenges of the outing and how the participant's fitness or equipment may prevent him or her from having a safe and enjoyable outing.

If you believe someone is not qualified for the hike, explain it is for their safety and the safety of the group. You may offer the following as explanations:

"Generally, this outing is more appropriate for people who are able to hike longer distances [for a longer time/at higher elevations/inclement conditions]"

"I am concerned that his outing may be too long [hard/strenuous/etc.] for you and will not be enjoyable"

"Though this hike does not seem like a good fit for you, we have a great hike coming up next week that I think you might enjoy."

If the leader believes the outing is not appropriate for the participant due to fitness, experience, or equipment concerns **the leader has the authority and responsibility to deny participation in the outing.**

You may recommend a more appropriate upcoming event.

Preliminaries At Trailhead

The Trailhead Talk

Wait a few minutes for all cars/hikers to arrive. If they don't, try contacting drivers via cell phone to see if group should wait. If they do not arrive within a reasonable amount of time, do not delay the hike.

If you have hikers meeting you here for the first time you can screen them and check them in as described above.

- Welcome the participants, give an overview of the hike, set the expectations and tone, provide an opportunity for participants to ask any questions. Explain trail conduct and safety issues and mention any other relevant topics.
- Introductions - fun fact (or some variant)
- Provide an overview of the hike including the level of difficulty, distance, elevation gain, terrain, hiking pace, leave no trace, and points of interest.
- Advise that the expected time of return is only an estimate and not a guarantee.
- Identify a sweep and explain the role and function. Give preference to another hike leader or experienced hiker
- You may ask if anyone has any special medical expertise to determine who may assist if needed or you may know those on your hike who have this expertise and no further action is needed
- Advise hikers to let you know privately if they have any medical issues that would make hiking difficult today.
- Ask hikers to inform you immediately if they encounter any problems on the hike (e.g., hot spots or blisters, accelerated heart rate, cramping, etc.).
- Leaving the trail when 'nature calls. Tell hiker to inform another group member and they should leave their pack or clothing item near the trail. The sweep watches for packs, stops and waits until the hiker returns to the trail
- Take a headcount
- Take a group photo. This may be useful if someone becomes separated.

THE HIKE - ON THE TRAIL

Group size. Three is the smallest independent hiking group that is considered safe. This is known as the “rule of three”. If there is an injury in a party of three, one person can stay with the injured, and the other can go for help.

Closed group. This is the simplest and most common group and the easiest to monitor because everyone is together. You have the resources of the entire group in case of emergency. The trail sweep and hike leader are close together and maintain communication.

The trail sweep is to make sure no member of the group gets behind them and inform the hike header if there is an incident that needs attention. The trail sweep should have a first aid kit. The trail sweep(s) needs to keep an eye on the condition of the group and should look particularly for signs of exhaustion, foot problems, altitude sickness, hypothermia, heat exhaustion or other physical problems and provide assistance as needed.

No one will be left alone on the trail.

All hike leaders and trail sweeps should have **map and navigation aid**, especially when going cross-country off-trail or in areas where the trail is not well defined. Two way radio communication may be helpful. Check with your VPO to see if radios are available.

First-Aid - Carry a First-Aid kit on all hikes. Watch those hikers who seem to be straining. Look for signs of exhaustion, dehydration. Ask about hot spots (blisters) at stops before a participant gets a blister. Privately talk with anyone showing excessive strain and insist that the person rest or take water if necessary. Remember your first-aid training. First aid/CPR/AED training is recommended and all hike leaders are encouraged to complete the training. Check with your VPO for options in your area.

Breaks and rest stops - A rest stop should be made every twenty to sixty minutes depending on the physical condition of the group, climate, and trail conditions. Three to six minutes is recommended as the best duration for a rest stop. Your body has done most of its recovery by then, and additional time only serves to tighten muscles. Rest stops are a good time to be an interpretive guide. Share your knowledge of floral, fauna, geology, landscape features and history of the area. Rest stops are also a good time to make adjustments. Get rocks out of your boots, adjust laces, add or remove layers, and have a snack. Generally, the lunch stop is the longest break and let everyone know your how long you are stopping for lunch. Keep the trail clear for other hikers to proceed.

Weather - Check weather report prior to the hike. Be alert to indications of a change in the weather and make adjustments accordingly.

Mark the trail - If you need to mark the trail or marked it while scouting, use colored plastic flagging. The sweep should pick up these markers.

Set the pace - Set and maintain an appropriate pace. Be sensitive to your group and *adjust your pace if necessary*. It's dangerous to push the group faster than it wants to go, even if you are running late. Call for rest stops if you notice some people are showing signs of fatigue. Pacing technique is critical to the success of a hike. The hike leader and trail sweep should use their motivation skills to encourage those who may be struggling to keep up. The average rate is two to three miles per hour. Trail conditions will affect pacing such as steep slope and loose rocks. Recommendations: Aim for a leisurely, fun pace. Plan for ample breaks for photos, bathroom, etc.

Who's in front? - The hike header is at the front of the group. What do you do if some participants want to go on ahead of the group? It depends on the situation and your knowledge of the people who want to go on ahead. Will they be ok? Do they know where they are going and where to meet you later? Will they notice the junctions in the trail? *The hike leader makes the final decision for hike organization.*

Split Group - If some hikers just seem slower than others *and you have a co-leader* who knows the route, consider breaking the group into two parts with two different paces. Have a plan for meeting location to regroup. If the route can be shortened, perhaps the slower group could take the shorter route. Or perhaps the faster hikers can add a side-trip that others skip.

Wait and Count - Wait at trail junctions to make sure everyone knows where to go. Both the leader and sweep should quietly conduct periodic headcounts to make sure nobody is missing.

Sweep - Keep in contact with the sweep via radio (if possible). Don't get too far ahead or stretch the group out too much. If no radio contact, then the leader should wait for visual contact of sweep at various points during the hike before proceeding.

Encourage Good Environmental Manners - Don't allow shortcutting, flower picking, etc. Encourage members to pick up and pack out litter if they see it. Set a good example by picking up and packing out any trash you see. You might carry a plastic bag in your backpack for this. Leave no trace.

Mix with the group - Be friendly and try to talk with each participant. Stay on schedule.

Early Sign-Outs - This rarely happen. As a leader, it is your job to keep track of participants from the start of a hike to the end.

Voluntary departure - If a participant wishes to depart from the group before the end of a hike, have the hiker sign out and enter the time (or make a note with the time witnessed by others). If you do not think that the participant can safely return to the trailhead, you should assertively try to convince the person to remain on the hike, or provide an escort back to the trailhead or re-route the hike. Before they leave, make sure they have

adequate water, etc. to make it back to the trailhead and make sure they aren't carrying something essential to someone else (e.g. lunch or car keys). While some situations may require the leader to allow a participant to sign out of the group, this should be the exception and should be done only when it is safe.

On rare occasions a participant may be creating a problem for the group or other participants. Signing out the problem person may be done only when safe, but it may be necessary to ensure the enjoyment of the entire group. The leader may have to cancel a hike by returning the group to the cars to deal with a problem person if it is not safe to sign him or her out on the spot.

Failure to stay with the group - If a hiker insists on hiking in front of the hike leader or not staying with the group, that hiker may be informed that he/she is now on his/her own. He or she will no longer be considered as part of the hike group and assumes all risk for safe return.

If someone cannot keep up, it may be advisable to send him/her back with an escort.

Signing out a participant is a judgment decision, which should not be made lightly, and alternative solutions (modifying trip objectives or turning the entire group around) should always be weighed in the light of the following considerations:

- Group objectives
- Length and difficulty of the return route
- Prevailing weather conditions and any other special hazards
- Physical and mental condition of the person to be signed out
- Experience, ability, and equipment of the person to be signed out
- Availability of sufficient personnel to provide an escort if needed
- Level of confidence that the person to be signed out expresses in his or her ability to return safely to the trailhead

Sign out options:

- Return alone if it is a very short distance back and a safe return is assured.
- Return the entire group to the cars to ensure participant gets out safely.
- Escort back with qualified people.

People Problems

- Prevention
 - Hiker instruction at trailhead talk
 - GO Code of Conduct (see [GO Bylaws, Appendix A](#))
 - Limit-setting & group goals
 - Prior Screening
- Solving
 - Public rebuke and peer pressure
 - The private "talk" - state the problem and what needs to change in order for the outing to continue. Identify the inappropriate behavior. Acknowledge and tend to his or her concerns. Explain that this behavior

has an impact on the group, and the behavior needs to change. Bring participant back into group if compliance expected (give them a task).

- Weighing all the factors, the leader bases the final decision on safety considerations for all participants.
- If all fails, remove the participant from the outing. Only do this if the behavior is truly disruptive to the progress or safety of the outing. Removing the participant should follow the early sign-out protocol shown above.

Trail Etiquette

- Horse traffic always has the right of way - step off the trail downhill side
- Hikers should follow instruction from horse rider
- Hikers have the right of way over bikers
- Bikers should give right of way to all other traffic
- Uphill traffic has the right of way
- No smoking on the trail

Leave No Trace

- Be environmentally conscious
- Don't cut switchbacks
- Careful not to damage the ecosystem.
- Cryptobiotic soil crusts are created by living organisms such as algae, cyanobacteria, and fungi. The bacteria within the soil release a gelatinous material that binds soil particles together in a dense matrix. The result is a hardened surface layer made up of both living organisms and inorganic soil matter.
- Pack out everything
- Leave what you find
- Be mindful of noise pollution - Use of electronic devices and cell phones are distractions and should be discouraged or prohibited

Lost Hiker

1. Identify who's missing
2. Keep everyone with you for resources
3. Did hiker get ahead/fall behind the group
4. Interview people (your hikers and others on the trail)
5. Determine when and where hiker was last seen
6. Determine what hiker was wearing and any equipment. Check photos
7. Evaluate mental and physical condition of hiker
8. Call/text the person
9. Evaluate weather, existing daylight
10. Consider the physical/mental condition of potential searchers
11. Determine exigent circumstances that require immediate notification to call 911
12. Plan a search - review where searchers will go on the map (all must have a map)
13. Don't send anybody out alone
14. Designate a time and place to reassemble all search groups
15. If hiker is not found, contact local search and rescue via 911
16. Record latitude and longitude locations and times

Ending the Hike

- Take a final head count to make sure nobody is missing
- Thank each participant for accompanying you on the hike. It might be nice if you kept extra bottled water in a cooler in the car to offer at the end of the hike.
- Consider optional after-hike activities such as lunch/dinner, a pool, or a spa
- Recruit - note anyone who has shown good judgment and other leadership qualities and encourage them to become hike leaders or at least join GO if they are not already a member.
- Bidding farewell - check that everyone has a ride. Make sure everyone's car has started before leaving the parking lot.

After The Hike

- Let the VPO or Day Activity Coordinator know who checked in for the hike or canceled ahead of time. Another option is to use WA app to check in participants. If you used a paper version, send an electronic copy of sign-in/sign-out sheet to VPO or Day Activity Coordinator with any information needed to plan a better hike in the future, including any issues during the hike. If you don't have a scanner or can't take a picture, send the sign-in sheet to VPO or Day Activity Coordinator who stores an electronic copy of the waiver form in the Google Drive folder
- Document any major injuries, problems, or incidents and advise VPO
- Identify person to write an article for the newsletter, including photos
- Advise hikers where to send photos for online posting or the newsletter

SAFETY

Risk management: self-care, preventing injury, handling risky situations

- Proper planning and preparation can mitigate potential problems
- Know your own physical capabilities and those of others in the group. This may be based on past hiking experiences.
- Have appropriate navigational aids and knowledge to use them
- Check the weather forecast. Be prepared for changing weather conditions with appropriate clothing.
- Tell someone your hiking plans and expected return time
- Know current road conditions if you are going into remote areas

Mental Aspects of Safety Management

- **Fatigue** - Physical fatigue can dull mental awareness of risk and diminish concentration on the task at hand, such as descending a relatively easy slope and taking a misstep or misjudging the size of a rock and tripping
- **Distractions** - Similar to fatigue in removing concentration from one's movement over the terrain, such as looking back to respond in a conversation and then tripping over a root
- **Overconfidence** - Overestimating the ability and experience of the individual or group, for example, assuming a group will move as quickly at the end of a long day as at the beginning
- **Complacency** - For example, while the group climbed up with confidence, the return may present challenges because of fatigue or awkward maneuvers . What has been done before may present challenges in the current circumstance.

MEDICAL EMERGENCY MANAGEMENT GUIDELINES

STOP: Stop - Think - Observe - Plan

1. STOP: Get calm and stay calm.
2. THINK: Remember your training and procedures.
3. OBSERVE:
 - a. Any present dangers for entering the scene?
 - b. Is the scene safe?
 - c. What happened?
 - d. How many injured people are there?
4. PLAN: Develop an action plan.
 - a. Can participants/bystanders help?
 - b. If a casualty needs to be removed to a safe place, is it safe to do so?
 - c. Assign a primary leader (yourself) and a first aid leader.
 - d. Address the needs and safety of the entire group, manage resources and coordinate plans.

In an emergency situation the objective of the leader is not to perform all the necessary tasks personally, but rather to identify the tasks and ensure that they are carried out. These guidelines are not a substitute for good judgment or a better alternate plan. A part of the pre-hike briefing is to ask if anyone has any special medical expertise; if so, what. Note the most proficient medical person. If a medical emergency occurs, consider taking the following actions:

- Assign (if that person will volunteer) the most proficient medical person (physician, EMT, nurse, first aid training, CPR training, etc.) to the immediate medical care of the individual. If you are this person, assign your remaining hike leader duties to another person whom you believe is most qualified to handle the situation
- Canvas the group for any medical supplies needed from the individuals' first aid kits. If the victim is conscious, ask them if they want your help and if so, proceed. If not, ask them what they want and respect their wishes. If the victim is unconscious, consent to help is implied. **Remember to only provide care that is within the scope of your medical expertise without harming the individual.**
- The Hike Leader's job is to keep the group calm, organized and provide leadership. Try to keep people occupied and away from the emergency site. Give them something to do.
- If the medical person judges that outside assistance is required, initiate an emergency response.

EMERGENCY RESPONSE: GETTING HELP OR EVACUATING

1. Direct contact with cellphone
 - a. Call 911 or Search and Rescue directly
 - b. Hike up to get signal
 - c. Send text message
2. Send a team out for help
 - a. At least 2 experienced hikers
 - b. Make sure team has coordinates or map with location marked
 - c. Decision for members staying - shelter/food
3. Directly evacuating victim
 - a. Consider advance team to provide notice for rescuers
 - b. Be sure the victim is stabilized, splinted and approves of self-evacuation
4. Helicopter Protocol
 - a. Let crew come to you
 - b. Do not mark landing area with tarps, rocks, etc.
 - c. Can provide wind direction - banner/streamer
 - d. Have victim ready to go along with their gear
 - e. Follow the helicopter crew's directions

Call 911. You may need to try cell phones that represent different carriers (e.g., Verizon, AT&T, T-Mobile, etc.) as they have different capabilities, tower locations, etc. Give the 911 operator your location and all relevant medical information. If no one can get a connection, select a volunteer hiker(s) to hike to a location that may provide a connection. They should take several cell phones that represent different carriers and hike to the nearest high ground and/or toward the nearest trailhead, seeking higher ground along the way for a connection.

- Summary
 - Assign medical person
 - Keep the group calm
 - Call 911 or send hikers out to call
 - Assist medical rescuers

SPECIFIC CONDITION INFORMATION

Protection: Elements/Inhabitants

- **Heat Exhaustion**
 - Cause - Excessive fluid loss leading to hypovolemic shock
 - Warning signs - Gradual weakness, nausea, anxiety, excessive sweating, fainting, sudden loss of consciousness
 - Manifestations - Pale, grayish, clammy skin; weak, slow pulse; low blood pressure
 - Management - Patient positioned flat or with the head down; replacement of lost salt and water
- **Heatstroke**
 - Cause - Inadequacy or failure of heat loss mechanism
 - Warning signs - Headache, weakness, sudden loss of consciousness
 - Manifestations - Hot, red, dry skin with little sweating; forceful, rapid pulse: very high temperature
 - Management - Emergency cooling by wrapping or immersing in cold water (e.g., a nearby cold river or ice). Call 911. Heatstroke is a genuine medical emergency. This might require a helicopter.
- **Heat Cramps**
 - Cause - Fluid and electrolyte loss
 - Warning Signs - Painful, involuntary muscle spasms that usually occur during heavy exercise in hot environments
 - Management - Rest briefly and cool down. Drink clear juice or an electrolyte-containing sports drink.
- **Hypothermia** - Even though we may hike in the desert; it gets cold and wet sometimes. We also hike in the mountains where there is a possibility of rain and snow. Several times in the memory of the club, hike leaders have found themselves in the mountains with people dressed in shorts and t-shirts in rain, hail, wind, and snow
 - Cause - Cold and wind. Unsuitable clothing (**cotton kills**) weather - windy conditions speed heat loss (wind chill), getting wet, exhaustion, dehydration, alcohol consumption
 - Warning signs - Internal temperature below 96 F (35 C). Lack of coordination.
 - Manifestations - Initially, involuntary shivering, loss of complex motor skills (but still able to walk and talk), shutdown of blood vessels in the hands and feet. As temperature falls below 35°C (95°F), violent shivering, impaired consciousness, loss of fine-motor coordination, especially in the hands, slurred speech, illogical behavior, loss of emotional cognition 'I don't care' attitude. This is a life-threatening condition.
 - Management - Replace wet clothes with dry. Get them moving. Get them to eat. Start a fire to keep them warm and to dry clothes. Body-to-body contact is effective. The basic principles are to stop heat loss and

preserve the heat the person has, and provide body fuel to generate more heat. If a person is shivering, they can warm themselves at a rate of 2°C an hour. Put on additional layers of clothing and replace wet clothes with dry. Get them moving to increase their activity and ensure their surroundings are as warm and still as possible. Provide food, initially as hot liquids. Carbohydrates provide a rapid source of energy while fats can provide a prolonged source of fuel. Add warmth with a fire or heater, or by body-to-body contact. Severe hypothermia needs urgent medical attention - call 911.

- **Blisters**

- Causes - the product of friction that rubs skin back and forth in a concentrated area, can mar an otherwise wonderful hiking trip
- Prevention - Blisters are easier to avoid than they are to fix. Hikers should start every trip with footwear that is broken in and fits their feet well. Wear clean, properly sized socks. Also, consider wearing 2 pairs of socks - a lightweight wicking liner and a thicker cushioning sock - to lessen the chance of abrasion
- Management - On the trail, address foot discomfort as soon as it develops. A quick response can often stop a blister before it becomes serious
 - At the first sign of irritation, put a small patch of protective material - moleskin, 2nd Skin or even duct tape - over the affected area to minimize abrasion
 - If you have a hiker that is prone to blisters, consider having them apply moleskin to their typical "blister zone" before they hit the trail
 - If a blister develops and walking becomes too painful, the hiker could drain the blister by lancing it along its base with a clean razor blade or knife. Once this is done, soothe the area with some antibacterial ointment, and then cover it with a patch of 2nd Skin (or similar product) plus a small adhesive bandage to keep the blistered area clean
 - If the area is still sensitive, cut a doughnut-shaped cushioning patch out of Molefoam® or duct tape and encircle the injured area. They may need to bulk up their circular pad with a number of layers to hold their sock and boot out away from the damaged area. This cushion will protect the area from further damage

- **Altitude Sickness**

- Causes - traveling at high elevations (often above 8,000 feet or 2,400 meters). It is caused by the combination of reduced air pressure and lower oxygen levels. How fast you climb to a high altitude and how hard you push hikers can increase the odds of an occurrence
- Manifestations - sluggish sensation often accompanied by a headache, dizziness, nausea, loss of appetite, elevated heart rate and shortness of breath with exertion. In most cases, symptoms are mild, but acute cases can be debilitating, even fatal
- Management - Descend. If you sense the symptoms are overtaking a hiker, seek out lower elevation quickly before their condition deteriorates and they are unable to walk unassisted. Aspirin can be beneficial for any

head pain they may experience. ***A hike leader should not administer any medications.*** Call for emergency help if the hiker has severe breathing problems, an altered state of alertness or is coughing up blood.

- **Sunburn** - Sun protection clothing is one good line of defense against the sun, but don't forget to put sunscreen on exposed skin to help prevent sunburns.
- **Dehydration** - Dehydration can contribute to illnesses, such as cramps, heat exhaustion and heat stroke. How much to drink while hiking depends on a number of factors, such as temperature and humidity, your intensity level, age, body type and sweat rate, as well as the duration of the hike. A good general recommendation is about a half liter of water per hour of moderate activity in moderate temperatures. Learn more about hydration in REI's [Hydration Basics](#).
- **Overhydration** - The flip side to dehydration is overhydration, or hyponatremia. This is a fairly rare condition but it's something that hikers should be aware of. In hyponatremia, sodium levels in the blood become so diluted that cell function becomes impaired. In very extreme cases, hyponatremia may cause coma and even death. The *symptoms* of hyponatremia are similar to dehydration: fatigue, headache and nausea.
- **Anaphylactic Shock** - An allergic reaction caused by an allergy to food, insect bites, or certain medications.
Symptoms - Swelling of mouth, tight feeling in your throat and difficulty breathing, hives, vomiting, dizziness, fainting, rapid heartbeat, in severe cases, people collapse, stop breathing, and lose consciousness in just a couple of minutes.
Treatment - A shot of epinephrine in the thigh is needed right away (EpiPen).
- **Poison Ivy, Poison Oak and Sumac** - Prevention - Learn how to recognize any dangerous plants that are common in the area you'll be exploring. Poison oak and ivy leaves grow in clusters of 3, so remember the old adage: If you see "leaves of 3, let it be." Be wary of touching anything foreign to you. Keep in mind that the oily, rash-causing resin found in poison oak and ivy – urushiol - remains present in the plants even during the dormant winter months. Contact with a leafless stem in January can still spawn an itchy rash. Pre-exposure lotion can be helpful.
 - Management - Wash the area thoroughly with soap and cool water right away. Carry a small supply of hydrocortisone cream or another soothing, anti-inflammatory lotion to lessen the discomfort caused by skin irritations. Fluid from a rash-induced blister will not spread the rash. However, if the resin is not cleaned from clothing, boots, skin or tools, you can re-expose yourself or another person.

- **Lightning**
 - Management
 - Get low relative to nearby terrain
 - Uniform forest is safest. Avoid open meadows, lakes, caves, rock overhangs, peaks, or ridges.
 - Go inside a building or hardtop vehicle
 - Move away from a tall, solitary tree or any lone, tall object. Isolated high-rise objects are likely strike points for lightning
 - Descend from ridgelines or peaks. Lightning tends to strike prominent topographic features. In threatening weather, move away from high points and exposed areas. Head for lower ground.
 - Stay away from water
 - Separate yourself from metal or graphite objects, including external-frame packs, ice axes, trekking poles and crampons
 - Keep out of shallow caves or overhangs. Lightning's current easily jumps across gaps and could jolt a person standing in the mouth of a cave
 - Insulate yourself from the ground; sit on an internal-frame pack or sleeping pad. Or crouch on the ground with your feet close together. If a ground current reaches you, it most likely will travel only through your feet. Do not lie down (since it expands your contact with the ground).
 - Have members in your party spread out by at least 25 feet
 - A strike victim can be revived by CPR
 - Where is the best place to be? Within a group of trees of roughly uniform height in a low-lying area or, as a second option, in a low spot of an open meadow.
 - Remember - no place is safe during a thunderstorm. If you are able to hear thunder, you could be struck by lightning. If inside a backcountry cabin, stay inside for at least 30 minutes after you hear the last sound of thunder. Once inside, stay off technology, such as a phone plugged into the wall. Also, stay away from doors and windows. Avoid plumbing like sinks and showers.
 - Keep in mind that June, July and August are the peak months for lightning activity in the United States, If you do find yourself outside during a thunderstorm, never lie flat on the ground or take shelter under a solitary tree. Also, stay far away from water and avoid anything that could conduct electricity.
- **Flash Floods**
 - Management - Plan ahead. Check weather forecast. Avoid hiking in or across washes and drainages during threatening or stormy weather. If caught out in a sudden downpour and you are in a wash or drainage, move to higher ground and be alert. Flash flood may originate many miles upstream and appear suddenly and without warning.

WILDLIFE ENCOUNTERS

Spend enough time in the woods and you will encounter wildlife. Fortunately, dangerous encounters are extremely rare. A calm mind is your most valuable asset. Wildlife in general is more afraid of you than you are of them. If they hear you, their instincts will tell them to flee and leave you alone. An animal's motivation for attacking a human is usually out of a perceived fear for its life or the life of its young

- **How often do bear or mountain lion attacks occur?** - Nationwide, mountain lion and bear attacks are very rare. In our area they are virtually unheard of. There are mountain lions in the area but live very secretive lives. Until recently, there were no bears in our area. Now there are a few black bears and sightings are limited. Our area is NOT considered "bear country". There have been no reports of human attacks by bear per Riverside Mountain Rescue.
- **Mountain Lion (Cougar)** - Be aggressive and large, maintain eye contact, throw things, and shout. Being aggressive is the only way to make the cougar back off. Do not run! If attacked, fight back with whatever means are at your disposal.
- **Black Bears** - If a black bear approaches, do not run. Remain calm, continue facing the bear and slowly back away. If the bear continues to approach, group together. Scare the bear away by shouting and acting aggressively while avoiding eye contact. If a black bear attacks, fight back using whatever means are at your disposal. Note that many bears charge as a bluff. They may run, then veer off or stop abruptly. Stand your ground until the bear stops, then slowly back away. Never run from a bear! They will chase you, running faster than 30 mph
- **Coyotes and Bobcats** - Aggressive behavior toward people is most often a result of habituation due to feeding by humans. If approached by a coyote or bobcat, make loud noises (bang pots and pans; blow a horn or whistle; shake a can with rocks). Show dominance and re-instill their natural fear of humans. Do not run, as this may elicit a chase response. If hiking with dogs in coyote country, keep them on a leash no longer than 6 feet and attached to a harness.
- **Dogs** - Face the dog and say firmly, "Go home!"
- **Bees** - Run away quickly. Do not stop to help others.
 - As you are running, pull your shirt up over your head to protect your face, but make sure it does not slow your progress. This will help keep the bees from targeting the sensitive areas around your head and eyes
 - Continue to run. Do not stop running until you reach shelter, such as a vehicle or building. A few bees may follow you indoors. Do not jump into water! The bees will wait for you to come up for air. If you are trapped for some reason, cover up with blankets, sleeping bags, clothes, or whatever else is immediately available.
 - Do not swat at the bees or flail your arms. Bees are attracted to movement and crushed bees emit a smell that will attract more bees.
 - Once you have reached shelter or have outrun the bees, remove all stingers. When a honey bee stings, it leaves its stinger in the skin. This kills the honey bee so it can't sting again, but it also means that venom continues to enter into the wound for a short time.

- Do not pull stingers out with tweezers or your fingers. This will only squeeze more venom into the wound. Instead, scrape the stinger out sideways using your fingernail, the edge of a credit card, a dull knife blade or other straight-edged object.
- If you see someone being attacked by bees, encourage them to run away or seek shelter. Do not attempt to rescue them yourself. Call 911 to report a serious stinging attack. The emergency response personnel in your area have probably been trained to handle bee attacks.
- If you have been stung more than 15 times, or are feeling ill, or if you have any reason to believe you may be allergic to bee stings, seek medical attention immediately. The average person can safely tolerate 10 stings per pound of body weight. This means that although 500 stings can kill a child, the average adult could withstand more than 1100 stings.
- Additional information about bee stings/attacks at USDA website.
- **Snakes - How to Avoid a Rattlesnake Attack** - Rattlesnakes are pit vipers, found in various parts of the United States. Rattlesnakes do not deliberately stalk human beings. Their natural diet consists of rats and mice, gophers, small birds, frogs, and even the occasional meaty insect.
- Know your snake.
 - A flat, triangular-shaped head
 - May be a variety of colors
 - A rattle may or may not be present.
- Behave appropriately when hiking.
 - Stay out of the way. Keep alert.
 - Watch where you place your hands and feet.
 - When walking, carry a stick, and whack bushes and undergrowth
 - The use of hiking poles creates vibration sounds that may warn the snake and allow it to retreat.
 - Wear long pants, gaiters, hiking boots.

Snake Bite Protocol

SnakeBite911 is a free app for emergency support

Avoid the following actions:

- ❖ Do not use tourniquets
- ❖ Do not attempt to cut or apply suction
- ❖ Do not apply cold packs or ice
- ❖ Do not use NSAIDs (Advil, Motrin, ibuprofen and other anti-inflammatory drugs)
- ❖ Do not use shock treatments or apply electricity to the bite
- ❖ Do not attempt to capture or kill the snake
- ❖ Do not attempt to transport the snake

Take the following actions:

- ★ Call 911 Time is Tissue! Get victim to the Emergency Room
- ★ Remove constrictions - jewelry, tight clothes, shoes
- ★ Take photos to track the spread of venom - new photo every 15 minutes
- ★ Elevate wound - keep limb raised to the level of the heart. (drape arm over chest)
- ★ Keep victim as still as possible

HIKE LEADER SUMMARY

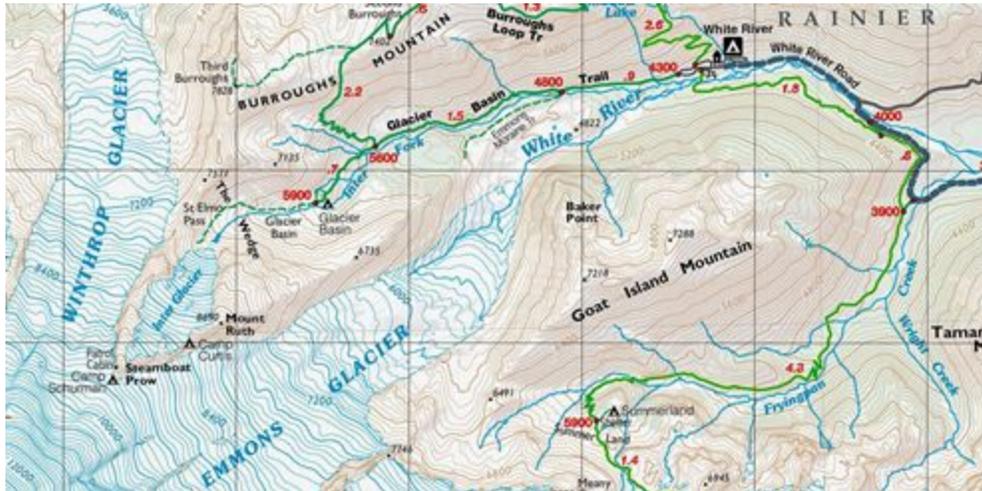
A hike leader is not just someone who knows the way, but someone who applies safety, best practices, fun, local knowledge and the ability to work with his or her group to make a successful hike. Keep in mind the goals and enjoy the adventure.

- Meet new people
- Explore new places and activities with others
- Hike when and where YOU want
- Hone your leadership skills
- Share a favorite hike with others
- Give back to the club
- Have fun!!!
- Remember a good leader:
 - Accepts responsibility
 - Knows appropriate outdoor skills and practices
 - Organizes and delegates
 - Is an enthusiastic, energetic self-starter with follow-through
 - Remains poised and confident under pressure
 - Possesses a sense of humor and is congenial and considerate
 - Can be tactful and understanding, yet firm and diligent
 - Has patience with the inexperienced
 - Is an effective communicator, good listener, and encourages others
 - Willingly imparts knowledge and skills to others
 - Recognizes her/his own limitations, capabilities and shortcomings
 - Identifies potential leaders

NAVIGATION

How to Read a Topo Map

<https://www.rei.com/learn/expert-advice/topo-maps-how-to-use.html>



Both a magnetized compass and a paper map are part of the [Ten Essentials](#). Learning to read a topographic (topo) map is every bit as essential. Your map will tell you a richly detailed tale about the terrain you'll be exploring. This article covers these concepts:

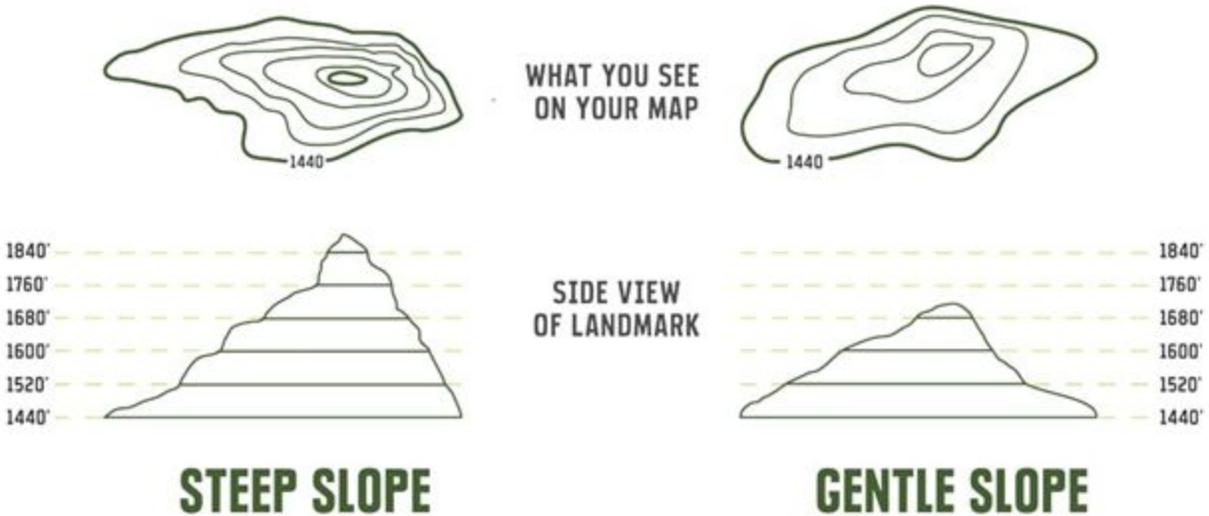
- How contour lines let you visualize your terrain
- How map scales work
- Other useful map details
- Where to find topo maps
- Also read REI's companion article, [How to Use a Compass](#). Then take a class with the [REI Outdoor School](#) or another outdoor organization and practice these skills until you master them.
- [Video](#): How to Read a Topo Map

How Contour Lines Describe Terrain

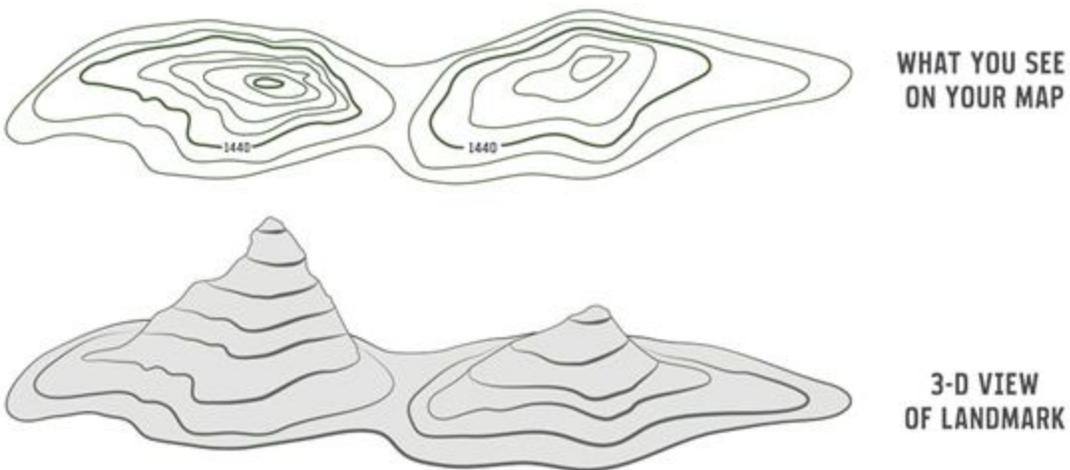
Simple trail maps are useful for trip planning but NOT for navigation in the field. Topographic maps go further, giving you the power to visualize three-dimensional terrain from a flat piece of paper. The feature that makes this possible is contour lines

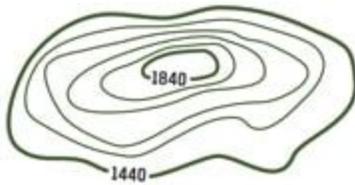
- Contour lines indicate the steepness of terrain.
- Contour lines connect points that share the same elevation

- Where they're close together (they never intersect) elevation is changing rapidly in short distance and the terrain is steep.
- Where contour lines are wide apart, elevation is changing slowly, indicating a gentle slope.



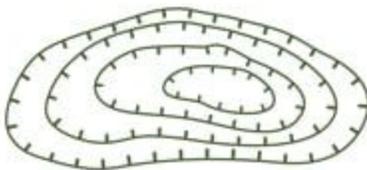
- Contour lines also indicate the shape of the terrain. Roughly concentric circles are probably showing you a peak, and areas between peaks are passes. Studying a topo map of a familiar area is a great way to learn how to match terrain features with the contour lines on a map





CONTOUR INTERVAL, 80ft

- Index contour lines - Every fifth contour line is a thicker, “index” line. At some point along that line, its exact elevation is listed
- Contour interval - The change in elevation from one contour line to the next is always the same within the same map. Many maps have either a 40- or 80-foot contour interval: An 80-foot interval simply means that each contour line is 80 vertical feet away from the next closest line. You find the contour interval for your map in its legend
- Every once in a while, a circle indicates a depression rather than a peak. A circle with tick marks inside it indicates a depression, rather than a peak. You should also see elevations decreasing as you get near the depression



DEPRESSION

- Map Scales - The map’s scale tells you how detailed your map is. A 1:24,000 scale, for example, means one inch equals 24,000 inches in reality. A larger scale, like 1:65,000, means that a map covers a larger area, but that it will have less detail

SCALE 1:24000

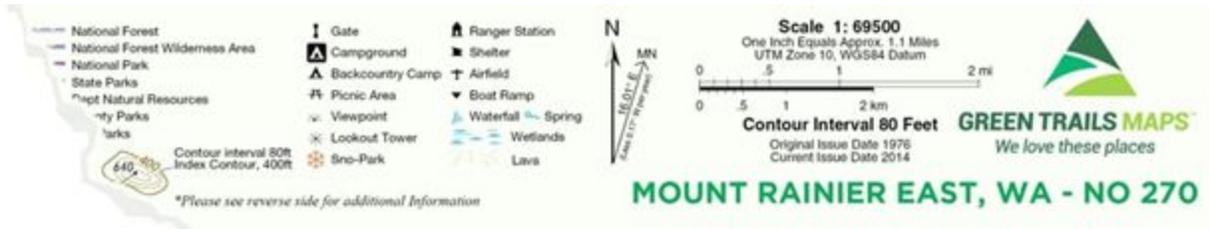
ONE INCH EQUALS APPROX. 0.38 MILES
DATUM IS MEAN SEA LEVEL



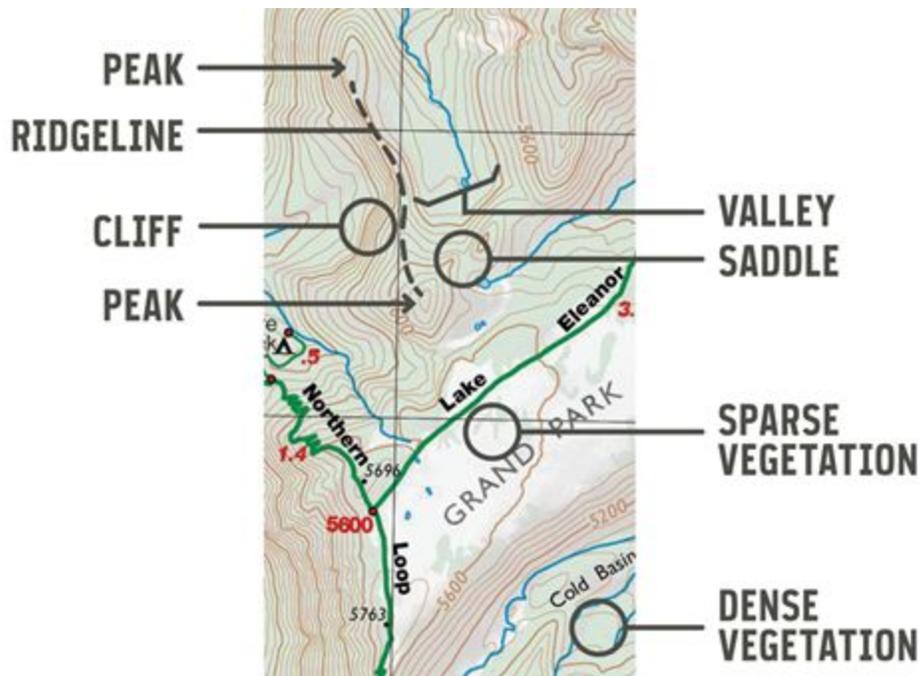
- Maps also have a representative scale to help you visualize real-world distances. You can use this scale and an object (string or the edge of your compass) to get a rough estimate about hiking distances on your map

Other Useful Map Details

- Look closely at the map legend. It is packed with map-reading clues and navigational data. Start by studying what each line, symbol and color means. Generally, green indicates denser vegetation, while light or colorless areas suggest open terrain. Streams and lakes are usually shown in blue



- The legend also lists key data like the map's scale, contour and index line intervals, grid systems (used for more advanced navigation), and magnetic declination (needed to set up your compass)



- Practice reading features from a map of a familiar area
 - Visualize how the terrain of the major landmarks relates to the contour lines on your map
 - Pick out features like peaks and saddles
 - Identify subtler features like cliffs with contour lines grouped tightly together, and ridgelines that connect peaks with contour lines that decrease in elevation on each side
 - Valleys are low elevation areas between ridgelines; some might have a creek running along the bottom, though that is not a requirement for a feature to be a valley

- Hone your skills on every trip. Pull it out at the trailhead, orient it correctly (see [How to Use a Compass](#)) and mentally check off landmarks as you hike. Regular map readers rarely get lost

Where to Get Topographic Maps

- U.S. Geological Survey Maps
 - The U.S. Geological Survey (USGS) - Its maps consist of rectangular areas of land called quadrangles (quads)
 - Preprinted USGS maps are being phased out of REI and other outdoor shops and replaced by an [online resource](#) that allows map data to be continually updated. Maps downloaded and printed from here have some major drawbacks: limited trail information and lack of in-the-field verification
- Maps from Specialty Companies - These maps highlight key features and update details regularly. These maps are more likely to be available for popular areas. Finding a map for a lesser known area will be more difficult
- Additional features that can make a map more valuable include:
 - Highlighted trails
 - Elevation callouts
 - Distances between trail junctions and landmarks
 - Primitive trails
 - Backcountry campsites
 - Highlighted boundary lines

REFERENCES

Emergency Phone Numbers

Calling 911 will get you the Highway Patrol who will then dispatch you to the local emergency department. You may want to include agency direct contact numbers in your cell phone or bring them with you

Liability

Good Samaritan Laws provide a deterrent against litigation, the purpose of which is to encourage people to help out voluntarily in emergencies. Although these laws do not prevent suits from being filed, they generally make it more difficult for the plaintiff to win because in theory they absolve from liability anyone covered by the statute who gives care gratuitously, *in good faith, and in accordance with his or her training and expertise in a bona fide emergency, except in the case of gross or willful negligence.*

California Health and Safety Code 1799.102 adds that no person who in good faith and not for compensation renders emergency care at the scene of an emergency shall be liable for any civil damages resulting from any act or omission.

Federal Volunteer Protection Act (1997) *protects volunteer members of non-profit organizations who are acting within the scope of their responsibilities.* Unlike the California Good Samaritan laws, the Federal statute is not limited to medical situations. It protects a wide range of volunteer activities such as coaching Little League, being a Girl Scout leader and leading a wilderness hike for the Sierra Club. The full text of this section can be found at: [Volunteer Protection Act](#)

Equipment Sources

[REI](#)
[Campmor](#)
[L L Bean](#)

[Eddie Bauer](#)
[Coleman](#)
[Amazon](#)

[Exofficio](#)
[Back Country](#)
[Bass Pro Shops](#)

GPS and Hiking Apps

[Garmin](#) GPS [hiking - handheld devices](#)

[GAIA GPS](#)

[All Trails](#) (be aware data is created by users and may vary in accuracy)

HIKING TIPS

- Hike in a group. Always have at least one other person (including when you scout out a hike) with you if you are going on low-traffic trails or be accepting of the risk you take in having no one able to aid you. Some of the benefits of hiking in a group:
 - Learn from more experienced hikers or pass on your knowledge
 - Aid for injuries
 - Distributing loads for common group gear
 - Meet new people or deepen relationships
- Drink often to stay hydrated. Drinks with electrolytes may be helpful
- Bring high-carb food such as trail mix and nutrition bars
- Embrace leave no trace ethics
- Leave your hike plan with someone and call them when you get off the trail
- Use sunscreen and a hat to prevent sunburn, even on cloudy days
- Keep your pack organized and put items back where you expect to find them
- Keep a bandanna tied to your pack strap for a quick wipe of your brow as needed
- Inspect your emergency and first aid kits before each hike
- If your hands swell while hiking, raise them. Hold onto your pack shoulder strap for a while and see how that helps. Use trek poles to keep your hands elevated a bit and keep the muscles active.

Clothing and Gear Tips for Hot-Weather Hiking

- REI expert advice - [REI advice](#)
- Dressing appropriately for a hike can go a long way toward keeping you comfortable
 - Choose light colors - Wearing light colors that reflect the sun's rays rather than absorb them (as dark colors can) helps keep you cool. Look for shirts, shorts and pants in white, tan or khaki.
 - Wear loose, breathable clothing - Lightweight, loose-fitting clothing that breathes well will help your body regulate temperature. Nylon and polyester are good choices.
 - Cotton can be OK - You've heard it before, cotton kills. Cotton has a bad reputation in the outdoors because it absorbs lots of moisture and dries very slowly, which can create an uncomfortable and dangerous situation on wet and/or cold days. But in hot and dry conditions, the moisture can feel good against your skin, and as it evaporates it will leave you feeling cool.
 - You must be careful when wearing cotton though. Make sure you're OK with the feel of wet cotton next to your skin (some people just don't like it) and that it won't cause chafing if it rubs against your skin. More importantly, if there's any chance you'll be out when the temps dip in the

evening, carry a change of clothes or choose to wear synthetics instead of cotton.

- Open vents - Some shirts, shorts and pants designed for hiking incorporate vents. Opening these up on a hot day helps improve airflow.
- Choose UPF-rated clothing - All clothing blocks the sun's rays to a certain extent, but clothing that has a UPF rating is guaranteed to provide protection. Common ratings include UPF 15, UPF 30 and UPF 50+. Learn more in REI's [Sun Protection Clothing Basics](#) article.
- Cover up - It may seem counterintuitive to put extra clothes on in hot weather, but the added coverage can provide necessary protection from UV rays, especially for people with sensitive skin. A lightweight long-sleeve shirt, sun sleeves and a neck gaiter can provide effective protection.
- Put a hat on - A hat provides essential protection from the sun for your face and neck. A baseball cap provides OK shade, but a sun hat with a brim that goes all the way around is even better.
- Cool your neck - A bandana, sun-protective neck gaiter or other lightweight cloth can be dunked in water and worn over your head or around your neck to keep the back of your neck cool and covered while the water evaporates. Special polymer-crystal filled neck scarves maintain the moisture for even longer periods of time.
- Wear the right socks - Never wear cotton socks (choose wool or synthetic instead) and make sure they fit well. Socks that are too big can have wrinkles that rub and socks that are too small can create pressure points and sock slippage. Learn more in our [Blister Prevention and Care](#) article.
- Carry a hydration pack - It might seem like a small difference, but having a sip tube always at the ready will make you more likely to hydrate frequently than if you have to reach for a water bottle
- Pack some heat- We're talkin' a water pistol here. When the going gets rough with your hiking mates, shoot 'em with a few squirts to cool them down. Alternately, bring along a spray bottle that you can holster to your belt and pull out for some fine misting when you need it.

TEN ESSENTIALS



1. To find your way
 - a. Map
 - b. Compass
 - c. GPS devices
 - d. Smartphone apps
 - e. Flashlight (extra batteries)
2. For your protection
 - a. Sun protection: hat, sunglasses, sun screen, umbrella
 - b. Extra Food and Water
 - c. Extra Clothes (depends on kind of trip, when, where)
 - i. Rain gear (jacket and pants better than poncho)
 - ii. Jacket
 - iii. Shirt
 - iv. Head protection
 - v. Gloves
 - vi. Socks
3. For emergencies
 - a. Fire starter fuel
 - b. Waterproof Matches
 - c. Pocket knife or multi-tool - considered one of the most important
 - d. First aid kit

REI expert article - [TEN ESSENTIALS: REI ADVICE](#)

Ten Essential Principles

The 10 essentials are more than just a list of the above items - they embody a set of essential principles that every outdoor leader should be aware of. By learning and incorporating the following principles, you'll know how to use the 10 essentials and why you should carry them with you at all times. So, here is a principle-based list:

- **Maintain a positive, creative, resourceful attitude of mind and spirit** - Don't lay blame and shame for unplanned circumstances. Anger or frustration does not lead to clear thinking nor does it lend to problem-solving. Concentrate on prioritizing significant problems. Be flexible and creative in adapting the available resources to the situation at hand
- **Problem solving** - CHALT means whenever possible, avoid making crucial decisions when you are Cold, Hungry, Angry, Lost, or Tired. In other words, warm up, eat something, have a hot drink, calm down, reorient, and then work on the problem. Avoid activity and solutions that don't really improve the current situation
- **Communication** - Watch for, look for, and listen to the people around you. Hear what they are telling you non-verbally. Are they sweating, shivering, cursing, stumbling, giddy? Volunteer your ignorance, but don't be afraid to patiently communicate what you really know to the group. Be upfront and honest
- **Thermodynamics** - You should understand how heat gets around the universe so you can prevent the onset of both sudden and chronic hypothermia/hyperthermia. Insulate, ventilate, layer up, layer down. It will rain, it will blow, it will get worse! Make sure to bring and use appropriate clothing, rain gear, and shelter on your trip
- **Hydration** - Always maintain optimal hydration. Carry water in your stomach and have a means of purifying/filtering more as needed
- **Nutrition** - Main energy reserves - EAT! Carry extra high-carb food such as trail mix and nutrition bars
- **Orientation** - Stay oriented! Know how to use a map, GPS device and/or compass - and use them consistently. Familiarize yourself with the area and a map before you set out. Pay attention both on and off the trail. If you get turned around, get re-oriented. Match the map to reality, not reality to the map
- **Prevent injuries** - Exercise good judgment, take sensible precautions, and consider the environmental hazards you could encounter on your trip
- **Rest** - Get adequate sleep and rest prior to and during the hike. Reduce exhaustion by avoiding overly ambitious routes or itineraries. Your body needs sleep, so does your mind
- **Treatment of Injuries** - Carry and know how to use an adequate first aid kit. Red Cross First Aid App on your phone

BEYOND THE TOP TEN ESSENTIALS

- **Identification** - Driver's License, In Case of Emergency (ICE), insurance cards - Take photos of this information and have it on your phone)
- **Insect repellent** - DEET or picaridin and/or clothing that has been treated with permethrin
- **Whistle** - For summoning help
- **Personal Locator Beacon (PLB)** - Notifies search-and-rescue
- **Communication Devices** - Two-way radios, ham radio, cell phone or a satellite telephone
- **Signaling Device** - Some compasses come with sighting mirrors. If yours does not, consider taking a small mirror to signal rescuers in an emergency. A bright orange cloth panel can also be used
- **Knowledge** - Having items in your pack has no value unless you understand how to use them. As one search-and-rescue leader told us, "People talk about the Ten Essentials, but the most important essential is between your ears."
- **Other Items To Consider Bringing:**

Chapstick
Climbing Rope
Comb
Duct Tape
Elastic bandage
Hiking sticks

Medication
Money for
lunch/dinner/gas
Mole Skin
Nylon Cord
Pencil & Paper

Sam splint
Toilet Tissue
Water purifying tablets
Water shoes

FIRST AID CPR/AED TRAINING

Hike leaders are encouraged to complete First Aid, Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) training. (First Aid/CPR/AED)

The American Red Cross offers an online course for Adult First Aid CPR/AED. There is a 1 hour skills test to complete the certification: [RED CROSS First Aid CPR/AED online course](#).

Check with your VPO to see if reimbursement for the training is available.

GETTING STARTED

New hike leaders are encouraged to initially co-lead 2 hikes with a certified hike leader. This will sharpen your skills and build your confidence.

HIKE LEADER CHECKLIST

HIKE LEADER CHECKLIST



What to do with the group of hikers-before you start hiking

- ✓ Introduce yourself to the group, club news, offer Club brochure (obtain from Club VPO).
- ✓ Provide an overview of the hike including the level of difficulty, distance, elevation gain, terrain and points of interest, expected lunch spot/time
- ✓ Ensure everyone has signed the sign-in sheet
- ✓ If carpooling, give directions, maps, mileages and discuss suggested gas donation. Hike leader does not arrange carpools.
- ✓ Check everyone for water, ability, proper equipment. If not prepared, respectfully deny hiker from participating
- ✓ Ask if anyone has any special medical expertise
- ✓ Ask hikers to inform you immediately if they encounter any problems or have any medical issues
- ✓ Each person is responsible for their own safety
- ✓ Introductions and take a count of persons and vehicles

Responsibilities at Trail Head

- ✓ Introductions again, if needed
- ✓ Hike Leader can give out their cell phone number
- ✓ Take a count to see if all reached the trailhead. Try to contact missing hikers, but don't cancel hike
- ✓ Identify sweep & tell group what a sweep does
- ✓ Take the sign-in sheet with you
- ✓ Make sure they know that the group is to stay together
- ✓ Start at slower pace for warm up
- ✓ Power off cell phones if hiking in dense areas with no cell signals

[Click here](#) to print a copy of the above checklist.

SIGN-IN/OUT LIABILITY / WAIVER

Sign-In Sheet & Acknowledgment of Outing Member Responsibility, Express Assumption of Risk, and Release of Liability



I understand that the activities engaged in by Great Outdoors, and specifically this activity, may involve dangers inherent in all outdoor activities, and by signing below, I, except as expressly prohibited by California statutory and case law, do expressly assume all risks and dangers of such activities and specifically this activity, and do hereby expressly release and hold harmless Great Outdoors Inc., including its event leaders, officers, agents, employees, administrators and assigns, from any and all liability for injury or death arising from said activities and specifically this activity, and agree to defend any lawsuits against any of them arising from those activities and specifically this activity.

"Great Friends, Great Times, Great Outdoors"

Date: <input style="width: 150px;" type="text"/>							
Activity: <input style="width: 300px;" type="text"/>				Leader: <input style="width: 150px;" type="text"/>			
		Member?				Member?	
Printed Name	Signature	Yes	No	Printed Name	Signature	Yes	No
1				15			
2				16			
3				17			
4				18			
5				19			
6				20			
7				21			
8				22			
9				23			
10				24			
11				25			
12				26			
13				27			
14				28			

Early Sign Out						
		Time			Time	
Printed Name	Signature		Printed Name	Signature		
1			3			
2			4			

[Click here](#) to print a copy of the above waiver form.

CREDITS

Some of this material in this manual was adapted with permission from The [Gay & Lesbian Sierrans \(GLS\)](#) Hike Leader Manual by Paget Valentzas

Great Outdoors Outdoor Experience Committee 2019-2020:

Scott Connelly, Chair Brent Sammons Brian Miller Ed Emond-Worline Peter Emond-Worline Wes Stieringer Tyler Redden

LINKS:

Great Outdoors - www.GreatOutdoors.org

Training documents and resources - <https://greatoutdoors.wildapricot.org/resource/dayhike>

Electronic copy of this manual - <https://greatoutdoors.org/resource/dayhike>

