



**American  
Alpine Institute**  
*The Spirit of Alpinism*

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## Palisade Traverse Equipment Checklist

This equipment list has been developed specifically for the conditions you will experience in the Sierra Nevada during the summer mountaineering season. The equipment you bring must function well in a wide variety of conditions. Because we will be travelling on technical rock, snow, and ice with overnight packs, it is crucial that those packs be pared down to the essentials. If your pack is bulky and heavy the climbing will feel harder and not enjoyable. Some of the equipment will be left in a "base camp" while on the route itself.

Please understand that weather varies throughout the season and that this list is designed to outfit you for severe conditions that you may not actually experience during your course. Everything you bring should fit inside your backpack while still allowing for some space for group items such as ropes and climbing hardware.

Temperatures and weather conditions in the Sierra are often conducive to great climbing conditions. Thunderstorms, however, are not uncommon and intense rainstorms often last a few hours in the afternoons. Nighttime low temperatures in the high peaks often drop to slightly above freezing while daytime highs range anywhere from 35°F to 70°F. Mountain breezes are not uncommon and should be taken into consideration when planning your clothing system.

Please take the time to carefully prepare and understand your equipment. If possible, it is best to use it in the field beforehand, perhaps on a backpacking trip or training hike. Take the time to properly label and identify all items of personal gear. Many items that climbers bring are almost identical. Your name on a garment tag or a piece of colored electrical tape on carabiners and miscellaneous items is an easy way to label your gear; fingernail polish on hard goods is excellent. If using tape or colored markers, make sure your labeling method is durable and water resistant.

When preparing your equipment for travel to the Sierra, please remember that lighters and stove fuel are not allowed on aircraft. Stoves that have been thoroughly cleaned can be put in your checked baggage. Protect your equipment by covering your ice axe, crampons, and trekking poles with cardboard or other protection to prevent the puncturing or tearing of less durable equipment.

At AAI we take equipment and its selection seriously. Our Equipment Services department is well stocked and its seasoned staff can help guide you through this complex undertaking. Please contact us to select equipment for your course.

**Equipment items that are available for rental are designated with an (R). Please contact the Equipment Shop at 360-671-1570 for assistance in selecting equipment for your course.**

## Clothing & Footwear

**Base Layer Top:** Bring one. This will be your base layer and should be "lightweight" or "silk weight" synthetic or wool. No cotton.

- ☐ Weight: 5 - 8 oz / 140 - 225 grams
- ☐ Materials: Synthetic, wool.
- ☐ Example: Patagonia Capilene 2

**Base Layer Bottom:** Look for the same features as your Base Layer Top. One pair is sufficient.

- ☐ Weight: 5 - 8 oz / 140 - 225 grams
- ☐ Materials: Synthetic, wool.

**Undergarments:** Many climbers wear them underneath their base layer. One pair is sufficient.

- ☐ Materials: Synthetic, wool

**2nd Layer Top:** A lightweight fleece or heavy weight synthetic shirt. A chest pocket is a helpful feature.

- ☐ Weight: 13 - 16oz / 368-454 grams
- ☐ Materials: Nylon, micro weave fabrics, fleece, wind stopper
- ☐ Examples: Outdoor Research Marvel, Patagonia R1

**Soft Shell Jacket:** A thin, light, stretchy, breathable but wind and snow-resistant layer that is comfortable to wear is ideal. This will be your 'action layer' and the outer layer that you spend the most time in. Hoods are optional but highly recommended. Size your jacket to be trim fitting, but large enough to fit over your base and second layers. This layer will go over your base and insulation layers, but under your shell and puffy jackets.

- ☐ Weight: 4 - 14 oz / 120 - 400 grams
- ☐ Materials: Schoeller, Powerstretch, Powerdry, or similar
- ☐ Examples: Patagonia Houdini, Outdoor Research Ferrosi, Rab Alpine and Scimitar

**Soft Shell Pants:** Look for the same features as your soft shell jacket. This will be your outermost layer most of the time for your legs. A thigh pocket is a useful feature for storing small items. Your base layers need to fit under these pants comfortably.

- ☐ Weight: 14 - 20oz / 400 - 560 grams
- ☐ Materials: Schoeller, Powershield, Powerdry, or similar
- ☐ Examples: Patagonia Simple Guide pants, Outdoor Research Ferrosi Pants, Arc'teryx Gamma LT Pants, Marmot Champ

**Shell Jacket:** Choose the lightest, most packable, waterproof shell that will still get the job done. Avoid extra pockets (one or two chest pockets is all you need) and hanging linings. Your hood should fit over your climbing helmet. Your shell should be sized to comfortably fit over your other base and mid-layers (minus your insulating layer).

- ☐ Weight: 8 - 20oz / 227 - 566 grams
- ☐ Materials: eVent, Gore-tex, h2No, or similar
- ☐ Examples: Rab Latok Alpine, Patagonia Jetstream, Marmot Precip

**Light Insulating Layer:** The goal for this piece is to add warmth to your internal layering system. Depending on your clothing system and the environment you are in you may fit this layer underneath your shell gear (e.g. fleece sweaters) or over your shell gear (lightweight insulated jackets). If choosing fleece, pick modern fleece garments with waffle grid patterns and avoid "windproof fleece" it is not breathable enough. The weight and design of this piece will vary based on the other items of climbing that you are bringing.

☐ Weight: 10 – 14oz/ 280 – 400 grams

☐ Fill Materials: Primaloft, down

☐ Examples: Patagonia Nano Puff Hoody, Patagonia R3 or R4, Rab Microlight Alpine, ArcTeryx Atom LT Hoody

**Mid-weight Insulation Jacket:** A warm puffy jacket with an optional hood. These come in many shapes, sizes and temperature ratings. If you tend to get cold easily, opt for a slightly warmer and more substantial parka.

☐ Weight: 15 - 20oz / 400 – 590 grams

☐ Fill Materials: Primaloft, down

☐ Examples: Patagonia Down Sweater Hoody, Rab Generator Alpine Jacket, ArcTeryx Atom SV Hoody

**Fleece Gloves/Glove Liners:** They need to be dexterous and comfortable, but not necessarily very insulating.

☐ Materials: fleece, Powerstretch, or similar

**Beanie Hat/Toque:** Bring a warm hat that will fit under your climbing helmet.

☐ Weight: 2 – 4oz / 56 – 112 grams

☐ Materials: fleece, wool, windstopper, or similar

**Sun hat:** A baseball cap or visor serves well. Models with a "tail" provide increased sun protection.

**Socks:** Bring two complete changes. Some climbers prefer to wear a very thin liner sock underneath a thicker hiking/mountaineering sock. Adjust your sock system ahead of time to perfect your boot fit. No cotton.

☐ Materials: wool, synthetic

**Approach Shoes:** With sticky rubber soles. For use in mid to late season when there is minimal snow on the route and approach. Running or tennis shoes are inappropriate for this route.

☐ Examples: La Sportiva Boulder X or Ganda, Five.Ten Guide Tennie, Camp 4

**Mountaineering Boots:** Lightweight leather or synthetic mountaineering boots are ideal. These must have at least a 1/2 length shank and be designed for use with crampons. Look for a model with a waterproof/breathable liner to help keep your feet dry. Hiking boots will not work for this application.

☐ Examples: Kayland Apex Rock, La Sportiva Trango S, Garmont Tower GTX

NOTE: There are many of 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.

## Climbing Equipment

**Carabiners:** (R) Two pear shaped (or MÜNTER) locking carabiners.

**Climbing Harness:** (R) For alpine climbing, must have a belay loop. Make sure it fits your body when wearing bulky clothing. Gear loops are desirable.

□ Weight: 6 - 16oz / 170 - 453 grams

□ Examples: Black Diamond Couloir, ArcTeryx A300a

**Climbing Helmet:** (R) Lightweight, well ventilated, and comfortable. Models with a plastic shell are more durable, but are heavier than all-foam models. Must be UIAA approved for climbing.

□ Examples: Petzl Elios, Black Diamond Half Dome

**Ice Axe:** (R) We recommend using an axe that is about 50cm. There are days when the axe will be used only briefly, and spend most of the day strapped to the pack while you are climbing rock.

**Steel Crampons:** (R) Flexible or semi-flexible. New-matic crampons are the easiest to put on with cold fingers. Only modern strap on, step-in, or 'new-matic' crampons are acceptable. Older Scottish style strap-on crampons are not adequate.

□ Examples: Petzl Irvis, Black Diamond Contact Strap, Grivel G12

**Belay Device:** (R) Please bring an autoblocking belay device that is designed for belaying multiple ropes on multi-pitch climbs.

□ Examples: Black Diamond ATC-Guide, Petzl Reverso 3

**Trekking Poles:** (R) At least one is required and two are recommended. Even if you don't normally use trekking poles, at least one is necessary to help with balance while carrying heavy packs on mountainous terrain and crossing streams.

## Camping Equipment

**Tent:** (R) A lightweight 3-season two-person tent is recommended. It should be able to withstand short, but intense rain storms. Generally, your shelter should weigh no more than 3 lbs. per person.

□ Weight: 3.5 – 5.5lbs / 1.6 – 2.5 kg

**Sleeping Bag:** (R) Rated to around 20°F from late June to mid September. Down is the sleeping bag insulation of choice.

□ Weight: 16 – 32 oz / 453 – 1200 grams

□ Materials: Down

**Compression Stuff Sack:** Used to shrink your sleeping bag into the smallest size possible.

- ☐ Weight: 2-4 oz / 56 – 110 grams
- ☐ Materials: SilNylon, eVent, or similar

**Sleeping Pad:** It is possible to camp on both snow and dirt during this course. Please bring a patch kit for inflatable pads.

- ☐ Weight: 8-20 oz / 225 – 565 grams
- ☐ Example: Thermarest Neo Air, Exped Down Mat

**Climbing Pack:** A 35 - 40L pack is the appropriate size for this route. A bigger pack is *too big*. Needs to be a climbing pack, not a backpacking pack. Climbing packs have minimal suspension parts that are also removable, a removable lid, no extra zippers and straps.

- ☐ Weight: 3.0lbs / 1.6kg max.
- ☐ Examples: Black Diamond Speed 30 or 40, Osprey Variant 37 or Mutant 38, Mountain Hardware Summit Rocket 30 or 40, Cold Cold World Valdez, CiloGear 40L Worksack, Gregory Alpinisto 35.

**Stove:** (R) Liquid fuel or canister stoves are acceptable. We'll likely pair up on stoves at the Rendezvous to save weight

- ☐ Examples: MSR Whisperlite, Jetboil, MSR Reactor

**Fuel:** White gas or gas canister. 22oz of white gas or two 8oz canisters are usually sufficient. Fuel is available to purchase at the rendezvous for your course.

**Fuel Bottle:** (R) For use with liquid fuel stoves. Leak-proof bottles designed for your specific stove such as Sigg or MSR are best.

**Pots:** One 1½ - 2 quart pot is enough for one person. Two people sharing a stove might want to bring two pots if their meals are significantly different.

- ☐ Materials: Titanium, aluminum

**Eating Utensils:**

- ☐ Spoon: Bigger is better. Lexan is lighter, but metals spoons are more durable.
- ☐ Thermal mug: 16-20oz with a lid. Optional.
- ☐ Bowl: A lightweight Tupperware-type bowl is recommended. The new, ultra-light folding plastic contraptions are excellent. Avoid metal bowls, they are expensive, and make your food get cold very fast (or burn your hands when you are eating soup).

**Lighter:** Bring two. Lighters are no longer acceptable in checked baggage when flying.

**Hydration:** 3 liters of water capacity minimum. Hydration bladders with a hose are recommended.

**Water Purification:** Bring tablets or liquid purification. Filters are overly heavy and should not be used.

- ☐ Examples: Aqua Mira, Potable Aqua

**Food:** You are responsible for planning your meals for the duration of this program. Please have a few days of car camping food and four days of food ready to be carried into the mountains. Food and clothing that is not needed in one area can be left in your vehicle. We have included meal planning guidelines in your program packet. Please call our office for additional guidance in the food planning and packing process.

**Personal Medical Kit:** Athletic or duct tape, moleskin, bandaids, blister care supplies, and prescriptions.

**Personal Toiletries:** Bring a toothbrush, toothpaste, floss, etc. Bring half a roll of toilet paper or less. Travel sized containers are excellent.

**Hand Sanitizer:** Any alcohol based product for hand sanitizing work well.

**Sunscreen:** With SPF 30 or higher. A 1 oz. tubes are adequate. Small containers are better than one large ones.

**Lip Protection:** Bring 1 container/applicator with the highest SPF available. Some models of chapstick have SPF15 or higher.

**Glacier Glasses / Sunglasses:** Choose a model with 100% UVA/UVB protection. Those using contact lenses should bring a pair of prescription glasses if available.

**Garbage Bags:** Bring two or three large ones to line your backpack and to pack out garbage. Trash compactor bag, if available, are more durable.

**Headlamp:** A high output LED model. Bring fresh batteries or one set of extra batteries. Flashlights are not acceptable.

□ Examples: Petzl Tikka XP, Black Diamond Spot

**Repair Kit:** At a minimum this kit should include a stove repair kit for your stove, Thermarest repair kit (for Thermarest pad users), duct tape (wrapped on water bottles or trekking poles), and a pack waist buckle.

**Multitool:** Bring one if you have one. Any multitool similar to a Leatherman is great. One can be shared amongst tent-mates.

## Optional Equipment

The items listed below are not required, although many are nice "luxury" items that can make your course more enjoyable. Remember that a few ounces here and there add up to extra pounds on your back and knees during your course.

**Handiwipes/Wet Wipes:** The mountain shower. For personal hygiene and general use.

**Entertainment:** Books, cards, are great for evenings in the tent. iPods are popular.

**Ear Plugs:** Defense against snoring and high winds in the area.

**Camera:** We recommend a small point-and-shoot cameras that can easily be carried in an outside pocket or small case outside your pack. If you can't comfortably and safely carry your camera outside your pack, even in bad weather, you'll miss the best photo opportunities. Though some climbers bring them, SLR cameras are not recommended because of weight and bulk. If bringing a digital camera, consider your battery needs.

**Shorts:** Lightweight shorts are nice for warm days.

□ Weight: 4 - 8oz / 110 - 227 grams

□ Materials: Nylon

**Buff:** Buffs are a multifunctional neck gaiter that can substitute for a lightweight balaclava.

**Sandals/Flip flops:** These are great for relaxing in camp in the evenings.

**Post-Climbing Clothing:** A clean set of clothing is an excellent item to leave in the vehicle to change into upon your return.

### **The Equipment Shop at the American Alpine Institute**

The Equipment Shop at the American Alpine Institute provides clothing and equipment for purchase, rental gear, and advice. Shop staff members are great climbers themselves and deeply involved in evaluating and testing gear. They are considered by many outdoor gear manufacturers to be the most expert in the country. They thoroughly understand the needs of climbers who will be rock climbing, ice climbing, mountaineering, or exploring the world on international expeditions.

Please consider our staff members a part of your resource team in preparing for your trip. AAI Equipment Specialists are on hand to consult with you on specific gear needs, to answer questions on the latest equipment and innovations, and to make recommendations on best choices of clothing and equipment. They can assure that you are equipped with the best possible gear for your climbs. And if you have any difficulty determining if some particular items of clothing or equipment you already own will serve you well on a particular trip, they can help you answer that question.

### **Guides Choice International Field Testing**

The Equipment Shop at the American Alpine Institute also administers AAI's prestigious Guide's Choice Award. Equipment and clothing that have been awarded the Guides Choice designation have proven to be the top item in their product category. The awards are made on the basis of excellence in design, performance, and durability demonstrated in rigorous international field tests carried out by the professional guides of the Institute. All of the products at the Equipment Shop and on its website, [guideschoice.com](http://guideschoice.com) have been field-tested or have been vetted and are in the process of being field-tested.

### **Call or E-mail the Equipment Shop for Advice or Gear**

Please feel free to contact us and to let us help you get ready for your climbing trip.

Our staff members are experts in the field, and the items of gear that we rent and sell are the best made in terms of design, performance, and durability. 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

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