



# LEADER'S GUIDE

2022

MONTANA HIGH ADVENTURE BASE  
<https://montanabsa.org/high-adventure/>

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## **WELCOME!**

We are excited to have you join us for a Montana High Adventure Base (MOHAB) expedition in the Bob Marshall Wilderness!

MOHAB is based out of the Boone and Crockett Club's Theodore Roosevelt Memorial Ranch near Dupuyer, Montana. In addition to having lots of fun and a newfound appreciation of the beautiful scenery, you will experience an advanced expedition program that will build youth leadership, strong outdoor skills, and expedition management. This is accomplished through the MOHAB Curriculum which focuses on 1) Wilderness Trekking, 2) Wilderness Packrafting, 3) Expedition Leadership, and 4) Conservation. Furthermore, our instructors will emphasize the principles of ultralight backpacking to maximize your comfort, safety, and enjoyment in the wilderness.

## **PURPOSE**

The purpose of this program is to foster an awareness of the importance of natural resources and develop leadership through immersion in the wilderness. At the trip's conclusion, participants will feel more comfortable in the outdoors and have the necessary skills to plan and execute expeditions of their own.

## **PREREQUISITES**

### ***Age and Certifications***

Scouts are required to be at least 14 and at most 18 years of age by the start of their MOHAB expedition. Scouts that are 19+ years old are considered to be Adult Leaders. Each crew is required to have at least two Adult Leaders who are both Wilderness First Aid and High Adventure trained. MOHAB will provide wilderness volunteers who have advanced first aid training, however, each crew should be prepared for emergencies regardless. Crews will be composed of at least 8 participants and at most 12 total participants.

### ***Backpacking Experience***

*Every participant is highly encouraged to have some prior backpacking experience. In addition, you should be very familiar with your gear and how to use it before your MOHAB expedition.*

Upon your arrival to the MOHAB, you will go through a rigorous equipment shakedown that will help you lower your pack weight, become familiar with the group gear issued by MOHAB, learn navigation and route planning procedures, and practice basic trekking and packrafting skills.

### ***Physical Fitness***

Your fitness will be tested on this trip, so preparing in advance is critical. The following fitness regimen is recommended:

- 6 months prior: day hiking on steep hills twice a week for at least one hour per session (foundational conditioning). 20 push-ups per day, 1-2 pull-ups per day.

- 4 months prior: day hiking on steep hills twice/week with a 20-pound pack for at least one hour/session (strength training). 30 push-ups per day, 2-3 pull-ups per day.
- 3 months prior: day hiking on steep hills twice/week with a 30-pound pack for at least one hour/session (strength training). 30+ push-ups per day, 3-5 pull-ups per day.
- 2 months prior: day hiking on steep hills once/week with a 30-pound pack for at least three hours/session (distance, endurance, and **foot conditioning**). 50 push-ups per day, 5+ pull-ups per day.

Please visit our [Resources](#) page for more detailed instruction on our training and fitness recommendations.

### ***Medical Evaluation***

Parts A, B, and C of the BSA Annual Health and Medical Record are required. MOHAB has the same requirements as other High Adventure Bases. [Download and use this form](#). All participants must arrive with a clear and realistic understanding of their physical health. Complete transparency in the health evaluation process both prior to and upon arrival at the MOHAB base camp is much appreciated. Due to the delayed access to health care and strenuous backcountry activities, an accurate and honest medical evaluation is of paramount importance.

### ***Shakedown Hike***

All participants will be required to participate in a shakedown hike at MOHAB with fully loaded backpacks. *MOHAB reserves the right to reject the participation of any individual, youth or adult, for inadequate physical conditioning as evaluated solely by that participant's performance on the shakedown trek.* The shakedown trek will be a fast-paced, 1-2 hour trek on steep terrain with fully loaded packs.

### ***Swim Test***

All participants must arrive with BSA *Swimmer* Classification, as evaluated by a certified American Red Cross Lifeguard or BSA Lifeguard within one year of your MOHAB start date. *Swimmer* classification is required because of the potential risks involved with swimming in swift rivers deep in the wilderness. **We do not conduct Swim Checks at MOHAB** - please bring your certification letter with you. The swim test certification form is available on the [MOHAB Resources Page](#).

## **WHERE IS MOHAB?**

MOHAB (**388 Upper TRM Ranch Rd, Dupuyer, MT 59432**; call if you have questions) is located 20 minutes west of Dupuyer, MT. If you are arriving by air we recommend flying into **Great Falls International Airport**. Shuttles to and from the airport and or trailhead (see below) are not included with the regular program cost. Round trip shuttles to the airport are \$660 per trekking crew (12 participants) and can be coordinated with Camp Director Luke Coccoli, [406-472-3311](tel:406-472-3311). If you are arriving by vehicle, follow highway 89 north of Great Falls to reach Dupuyer, MT. Once in Dupuyer, head west (towards the mountains) on Gillette Drive (aka Dupuyer Creek Road) for about eight miles until you reach a fork in the road. Take a left and drive less than a mile until you see the TRM Ranch/RWCC sign, then turn right. After you pass the TRM Ranch main entrance, stay left and drive past the upper ranch house and continue to the Center. A map, directions to camp, and more details about the property can be found on the [Getting to MOHAB Page](#).

Additionally, you can follow the appropriate links below for exact google maps links that do work and will take you directly to the ranch.

- [Coming from Great Falls](#)
- [Coming through Browning](#)
- [Coming through Choteau](#)

These are the only three possible ways to get to the ranch, so please use the appropriate link. Please ensure that your navigation system does not route you to Swift Dam, as it is not a through road.

## **TRANSPORTATION WHILE AT MOHAB**

If you opted for one of our packrafting programs, transportation is needed to reach the trailhead and is not included in your participant fees. We can shuttle your packrafting/trekking crew to the start of your MOHAB adventure from the ranch and back. The shuttle rate is \$1.35/mile and is subject to change. Shuttling mileage includes the 15-passenger vans used by the Troop and the "chase" vehicle(s) needed to shuttle those vans and/or personal vehicles across rugged and sometimes abusive dirt roads. This fee helps ensure proper care and maintenance for our fleet during the off-season to ensure quality transportation exists for MOHAB Scouts for many years to come. You will be charged for your shuttle once all trek logistics have been completed at base camp via credit card or by check. MOHAB is not liable for any damage or unforeseen circumstances regarding the use of personal or rental vehicles, thus, it is recommended that you reserve the MOHAB vehicles. To arrange shuttles, including to and from the airport, please contact Program Director, Thomas Evans at (858) 864-6613 or [315.MOHAB@scouting.org](mailto:315.MOHAB@scouting.org).

## **CURRICULUM**

By the end of the course, participants will be familiar with and will retain skills relating to:

- **Wilderness Trekking techniques and skills:**
  - Principles and gear of ultralight backpacking
  - Expedition cooking and nutritional requirements for multi-day expeditions
  - Risk management, safety procedures, and decision making
  - Off-trail and on-trail, river corridor, forest, and mountainous alpine navigation tactics
  - Techniques to manage inclement weather through preparation and leveraging the latitude of your gear
- **Wilderness Packrafting techniques and skills (packrafting treks only):**
  - Equipment selection and use
  - Paddling, inflating, securing gear, and other crucial packrafting skills
  - Risk management, safety procedures, and decision making
  - River corridor and on-the-river navigation tactics
  - Incorporating packrafting into your wilderness travel
- **Expedition Leadership principles:**
  - Learning to reach well-constructed decisions quickly and knowing what steps must be taken for action
  - Recognizing your value to the team, knowing your limits, and being of service to the crew
  - Managing behavior and conflict
  - Developing sound methods to organize your gear and provide opportunities to learn new skills
  - Meeting and overcoming challenges with courage and an open mind
- **Conservation foundations:**
  - Develop the “Leave No Trace” ethic and learn how to minimize the impact of wilderness travel
  - Understand the value of “wild places” and the health of the ecosystem
  - Experience the flora and fauna of the Bob Marshall Wilderness Complex and learn how it is affected by human activity

## **SCHEDULE**

The one-week trek will consist of two days at base camp and five days on-trail. A two-week trek differs only by the duration of on-trail travel (12 days). The typical schedule is as follows:

### **Sunday:**

Plan on arriving at MOHAB between 3 P.M. and 5 P.M.

- 5:30 pm - Boone and Crockett Introduction
- 6:30 pm - Dinner & Flags
- 7:30 pm - Leave No Trace
- 8:30 pm - Expedition Leadership
- 11:00 pm - Lights Out

### **Monday:**

- 6:55 am - Flags
- 7:00 am - Breakfast
- 8:00 am - Meal Packaging
- 10:00 am - Group Gear distribution, Bear Awareness
- 11:00 am - River safety
- 12:00 pm - Lunch
- 12:30 pm - Hazardous Weather
- 1:00 pm - Shakedown Hike, Final Gear Inspection
- 5:30 pm - Plan Itinerary
- 7:00 pm - Dinner & Flags
- 10:30 pm - Lights Out

### **Tuesday:**

- 7:00 am - Breakfast
- 8:00 am - Leave TRM Ranch
- 9:00 am - Stillwater Training

**Tuesday morning - Saturday afternoon:** In the Bob Marshall Wilderness Complex

### **Sunday:**

- 7:00 am - Breakfast
- 7:45 am - Debrief
- 8:00 am - Checkout and packing
- 10:00 am or earlier - Departure

**Note:** The Checkout time of 10:00 A.M. is **MANDATORY**. MOHAB has crews arriving every Sunday by 5 P.M. (sometimes earlier), and we require time to prepare for the following crew.

## **ROLES AND RESPONSIBILITIES**

**Trek Director's Role:** The Trek Director's primary responsibility is the health and safety of all participants while maintaining the provision of final decision-making authority. In addition, the Trek Director and Assistant Trek Director(s) will be responsible for implementing the MOHAB curriculum and advising the crew in route planning, group decision-making, and skills training. These are volunteer positions, and the youth participants will receive training and instruction while at the MOHAB basecamp that will prepare them to be the leaders of their trek. MOHAB is not an outfitting service, therefore, all participating Venture Crews and Boy Scout Troops will provide their own, two-deep, adult supervision.

**Youth Instructor's Role:** MOHAB may provide your crew with one or more Youth Instructors (age 15-17). Youth Instructors serve as mentors and examples for youth participants. In addition, they will also assist the Trek Director in preparing for the trips, helping to facilitate discussion, and conducting training sessions.

**Youth Participant's Role:** Youth participants ("Scouts") have the responsibility of preparing for their trek with adequate gear that meets MOHAB requirements, good physical conditioning, and enthusiasm for their adventure! The youth participants will be expected, after MOHAB training, to demonstrate an appropriate amount of leadership, initiative, and decision-making skills while on the trek. Most importantly, youth participants are expected to demonstrate positive expedition behavior consistent with Scouting Aims and Methods, the Scout Oath and Law, and the Expedition Leadership curriculum taught as part of the MOHAB program.

**Adult (Troop) Leader's Role:** Your role is to relax, have fun and enjoy the experience. Stand back and let your youth participants and the MOHAB staff take the reins. We expect the adult leadership maintains an encouraging attitude as a contributing member of the crew. However, MOHAB's focus is on developing the Patrol Method - please let the Scouts in your crew lead the trip with guidance from MOHAB staff. Successful MOHAB treks are entirely Scout led, no matter the trials and tribulations (within limits of health and safety) that we may encounter as a crew. Please stand in the background and allow the process to happen. Your most important role on this trip is to be an endless source of encouragement for your youth!

**Expedition behavior:** Please act in a manner that embodies the Scouting principles of honor and respect for the duration of your MOHAB trek. Understand that people handle obstacles in unique ways. Contribute to the group by using effective communication and transparency. Do your fair share and speak up if you feel called to do so. Remember, the group is here to support you and we all benefit if we can work together as a team.

**Group Dynamics:** *Youth-led.* On the trip, we will be giving the Scouts the flexibility to dictate their own experience within the agreed-upon parameters. They will be responsible for managing the pace, navigating the route, and making decisions as long as it is within the framework we provide. The Trek Director and Assistant Trek Directors will be on the trek to ensure the safety



of all participants while providing additional skills training if needed. As long as the Scouts make sound decisions and are on schedule, the (Assistant) Trek Director will be largely behind the scenes and intervene when asked or when necessary. Dysfunctional crews should expect their Trek Director to be much more involved and vocal, and there will be less leeway on the trek. Even the most dysfunctional crews should expect to be running smoothly by the end of the trek.

For those of you who are coming in a group, you can start now by outlining crew roles and responsibilities while on the trek so that the instructor knows who to communicate with. The more time you spend preparing and practicing scenarios with the designated leadership roles will serve you well in the wilderness. **Before** arriving at MOHAB, please make sure that you have selected a **crew leader**, who will serve as the lead Scout for this trek.

## **RISK ADVISORY**

The Montana High Adventure Base is located in the Northern Continental Divide Ecosystem adjacent to the Bob Marshall Wilderness Complex in Montana.

The following table presents hazards and risks unique to the area. This list is not exhaustive and does not necessarily represent the severity of the prominent hazards and risks.

<b>Hazards</b>	<b>Potential Risks</b>
Heat & sun exposure	Dehydration, sunburn, heat exhaustion, heatstroke
Cold, wind, & rain exposure	Hypothermia, frostnip
Extreme mountain topography	Overexertion, joint, muscle strain, slips and falls, foot/ankle/knee injuries
Off-trail travel	Injury from contact with, or slips/falls in the undergrowth
Bears and other wildlife	Encounters with the possibility of physical injury
Biting insects, grass and tree pollen, & plant irritants	Allergic reactions, infections resulting from scratching irritated areas, insect-borne diseases (e.g. ticks, mosquitoes)
High altitude	Headache, nausea, loss of appetite, dizziness, acute mountain sickness, related altitude conditions
Wilderness rivers, cold water, swift water	Drowning or injury resulting from uncontrolled swims/entrapment in river debris, hypothermia resulting from immersion in cold water

The MOHAB staff are highly trained and strive to mitigate these hazards by emphasizing safety above all else. Participants who have preemptively improved their fitness, are familiar with all their gear, have practiced trekking and packrafting skills, and have a plan to deal with hazards will be safe on their expedition. We advise all participants to take this opportunity seriously; fully conscious of the risks associated with wilderness travel. On the trek, participants must be willing to follow directions accurately and have the necessary level of fitness, basic trekking skills (systematically packing your pack, pace management, basic navigation, etc.), and camp skills (fire making, shelter set up, water treatment familiarity, cooking experience, bear bagging techniques, etc.). Participants must prepare in advance and take responsibility for their own health and safety to succeed on this trip. Those who follow our gear list, are active listeners, and keep an open mind will have the greatest opportunity for growth and learning. Parents, guardians, and participants are advised that journeying to and from MOHAB does involve inherent risk and exposure to injury and/or illness.

All MOHAB staff maintain the following competencies: Wilderness First Responder training, Wilderness First Aid, CPR, auto-injector use, Swift Water Rescue, hazardous weather, and risk management. They will be ready to assist your crew in recognizing, reacting to, and responding to injury or illness.

*The equipment provided by Montana High Adventure Base is to be cared for diligently. The Montana Council reserves the right to bill participants for the equipment they lose or damage due to negligence.*

## **HEALTH ADVISORY**

**High-Risk Health Conditions in Remote Environments:** MOHAB expeditions take place in one of the most remote environments in the Continental United States. While we carry satellite communications devices (e.g. Satellite phones, SPOT beacons), rescue operations are complex and subject to delays of up to several days depending upon weather, terrain, and other environmental factors. Therefore, if upon consultation with our medical advisors, we deem that a participant's pre-existing health condition might pose an unnecessary risk to the safety of the expedition, we reserve the right to refuse participation.

**Exceptional Fitness for Rough Terrain at High Altitudes:** MOHAB expeditions take place in extremely rugged, mountain environments. Steep trails, high altitudes, difficult off-trail travel over scree, talus, and undergrowth, and sustained long walking distances require exceptional levels of cardiovascular endurance, muscular fitness, and foot (walking) conditioning with a heavy pack. Fitness will be evaluated on a shakedown hike, and *we reserve the right to exclude the participation of any participant if a lack of fitness is observed during the shakedown.* No exceptions to the BSA-mandated obesity guidelines will be granted under any circumstance.

## **PRE-COURSE COMMUNICATION**

You can contact the below people regarding questions:

- Luke Coccoli, Camp Director, [luke@boone-crockett.org](mailto:luke@boone-crockett.org)
- Thomas Evans, Program Director, [315.mohab@scouting.org](mailto:315.mohab@scouting.org)

Most questions can be answered via our website, [Montanabsa.org](http://Montanabsa.org). There are course descriptions and guidelines as well as a Resources page that has lots of useful information.

## **ANTICIPATED WEATHER AND ENVIRONMENTAL CONSIDERATIONS**

**Overview:** Summer trekking in the Bob Marshall wilderness is usually accompanied by warm days and cool nights. Late summer (end of July through September) can be accompanied by strong thunderstorms, and rainstorms, although not particularly common, are a necessary consideration throughout the whole season. Alpine weather systems are unpredictable and can change in the blink of an eye. Preparing for all types of weather and learning how to read the signs will help you manage weather systems in the future. The best way to manage river travel and precipitation in an alpine environment is to have lightweight (ultralight) gear. This will make your pack lighter, but it also means that **when** you get wet, your gear will dry quicker and you will be warmer.

**Temperatures:** As the snow melts and the rivers rise, temperatures steadily increase. In early June weather can still be chilly and precipitation can bring sudden dips in temperature. By late June and into July, the temperature has increased steadily and the days are favorably warm with cool nights; however, seldom and sudden cold spells are not uncommon. During this part of the season, layers are a necessity. Layering doesn't mean bringing your winter jacket to put on during the cold spell - it means that all of your gear when combined appropriately has the latitude to keep you cool during the days and warm during the nights. The gear list we provide has considered the expected weather patterns, and if followed precisely, your gear will have the diversity to keep you comfortable for the duration of the trip.

We will be traversing the Bob in elevations ranging from 5000 to 8000 feet. In the summer months, daytime temperatures range from 30F to 90F with an average of 65F. For an estimate on the expected temperatures look up the weather for "Dupuyer, MT". Remember temperature drops by about 2-3F for every 1000 feet of elevation gain. The Theodore Roosevelt Memorial Ranch is located at about 5000 feet and there is a possibility your trek will take you up to 9000 feet.

One thing to note is that while in the field it is important to sense weather conditions before they arrive and change your clothing in advance to meet that weather. Staying dry is the biggest key to staying warm. Practice packing your pack so you can access the clothing you need if the weather were to suddenly change.

**Precipitation:** In the summer season, we expect most days to be dry and sunny; however, we will prepare for the occasional thunderstorm. These can be intense with bursts of hail and heavy rain. We will prepare for the presence of these storms on our trip.

**Terrain Types:** Trekking will be mostly on well-maintained trails throughout the Bob Marshall wilderness; however, off-trail navigation and travel will occur. For those who are opting to do the packrafting trips, off-trail travel is inevitable to connect the legs of the trip. The terrain will vary with elevation and, for most of the trip, you will encounter a combination of mountainous alpine with thick forests at high altitudes, and meadows surrounded by forests down in the riverbeds. While crossing mountain passes, you will encounter exposed rocks, high winds, and limited tree cover. Shallow yet possibly swift stream crossings may be necessary and adequate preparation will be devoted to this technique. By the time you start your trek, most of the snow should recede; however, up high it is possible to run into patches of snow that must be traversed.

**Daylight:** Nights are over quickly with daylight beginning around 5 AM and useful light lasting until 10 PM. This will allow you to cover a good amount of ground each day as well as enjoy some fun time in camp. From fishing (bring your fishing gear - the fishing is incredible) to learning new skills, the extra daylight is a nice bonus. Do not plan on traveling all 17 hours of the day, this will make for a less enjoyable experience.

**Wildlife & Insects:** The Bob Marshall Wilderness is home to a diverse ecosystem that is home to grizzly bears, black bears, elk, wolves, and even rattlesnakes. Although very rare, negative encounters with these animals are possible. Proper training and emphasis will be given to handling these situations and strict protocol will be followed to ensure safety. Each group will be given enough “bear spray” and will be taught how to use it. Mosquitos should not be a huge issue; however, a head net and insect repellent should be brought by all participants.

**Elevation and Altitude:** Days spent at higher elevation can be taxing on the body resulting in shortness of breath and decreased endurance. Altitude sickness can be common for travelers from sea level. Since most travel will be below 8000 feet, the effects of altitude will not be as prevalent as at higher elevations. Nevertheless, during pass crossing and at other times, elevation may be a factor, and participants are encouraged to work on their fitness (especially at higher elevations) before the trip.

## **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 shakedown. ***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 only 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\* Trail running shoes with an aggressive lug sole (not 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. Absolutely no GORE-TEX 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:** [Suunto](#) (best), [Mountain Summit Gear](#), [TurnOnSport](#), and other similar compasses

## **Trail Gear and Clothing (keep this gear accessible in outside pockets or near the top of your pack)**

**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](#)

**Fire-Starting kit containing a magnesium striker and/or waterproof fire starters (max 2 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 not 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 [Black Rifle Coffee Company](#) and the [Black Coffee Roasting Company](#) (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 need 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)*

### **Trail Clothing**

- 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 (worn)
- baseball cap (worn)

### **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, ⅔ 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.**