

www.alpineinstitute.com

info@alpineinstitute.com Equipment Shop: 360-671-1570 Administrative Office: 360-671-1505

> 1515 12th st Bellingham, WA 98225

SUMMER SIERRA ALPINE

Sierra Nevada, CA EQUIPMENT CHECKLIST

The primary goal of any alpine climber should always be to carry as little as possible. What is left out of a backpack is often just as important as what is placed inside. Conditions in the mountains vary dramatically from season-to-season, and sometimes even throughout the same day. This can make the process of preparing equipment for an alpine climb difficult. On the one hand, a climber wants to be light. But on the other, a climber wants to have everything he or she needs if there is a storm.

This list was designed for the "worst case scenario," a trip with significant inclement weather. In serious conditions it's not uncommon for a climber to need every piece of clothing and equipment on this list. However, if a program does not encounter significant weather, there may be items here that are not used. As you prepare for your trip, it's important to plan for the worst and hope for the best.

On the first day of your program, an AAI guide will work with you to refine your mountain kit to ensure that you bring exactly what's needed given the forecast. If you have questions about items you may bring them along for consideration and extra items can be left locked in your car.

The Sierra summer climbing season is defined as May 1st through November 1st. This list references Early, Mid, and Late-season conditions. These periods of the climbing season are roughly defined by the different types of weather and snow conditions you are likely to encounter:

- Early-Season Conditions (Early-May to mid-June): Lingering winter snow may still blanket the ground into late spring. Sometimes the final snows don't melt off until early or mid July. Use of ice axe and crampons are likely to be needed on approaches and routes. Overnight temperatures range from 15-degrees to 40-degrees Fahrenheit (-9-4C). Daytime highs range from 35-degrees to 70-degrees Fahrenheit (1-21C). Snow or rain is likely in the early season. Days are getting longer.
- **Mid-Season Conditions (Mid-June to Mid-September):** Daytime temperatures often hit 70-degrees Fahrenheit (21C). Evening temperatures range from 40 to 50-degrees Fahrenheit (4-10C) at night, with occasional dips down below freezing.
 - July to Mid-August is usually the hottest time of the year. Approaches are generally snow free. There may be lingering snow in shaded slopes and gullies if it was a big snow year. Though mid-season tends to be dryer in the Sierra, the possibility of a thunderstorm is still there. Long daylight hours. Mosquitos. ©American Alpine Institute 2019

- Mid-August to Mid-September. Snow is melted out, exposing more scree. Late afternoon thunderstorms are common. Warm days with cooler mornings and evenings.
- Late-Season Conditions (Mid-September to Early-November): October is a varied month. Temperatures begin to drop both during the day and at night. Snow falls in the mountains. Daylight hours getting shorter. Cool to cold days.

Please be sure to check the forecast several days prior to your course to ensure that you are properly <u>prepared.</u>

NOAA Lone Pine/Whitney area Weekly Forecast

PROVIDED EQUIPMENT: Climbing rope, anchors, solid waste bags

RENTALS: Equipment that is available for rent through our AAI Sierra Equipment cache is designated with a "Rent" check box. Your instructor will bring these items to you on the first morning of your course during your rendezvous. Please reserve rentals ahead of time and we will send you an invoice for these items. Don't forget that AAI climbers receive a 15% discount off full-price items purchased through our gear shop! Sierra Rental Form.

Call or E-mail the Equipment Shop for Advice on Gear: Please feel free to contact us to get you ready for your climbing trip. Your comfort and safety depend on being well equipped. Whether you get your gear from us or just get advice, we're here to help you prepare.

Call: (360) 671-1570

Email: shop@AlpineInstitute.com

Equipment Shop Website: Shop.AlpineInstitute.com

Clothing	Packing Checklist
Beanie/Toque Wool or synthetic, must fit under helmet. Easily replaced with hooded layers after early season.	☐ Own ☐ Buy
Sun Hat Preferred to fit under helmet.	☐ Own ☐ Buy
Buff/Neck Gaiter Look for one that is UPF rated. Brighter colors work better for warmer conditions and darker colors for colder conditions.	Own Buy
Glacier Glasses These are mandatory. Look for a pair that fits well and has side shields. The lenses should be dark enough to not let more than 10% of visible light through. Photochromic (variable tint) lenses are more expensive but are usable in a wider range of activities. ★ NOTE: Those using contact lenses should also bring a pair of prescription glasses in the event that your contacts or solutions are lost or damaged by freezing. If you only use prescription glasses, we recommend "OTG" (over the glass) or "Frame-over" style sunglasses.	☐ Own ☐ Buy
Headlamp Bring extra batteries, or if it has a rechargeable battery, make sure and bring a charger. 200-350 Lumens is an ideal range.	☐ Own ☐ Buy

Liner Glove Thin, lightweight, wool or synthetic gloves. Size to fit snug but not too tight. Generally worn alone in temperatures above 25°F(-4°C) when precipitation is not present. UPF rated liner gloves are ideal for sun protection. Bring 1 pair.	☐ Own ☐ Buy
Work Glove These gloves are used for belaying, tying knots, rope management, etc. Dexterity and durability are key. These gloves provide slightly more insulation than a liner glove and are generally used in temps of 15°F to 30°F(-9°C to -1°C) while actively using your hands. Look for a comfortable snug fit favoring dexterity and a durable leather or synthetic palm. Water-resistant material is recommended because they dry out faster than waterproof gloves.	☐ Own ☐ Buy
Hard Shell Glove Waterproof and insulated gloves. If the glove lacks insulation then size it to fit a liner glove inside. Mainly worn in wet conditions, cold, or when not mobile.	☐ Own ☐ Buy
Sports Bra Wool or synthetic, comfortable, active wear.	☐ Own ☐ Buy
Base Layer Wool or synthetic shirt, long sleeves preferred, ideally a "sun hoody" with UPF 30+ sun protection.	☐ Own ☐ Buy
Active Insulation Layer Lightweight "gridded fleece" or lightweight down or synthetic insulated jacket. Hood preferred.	☐ Own ☐ Buy
Soft Shell Jacket A soft shell is a weather resistant, breathable, and stretchy freedom of movement piece. This piece is versatile in the sense of movement. It is often called an "action layer." It is weather resistant, meaning it can put up with light showers and wind. Also if it gets wet it dries fairly quickly. This enables you to not have to stop and put on another piece when the wind picks up or a light shower happens. Because it is water resistant, and not waterproof, it also breathes fairly well. This enables you to move without overheating, so you don't have to constantly stop to change out layers to regulate body temperature. They are also made of a stretchy material so there are no restrictions to your movement during activity. Put all those together and you have a pretty versatile layer, the Soft Shell. Hood preferred.	☐ Own ☐ Buy
Insulation Jacket AKA the "puffy." Down or Synthetic. This piece is worn in cold conditions or when not moving. Hood preferred. If choosing Down, water-resistant Down treatment is preferred to help prevent matting and loss of insulating ability if the jacket gets wet. ★ Weight: 350g-450g ideal weight.	☐ Own ☐ Buy
Hard Shell Jacket Non-insulated jacket with a waterproof and breathable membrane. Three layer construction is recommended. It must have a hood, ideally a helmet compatible hood. When sizing make sure it can fit over other layers.	☐ Own ☐ Buy

Undergarments Wool or synthetic.					☐ Own ☐ Buy
Base Layer Pant (aka "Long Johns") Wool or synthetic. Bring one for early or late-season conditions, optional for mid-season conditions (depending on the weather).			☐ Own ☐ Buy		
Soft Shell Pant Thin, weather-residue	•	•			☐ Own ☐ Buy
Hard Shell Pant Non-insulated, waterproof and breathable membrane. Full side zips are recommended. When sizing make sure it is able to fit over a base layer and soft shell pants.			☐ Own ☐ Buy		
Socks Wool or synthetic socks that are over the ankle height. Focus on getting insulation from the boot and using a lighter weight sock, instead of using a heavy weight sock for warmth. Wearing a "silk-weight" liner sock beneath your hiking sock can reduce friction on the skin directly and mitigate blister development. Bringing 2-3 pairs is recommended for this 6 day course. Two pairs mainly used while climbing that can be switched out if one gets wet. As well as having a 3rd pair to sleep in and as a backup.			☐ Own ☐ Buy		
Approach Shoes Optional. Can be nice to have to hike into camp instead of boots. As well as walking around camp. Not recommended for early season as there can still be lots of snow on the ground and hiking in your boots is better.			☐ Own ☐ Buy		
Mountaineering Boots Must be stiff, crampon compatible, mountaineering boots. Synthetic or plastic double boots recommended prior to July 1st. After July 1st, plastic or synthetic double boots are not recommended.			☐ Own ☐ Buy ☐ Rent*		
★ NOTE: There are many makes and models out there and not all are created equal. Please consult with our Equipment Shop if you are uncertain about the acceptability of your chosen model.					
Gaiters Knee or calf height. Best used in early-season conditions. Optional for mid or late-season. Gaiters do help protect pants from crampon holes regardless of the season.			☐ Own ☐ Buy ☐ Rent*		
		Climbing			Packing Checklist
Ice Axe Straight shaft axe or semi-technical slightly curved axe. Adze required. Use the following table as a rough guide on length. Ice axe leashes are not required and not recommended.			☐ Own ☐ Buy ☐ Rent*		
		Recommende	d Length of Axe		
	Climber Height	Straight Shaft Axe	Semi-Technical Axe		
	5'8" or shorter	50-55cm	50cm		

			Ι	1		
	5'9"- 6'	55-60cm	52cm			
	6'1"-6'3"	60-65 cm	55-57cm			
	6'4" and up	65-68cm	60cm			
version is desired Petzl Sum'tec or tools are recomm	since your ice ax the Black Diamon	e should have an d Swift can doub rse. You will be c	ou are bringing only o adze. Semi-technica le as an ice axe and limbing in crevasses	al ice axes like the d tool. Leashes for	☐ Own ☐ Buy ☐ Rent*	
	arness has a bela layers when you h	•	oops. When sizing n rs on.	nake sure it can fit	Own Buy Rent*	
Helmet Must be UIAA rate	ed for climbing.				Own Buy Rent*	
Crampons Must be steel crar	mpons with front po	pints and compati	ble with your mounta	ineering boots.	☐ Own ☐ Buy ☐ Rent*	
Slings Bring one 48in.(12 rated for climbing.	,	n.(60cm) pre-sew	n nylon sling. Slings	must be UIAA	Own Buy	
Belay Device Bring an auto-blood Diamond ATC Gu	•	ccepts two ropes	like the Petzl Revers	o or Black	Own Buy	
	ed for climbing. shaped munter-sty wire gate carabine	-	ers.		Own Buy	
heavy pack and	making stream cr	ossings, while al	hese increase baland so decreasing press es should have a sno	sure on the knees	☐ Own ☐ Buy ☐ Rent*	
•	n three lengths; 13 etting three differe		ilable at AAI the mor identification.	ning of the course.	☐ Own ☐ Buy	
Day Pack 25L to 35L is an i used as a summit		be used during	rock climbing portion	s and can also be	Own Buy	

Internal Frame Pack 60L or more. Mountaineering specific packs, instead of backpacking packs, are a good way to shave weight. Should also have the ability to carry weight well (45 lbs+).	☐ Own ☐ Buy ☐ Rent*
Camping	Packing Checklist
Tent 3 season tents can be used if the rain flys goes all the way to the ground on all sides. A "bathtub" floor for the inner tent is also recommended. This means that the inner tent isn't all mesh but has water resistant floor material that scoops up from the floor for 4-12" before changing to mesh, like a bathtub. If there are any questions please consult our Equipment Shop to see if your tent is okay to use. -Early-season: Double wall 4 season tent recommendedMid-season: 4 season or 3 season tentLate-season: 4 season tent recommended. ★ NOTE: 4 season tents are available to rent at AAI the morning of the course.	☐ Own☐ Buy☐ Rent*
Synthetic or Down. If you bring a synthetic bag bring one on the lower end of the temperature range since synthetic bags tend not to be as warm as down. If you sleep cold it is recommended that you bring a warmer bag than required for the seasonal conditions. If choosing Down, water-resistant Down treatment is preferred to help prevent matting and loss of insulating ability if the sleeping bag gets wet. -Early-season: 0°F to 20°F (-18°C to -6°C) -Mid-season: 20°F to 30°F (-6°C to -1°C) -Late-season: 15°F to 20°F (-10°C to -6°C)	☐ Own ☐ Buy ☐ Rent*
Compression Stuff Sack For your sleeping bag. If it is a down bag, a waterproof compression sack is recommended.	☐ Own ☐ Buy
 Sleeping Pad □ Early-season: Bring two; one inflatable and one closed cell foam. The foam pad helps insulate from the snow and serves as a backup to the inflatable pad. □ Mid or late-season: One inflatable or closed cell foam pad. 	☐ Own ☐ Buy ☐ Rent*
Stove and Fuel Liquid fuel or canister stove. Fuel is available at AAI the morning of the course. **NOTE: Many people choose to share stoves, fuel and tents to decrease weight. However, some people prefer to camp in their own tents and use their own stoves. This can be determined on the morning of the first day of your program.	☐ Own ☐ Buy ☐ Rent*
Pots Bring one pot. □ Early-season: Bring a bigger pot for melting snow; 1.5L to 2L □ Mid or late-season: 0.5L to 1L ★ NOTE: If you have a complete stove system like the Jetboil or MSR Reactor, and plan on eating out of your integrated pot, then you do not need to bring a pot.	☐ Own ☐ Buy
Utensils Don't forget the official "most forgotten item ever;" the spoon, or spork.	☐ Own

Bowl □ Early-season: Bring a plastic bowl or mug, preferably with insulation. □ Mid or late-season: Bring a plastic bowl, insulation is not necessary. ★ NOTE: If you have a Jetboil or MSR Reactor type stove and plan on eating out of your integrated pot, then you don't need to bring a bowl. The same applies if you plan on only using commercially packaged dehydrated or freeze dried meals.	☐ Own ☐ Buy
Lighters Bring two. You will have the opportunity to buy them the morning of the course.	☐ Own ☐ Buy
Hydration 3L capacity is recommended, though some people need more and some people need less. Some people bring a bladder and a hard sided bottle. The bottle is an important backup to the bladder if it gets punctured. A hard-sided bottle may also double as a mug for hot water, though not every bottle is designed to hold boiling water. For Camelbak style hydration bladders, bring a drinking tube insulator, as the tube can	☐ Own☐ Buy
freeze up. Drinking tubes must also have a lock on the bite valve. If you choose to use this system, be aware that they require constant vigilance in order to avoid freezing. Some people are not very good at this. Blow the water out of the tube after every use and place the bite valve in the neck of your shirt to keep from freezing. -Early-season: Bring more water carrying capacity (3L to 4L) to reduce the number of times you need to melt snow.	
Water Purification Water purification tablets are recommended, they are available at the shop the morning of the course. Pills that take an hour or less to purify are recommended. Steripens are an acceptable alternative to purification tablets.	☐ Own ☐ Buy
Food You are responsible to bring your own food for the duration of the course. Please consult our meal planning page.	☐ Own ☐ Buy
Other Essentials	Packing Checklist
Toothbrush and Toothpaste Travel size recommended.	Own Buy
Hand Sanitizer and/or Wet Wipes Required. Used after going to the bathroom and before eating. Wet wipes can be used for the "mountain shower."	☐ Own ☐ Buy
Toilet Paper The provided solid waste bags have a small amount of toilet paper with them, but most people do not find this to be adequate. Estimate how much you'll need for a program of this length and place that in a plastic zip lock bag. An extra zip lock bag can be helpful for pack-out of used paper.	☐ Own ☐ Buy
Sunscreen	☐ Own

SPF 30+, zinc based is preferred. Small travel size tubes are recommended so you can put them in a close by pocket for easy access.	☐ Buy
Lip Balm Make sure it is SPF rated.	Own Buy
Personal First Aid Kit Band aids Blister treatment Prescription drugs Ibuprofen etc. If you wear contacts make sure and have spares if you can't see without them.	☐ Own ☐ Buy
Repair Kit ☐ Inflatable sleeping pad patch kit ☐ Duct tape (Can be wrapped around trekking poles or water bottle. Gorilla Tape tends to be the best brand for the mountains.) ☐ Zip ties ☐ 6-10 ft of 3mm accessory cord ☐ 2 Trash bags that are big enough to line the inside of your pack with.	☐ Own ☐ Buy
Optional Items The items below are not required, although many are nice "luxury" items that can make your expedition more enjoyable. Remember that a few ounces here and there add up to extra pounds on your back and knees during your expedition.	Packing Checklist
Ice Climbing Rack If you have it then bring it. Make sure and mark your gear so it doesn't get mixed up.	☐ Own ☐ Buy
Gaia Navigation App Optional Smartphone App. Please have the Mt. Baker (all aspects) maps downloaded prior to the start of your course.	Own Buy
Map and Compass Map should be of Mt. Baker area (preferably Green Trails Maps #13SX). Compass must have declination adjustment.	Own Buy
★ NOTE: All three items are available together in a bundle, or all sold separately, at AAI the morning of your course.	
Altimeter Watch If you have one then bring it, it is a great tool to have in the backcountry, especially for navigation.	☐ Own ☐ Buy
Pee Bottle Used at night or when the weather is poor so you don't have to get out of your tent.	☐ Own ☐ Buy
Women's Specific Items Female Urination Device Pee funnel such as the GoGirl or Freshette. Many female guides prefer a rigid pee funnel. Click here for more info	☐ Own ☐ Buy

Menstruation Collection Cup There are many things to consider concerning backcountry menstruation. Click here for more info	
Entertainment Books, games, cards, music player, kindle, ect. For evenings or rainy days in the tent.	☐ Own ☐ Buy
Portable Charging Device Phone charger, battery pack, or solar panel.	☐ Own ☐ Buy
Ear Plugs For defense against snoring and high winds.	☐ Own ☐ Buy
Insect Repellent Biting insects such as mosquitoes and blackflies can be prevalent during different times of the season depending upon conditions and location. This is a nice item to have just in case.	☐ Own ☐ Buy
Camera Phone cameras or small point-and-shoot cameras are preferred. SLR cameras are not recommended due to their size and bulk.	☐ Own ☐ Buy
Comfortable Clothing and Footwear Breathable footwear like flip-flops as well as some comfortable cotton clothing can be nice to change into after you get back to the van.	☐ Own ☐ Buy
Car Charger Consider bringing an extra battery pack as well, having a lot of people using car charger cables is difficult.	☐ Own ☐ Buy