

GEAR GUIDE

2022

MONTANA HIGH ADVENTURE BASE

https://montanabsa.org/high-adventure/

GEAR CONSIDERATIONS

MOHAB is the most challenging and unique High Adventure program in Scouting. We expect all participants to arrive with all gear on the gear list. Our gear list is refined after each season and has been specifically catered to ultra-light packrafting/backpacking expeditions. If any participant arrives with inadequate gear, we reserve the right to exclude participation, because participants that are ill-prepared pose a significant risk to the safety of the group. Wilderness travel requires teamwork and dependability. Lack of preparation can cause seemingly mundane situations to be dangerous and/or potentially deadly. We will not hesitate to exit the wilderness early if a crew is inadequately prepared, specifically concerning gear and fitness. Safety is our number one priority. Additionally, MOHAB staff will teach proper LNT, food storage, and wilderness travel techniques. Please do not come to MOHAB expecting to use "Philmont" or "Northern Tier" camping methods. The Bob Marshall Wilderness Complex is one of the last remaining wilderness areas in the Continental United States. Once in the backcountry, we depend on each other to survive. Each piece of equipment that you pack will undoubtedly be used, so please, be detailed and thorough when conducting pre-trek gear shakedowns. NOTE: gear shakedowns prior to arrival are now mandatory. This means that every piece of gear that will be brought on the trail will be inspected by an Adult Leader before arrival.

Target Pack Weight: Your target pack weight without food, water, or packrafting equipment should be less than 15 pounds. An easy way to do this is to buy the lightest possible items on the gear list and bring <u>only</u> that gear. Once we add food, water, and packrafting equipment, the actual pack you will carry will be closer to 40 pounds. Practice hiking with this weight to increase your fitness.

Keeping gear dry: Wet gear = cold gear. When your gear is wet, it loses a majority of its insulating ability and becomes much heavier. This is detrimental on two fronts: you will be cold and you will be carrying more weight, so you are expending calories that could otherwise be used for heat production. It is important to keep all of your gear dry, though this is especially hard if you are packrafting where contact with water is inevitable. Important care will be placed on keeping your sleeping bag and warm clothing dry, so we encourage you to have dry bags to store this gear. Additionally, we recommend having a pack liner, such as a thick trash bag or large dry bag on the inside of your pack as the first line of defense. Dry bags are waterproof, flexible containers that are secured by rolling the compartment opening at least three times, then clipping the buckles together. *Pack covers do not keep your gear dry on the river, and are not recommended*

DETAILED INDIVIDUAL GEAR LIST

Suggestions are listed below but are not, by any means, the only option.

Most gear can be acquired affordably by looking for online deals and used gear sales. If you subscribe to emails, some retailers will offer additional discount coupons. Check sites like Sierra Trading Post, The Clymb, Steep and Cheap, REI garage sale, Used gear shops, etc. Good gear isn't always the most expensive gear. Please feel free to contact Program Director, Thomas

Evans, to discuss affordable gear options. Both men's and women's options are available for each product described below.

*Buy the lightest possible item you can afford for items marked with an asterisk. The lighter they are, the less water they absorb and the faster they dry, and thus, the more comfortable and safer you'll be.

Clothing Worn

Lightest possible* Long synthetic sleeve trekking shirt (max 6 oz): Material should be very light and breathable, made from woven nylon or polyester (resistant to insect bites, too). The material must dry quickly and wick moisture off of the skin. The shirt should have long sleeves with high UPF (sun) protection to protect against sunburn. Button-up style and sleeves offer ventilation options. A collar offers extra sun protection at high altitudes and some pockets (not too many so that they add significant fabric weight) are a nice bonus. Some staff prefer an ultra-light sun hoodie. The sun hoodie lacks pockets, but the hood is excellent for sun protection. Do not bring more than two shirts.

Suggestions: REI Sahara Tech Long-Sleeve Shirt, Columbia Silver Ridge Shirt, Outdoor research Astroman L/S Sun Shirt, Outdoor research Echo Hoodie, Marmot Aerobora Long-Sleeve Shirt

Lightest possible* Trekking pants or shorts (max 10 oz): Material should be very light and breathable woven nylon or polyester, and be resistant to insect bites. The material must dry quickly and wick moisture off of the skin. Convertible pants are an option as long as they don't add significant weight. Shorts with built-in liners are preferred by staff because they are ultra-light and fast drying. Do not bring more than two pairs of pants/shorts.

Suggestions: Columbia Silver Ridge Convertible Pants, Mountain Khaki Granite Creek Convertible Pants, REI Sahara Convertible Pants, Smartwool Merino Sport Lined Short, Patagonia Trail Shorts

Lightest possible* Underwear (max 3 oz): Tight-fitting athletic underwear such as spandex shorts minimize chafing. Synthetic underwear will dry quickly and wick moisture away from the skin. Built-in underwear is preferred for simplicity. Males: 1-3x underwear, Females: 5x underwear, 1-2x sport bras

Suggestions: Exofficio Give-N-Go Boxer as well as any other Exofficio underwear, Nike Core Compression shorts, Patagonia Capilene

Lightest possible* Mid-weight, full cushion, Merino wool trekking socks (max 2.5 oz): Thick socks provide good blister prevention and can be much warmer during cool nights or chilly mornings especially when wet shoes must be worn. Thick socks provide extra warmth and manage moisture during stream crossings. Well-fitting wool socks are arguably the most important piece of clothing that you will wear. You will wear these socks every day (even if they are wet). Consider using thinner wool socks if it is more appropriate with your footwear.

Suggestions: Smartwool, Darn Tough, REI Co-op

Lightest possible* <u>Trail</u> running shoes with an aggressive lug sole (<u>not</u> waterproof) (max 32 oz/pair): The lighter the better. They will dry faster, you will spend fewer calories walking, and your feet will hurt less. If you keep your pack weight within the constraints provided you won't need the extra stability provided by a hiking boot. <u>Absolutely no GORE-TEX</u> or other waterproofing; this material makes your shoe function like a bathtub rather than letting your feet breathe. Your feet will be wet, and they will stay wet the majority of the expedition. The water must drain out once we are on land, not pool in your shoes. It is a common saying that, "every pound on your feet is equivalent to carrying two pounds in your pack."

Suggestions: La Sportiva Helios SR, Hoka Challenger ATR, Altra Lone Peaks, On Cloudventure

Cotton Bandana or Buff (max 1 oz): Great for offering additional sun protection for the neck and face. Ideal sunblock to be worn over the face to block UV rays that reflect off the water surface. Has multiple uses such as a hand towel, washrag, etc. Look at the "Buff" neck gaiters for a versatile option.

Baseball Cap (max 3 oz): This is self-explanatory - no one (not even you) wants to see your hair after a few days on the trail. Also, there is no sense in frying your scalp and face. You'll need those later in life. It can be worn under your helmet for sun protection or under your jacket hood during a rainstorm to protect your face and eyes.

Warm Clothing

Lightest possible* synthetic/wool long underwear top (max 5 oz): Needed as a base layer. Great to wear to bed or have to put on during chilly mornings.

Suggestions: Smartwool Merino 150 Base Layer Long Sleeve, Icebreaker Oasis, REI Co-op Thermal base layer

Lightest possible* synthetic/wool long underwear bottoms (max 5 oz): As expected, they accompany the top and are a great base layer or sleeping item.

Suggestions: same as above

Mid-layer jacket (200 weight fleece or high loft synthetic or down) (max 10 oz): A warm camp jacket is key. Also, remember you will likely be wearing this by the fire so something durable is nice. Synthetic and fleece jackets are preferred because they retain insulating properties when wet.

Suggestions: Arc'teryx Atom LT, Patagonia R1, Smartwool Hudson Trail Fleece, Marmot Highlander Down Hoodie

2nd (spare) pair of mid-weight, full cushion, merino wool trekking socks (max 2.5 oz): Same benefits as above but these are your extra ones. They will be used for sleeping or hiking, depending on the situation.

Suggestions: Same as above

Warm hat or balaclava & warm gloves (100-200 weight) (max 4.5 oz): Great to wear to bed or on chilly mornings. Fleece dries quickly after becoming wet.

Suggestions: Duckworth, REI Co-op, etc.

Other Items worn or carried

Pealess Whistle on neck lanyard (max 0.5 oz): Necessary for river travel and short distance communication. Worn or attached to PFD at ALL times. Pealess inhibits freezing or water damage. Whistles with peas are useless in water, as the cork ball becomes waterlogged and ineffective. Fox 40 is recommended.

Sunglasses attached to a retaining strap (max 1 oz): Sunglasses are needed for river travel to protect your eyes from UV rays that bounce off the water. A retaining strap ensures they do not become lost, caught on brush, or knocked off in a rapid. Polarized are recommended as they cut down on glare, will help you to see routes while packrafting, and help you with sight fishing.

Compass: Learning to navigate in the wilderness is an art - an art best realized with proper tools. 2-degree graduations or smaller. **Only two are needed per crew**. Please ensure that the compasses can be used for orienteering.

Suggestions: <u>Suunto</u> (best), <u>Mountain Summit Gear</u>, <u>TurnOnSport</u>, and other similar compasses

<u>Trail Gear and Clothing (keep this gear accessible in outside pockets or near the top of your pack)</u>

Lightest possible* waterproof-breathable rain jacket and pants (max 16 oz): Rain gear doubles as a dry top and pants for river travel, so highly waterproof gear is a must. It will be cold on the river and this will help to keep you warm. Jackets and pants should be breathable (ventilation) to accommodate hiking and paddling. Rain gear doubles as a shell layer to trap heat lost from the base layers and mid-layer jacket. You will wear your rain jacket and rain pants in the evenings or mornings if it is cold. The rain jacket/pants are also perfect for keeping bugs off

Suggestions: REI Co-op, Arc'teryx Beta LT jacket, Patagonia Torrentshell, Marmot Minimalist Jacket, Black Diamond Stormline Stretch, Outdoor Research Apollo Jacket

One 1.0-1.5 liter collapsible water bottle (e.g., Platypus style) - no hydration systems/hoses (max 3 oz); and one 1.0-1.5 liter non-collapsible water bottle (e.g., Nalgene 1L): Water is an obvious key for health, and having two bottles of this size ensures that you have enough capacity to carry water between dry areas. Hydration systems and hoses add unnecessary weight - there will be plenty of opportunities to drink water, so drinking while walking is not necessary. Hoses often break when packrafting and are inconvenient while on the river. The primary use of the Nalgene will be to fill up the platypus in low water conditions. Gas station water bottles are ultra-light and durable (SmartWater, Lifewater...). One or two extra caps per crew may be useful.

First-aid supplies (max 2 oz): about a dozen assorted band-aids and other minor wound care supplies, 1 yard of first-aid/blister tape (leukotape is highly recommended), acetaminophen 500mg (x10) or ibuprofen 200mg (x10), Benadryl (x6, for allergies), epi-pen if you have allergies that can lead to anaphylactic shock, a small bottle of medical-grade superglue for wound closures (optional), and a tincture of benzoin ampules for increasing the adhesiveness of tape (optional). A small tube of Neosporin and some alcohol prep pads can help fight infection. A combination of an over-the-counter analgesic for pain and an over-the-counter anti-inflammatory to stop swelling can handle most scenarios just as well as prescription medications. You never know what you may suddenly become allergic to, Benadryl handles virtually all allergies. Staff will carry a comprehensive medical kit, stocked to handle any trauma situation that may arise. Each person must be capable of taking care of all personal needs. Prescription medications for the youth must be carried by the Adult Leaders.

Camp Gear

Backpack (55-80 liter size, so you can carry bulky group gear) (max 40 oz): Expect to carry an additional 20lbs of group/packrafting gear. Your pack should have some degree of waterproofing and should be lightweight. An internal frame is best. We are not carrying enough weight that an external frame is warranted. Backpacks with a simple design are best. No need for extraneous straps or pockets, which pose an entrapment hazard while river running.

Suggestions: HMG backpacks, Osprey Farpoint, Osprey Exos, etc.

Durable Pack liner: Waterproof and sized to fit the whole pack. Used to keep the sleeping bag and insulating clothing dry. We recommend a 3mm contractor trash bag (ultra-light, ultra-cheap). Pack liners are perfect waterproofing systems if you do not plan on purchasing individual dry bags for your sleeping bag and warm clothing.

Suggestion: search Amazon for the best deal

Sleeping bag (30F rating, down or synthetic) (max 32 oz): Your sleeping bag is your last line of defense against the cold. Get a good one, take care of it, and if it is down make sure it stays dry. If you are not using a pack liner, please have a separate dry bag for the sleeping bag and warm clothing (compressible dry bags work well).

Suggestion: See your local gear store to be properly fitted.

Sleeping pad (max 14 oz): Serves as a means of comfort and insulation against the cold. Can be inflatable (as long as it's durable) or foam. Half-length foam pads are the cheapest and lightest option. Full-length inflatable pads are the most expensive, but more comfortable. Suggestions: Klymit Static V, Amazon foam pads, Thermarest UberLite, Nemo foam pad

Ground cloth (2.5 feet x 6.5 feet, 2mil painter plastic, mylar emergency blanket, Tyvek, etc.) (max 3 oz): Since the shelters we provide are floorless, a personal ground cloth is needed to keep your gear clean and free from morning dew. Should be large enough to accommodate your sleeping bag and other gear kept in the shelter. An easy and cheap way to do this is for a crew to split up a roll of Tyvek.

Toiletries (max 4 oz): toothbrush, toothpaste, hand sanitizer, chapstick, sunscreen, personal meds, and toilet paper (repackage these into small containers so you have just enough for the trip). Hygiene is perhaps the most important factor in staying healthy and avoiding sickness on a trek. Only bring as much as you need (No, you do not need a full roll of toilet paper). Do not share toiletries and make sure they are in a waterproof container (or ziplock bag). Concerning female hygiene, please bring an antimicrobial pee cloth (Kula Cloth or bandana) and feminine wipes. Additionally, a menstrual cup is preferred for Leave No Trace principles but organic cotton tampons will suffice.

Insect repellent (max 1 oz): We do not expect to encounter too many mosquitos but you will want it when we do. We do not recommend 100% Deet, as it damages gear and is not healthy. Look for natural options. No aerosols are allowed. Insect repellent can be shared among the crew to save weight.

Insect head net (max 1 oz): Critical piece of equipment if we have to camp or travel in a highly infested area. Repellent works for a while - but you can only carry so much! Solution: insect head net combined with a hat (to distance the net from your face). All staff carries head nets.

LED headlamp* (the type that takes 2-3xAAA's or 2xAA's), with one set of extra batteries per crew (max 2 oz): Don't expect to travel in the dark, though a headlamp is useful in camp. You don't need the newest and greatest; all you need is something powerful enough to navigate from the fire to your tent and get situated for bed and if nature calls during the night.

Suggestion: Black Diamond Flare, Petzl e+Lite

oz): If you are on the packrafting trip, there is a high probability some of your gear may become wet. If inclement weather arrives the first thing you will want is a fire. If your fire-starting gear is wet you have a problem. The smaller and more compact the better.

Bear Bag (Durable Dry Bag) 20-25L, to store food (max 8 oz): The dry bag has two benefits: 1) Your food will stay dry during river travel, and 2) it is easy to hang in a tree while entrapping odors. This bag will be hung in trees each night, so it should be durable enough so it will not rip or puncture if drug over branches. We suggest that you bring a gallon size ziplock to store trash. MOHAB is not responsible for any ripped dry bags. Please know that all "smellables" (items that smell), must be put into this dry bag to be strung up at night. This bag is critical to safe and LNT camping in bear country. This bag should have enough extra space to store group food.

Suggestions: Sea to Summit Big River, NRS Tuff Sack

Lightweight 3-cup bowl with lid (smaller ones don't hold enough food and oftentimes spill) (max 1.5 oz): We will be cooking patrol style - boiling water, doling out dry food into your bowls, and allowing the food to rehydrate in the bowl. Lids can be made from tin foil. The bowl doubles as a drinking mug. The dollar store typically has good deals on bowls. You do not need a separate cup for hot drinks, simply enjoy them before or after eating. Optional: consider insulating your cup to keep your food warm for a longer time.

Suggestion: Snow peak titanium cup, Toaks titanium cup, GSI Cup

Lightweight but durable spoon or spork (max 0.5 oz): You want to eat, right? Please do <u>not</u> purchase the plastic "*light my fire*" eating utensil, as we have seen hundreds break. Long-handled spoons/sporks are a pro move, as they keep your hands clean and do not break. **Suggestion**: Long-handled spoon/spork

Lightweight journal and pen (optional): To record any profound thoughts or good memories. Also a very useful tool in emergencies or changes in the itinerary. You can wrap athletic tape/duck tape around the pen if you do not want to carry an entire roll.

Lightweight/Lightest possible camp shoes (optional): A cheap pair of flip-flops from Walmart or something similar is all that you need. The point of these shoes is to dry and air out your feet while in camp. They are not for use on the trail or for while you are packrafting. Crocs are commonly used.

Other Gear (optional gear is marked appropriately)

Trail Snacks: please bring a "handful" of snacks (12-16 oz per day) ~1000-2000 calories; peanut butter/almond butter packets, fig bars, nuts, dried fruit, energy/protein bars, trail mix, etc. This will serve as your lunch in addition to being your snacks while in the backcountry. Also, bring one or two servings of your favorite hot drinks (coffee, tea, soup, cocoa) for the morning. If you enjoy coffee, the unanimous favorites among staff are made by the <u>Black Rifle Coffee Company</u> and the <u>Black Coffee Roasting Company</u> (made in Missoula!).

Bicycle, skateboarding, climbing, or whitewater kayaking helmet: This is a must for those doing the packrafting course.

Lightweight, packable fishing rod, tackle, and MT license (optional): Fishing in the Bob is out of this world. You definitely want to be able to catch some fish. Plus, they're good eating! Bring seasoning if you plan on cooking fish. Please, please, please, read up on the fishing regulations on the Sun Rivers and the Flathead Rivers.

Lightweight trekking poles (optional): Should be collapsible so that they can be easily attached to your pack while scrambling or bushwhacking. DO NOT BRING TREKKING POLES IF YOU DO NOT NEED THEM OR IRREGULARLY USE THEM. Trekking poles are known to pop packrafts. If you think you *might* use trekking poles, do not bring them. If you know, undoubtedly, that you <u>need</u> them, feel free to bring them.

Lightweight merino wool sock reserved for sleeping only, 1 pair (max 2.5 oz, optional): Just so it's clear, that's 3 pairs of merino wool trekking socks total, if you choose to bring sleeping socks.

Camera (optional): if you are passionate about photography, feel free to carry a camera. Typically, small point-and-shoot cameras suffice. Smartphones can be used for photos ONLY.

Please have a waterproofing system in place to protect sensitive camera gear.

Locking Carabiners (optional): Locking carabiners are great to use while on the water. They are perfect for clipping your water bottle into your backpack or securing other items to your raft/backpack. If you are going to bring a carabiner, make sure it is a locking carabiner. Non-locking carabiners can be an entrapment hazard if you capsize and attempt a wet re-entry.

Prohibited Items

Electronics, including electronic compasses and altimeters, personal gaming devices, music players, e-book readers, cell phones, electronic (smart) watches, and GPS devices. Watches that only tell the time are allowed, but not recommended. You would be surprised how amazing it feels to not be constrained (stressed) by a schedule. All navigation will be conducted with a map and compass. Staff carry a SPOT device and SAT phone for emergencies.

Large hardcover books are not allowed, rather, bring a small softcover book. You will likely not have much time to read.

As always, alcohol, drugs, tobacco, firearms, and other illegal items are prohibited. If electronic tobacco devices are found, there will be immediate consequences.

One of the most important facets of experiencing Wilderness is *solitude*. The use of electronics either quietly or audibly will most likely negatively impact the experience of others who do not wish to be "connected" to modern-day technology in any way, shape, or form during their backcountry expedition. With this in mind, please leave **ALL** electronics at home or MOHAB base camp.

INDIVIDUAL GEAR CHECKLIST

NO COTTON CLOTHING (except bandana & baseball cap)

iraii (Siotning	
	lightest possible* synthetic long-sleeve hiking shirt (worn)	
	lightest possible* woven nylon trekking pants or shorts (worn)	
	lightest possible* synthetic underwear / spandex shorts (worn)	
	mid-weight, full cushion, merino wool trekking socks (worn)	
	lightest possible* trail running shoes with an aggressive sole (not waterproof) (worn)	
	cotton bandana / Buff (<u>worn</u>)	
	baseball cap (<u>worn</u>)	
Warm	Clothing (to be kept dry in a separate dry bag or pack liner)	
	lightest possible* synthetic long underwear top	
	lightest possible* synthetic long underwear bottoms	
	warm mid-layer jacket (200 weight fleece, high loft synthetic fill or down fill)	
	2nd pair of mid-weight, full cushion, merino wool trekking socks	
	warm hat or balaclava (100-200 weight)	
	warm gloves (100-200 weight)	
Other Items Worn/Carried		
	pealess whistle on a neck lanyard	
	sunglasses attached to a retainer so they can hang around your neck	
	compass (only need two per crew)	
Trail-Gear (keep this gear accessible in outside pockets or near the top of your pack)		
	lightest possible* waterproof-breathable rain jacket	
	lightest possible* waterproof-breathable rain pants	
	one 1.0-1.5 liter collapsible water bottle (Platypus)	
	one 1.0-1.5 liter hard-sided water bottle (Nalgene, Smartwater)	
	first aid supplies: a few assorted band-aids, 1 roll of first aid/blister tape, acetaminophen 500mg (x10) or ibuprofen 200mg (x10), Benadryl (x6), EpiPen if you have allergies that can lead to anaphylactic shock, superglue, Neosporin, alcohol prep pads	
Camp	Gear	
	backpack (55-80 liter size)	
	durable pack liners such as a large dry bag or contractor trash bag	
	sleeping bag (30*F rating, down or synthetic, needs an individual dry bag if not using a pack liner)	
	sleeping pad (½, ¾ or full-length pad)	
	ground cloth	
	toiletries: toothbrush, toothpaste, hand sanitizer, sunscreen, personal meds, toilet paper, feminine products (repackaged into small containers)	
	insect repellent (Natural or 30%+ DEET only)	
	insect head net	
	LED headlamp	

	fire starting kit containing a waterproof fire starter	
	25-35 liter dry bag to store food, with a gallon ziplock for trash	
	lightweight bowl	
	lightweight spoon or spork	
	lightweight journal and pen (optional)	
	camp shoes (optional)	
	bear bag to store food overnight (waterproof, durable drybag recommended)	
Trail Snacks		
	please bring a "handful" of snacks (12-16 oz per day): This will be your lunch on the trek. Plan to bring 1000-2000 calories per day.	
	bring one or two servings of your favorite hot drinks (coffee, tea, soup, cocoa) per day	
Other Gear		
	bicycle, skateboarding, climbing, or whitewater kayaking helmet (REQUIRED)	
	lightweight, packable fishing rod, tackle, and MT license (optional)	
	trekking poles (optional)	
	sleeping socks (optional)	
	camera (optional)	
Prohibited Items		
	electronics, including electronic compasses and altimeters, personal gaming devices, music players, e-book readers, cell phones, electronic (smart) watches, and GPS devices. Watches that only tell the time are allowed.	
	alcohol, drugs, tobacco, firearms, and other illegal items.	
	large hard-covered books	
Frontcountry		
	Class A Uniform: to include your Class A shirt, olive shorts or pants, olive socks, neckerchief, and slide.	
	Class B Scout shirt (T-Shirt with a Scout theme), an extra pair of shorts, socks	
	Extra house shoes or slippers (clean!) for base camp	
	Deodorant, soap, comb/brush, and shampoo, towel	
	A small duffel bag or day pack that can hold your "Frontcountry Stuff" that will be left at	
	the TRM Ranch	
	\$35 to \$50 for incidental spending money (road meals, trading post, etc.)	
	Paper copies of your BSA Medical Forms & Swim Test	
	Other required paperwork	

If you have any gear questions, please call Program Director, Thomas Evans, at (858)864-6613 and ask for recommendations. Thomas can help recommend less expensive gear that will perform well. Do not go out and spend lots of money on new gear without consulting our Program Director first. If you're unsure about anything, please ask.