

# FIELD SAFETY RESOURCES

## BOTANY DEI COMMITTEE | UNIVERSITY OF WYOMING

### Safety Trainings

#### First Aid

- Fully online first aid, wilderness first aid (WFA), or CPR Certification
  - Pro Trainings (<https://www.protrainings.com>) (first aid and CPR)
  - The Red Cross (<https://www.redcross.org/take-a-class/online-safety-classes>) (first aid and CPR)
- In-person/Hybrid first aid, wilderness first aid (WFA), or CPR Certification
  - University of Wyoming Outdoor Program (<http://www.uwyo.edu/rec/outdoor-program/wilderness-medicine.html>) (Wilderness first aid, wilderness first responder)
  - The Red Cross (<https://www.redcross.org/take-a-class>) (first aid and CPR)
  - American Heart Association (<http://ahainstructornetwork.americanheart.org/>) (first aid and CPR)
  - Courses at Laramie County Community College (<https://lccc.wy.edu/workforce/development/emergencyServices.aspx>) (first aid, CPR, EMT)
  - NOLS Wilderness Medicine (<https://www.nols.edu/en/coursefinder/courses/wilderness-first-aid-WFA/>) (wilderness first aid, wilderness first responder, wilderness emt) (also has a great library of free learning resources: (<https://www.nols.edu/en/wilderness-medicine/resources/>))

#### Interpersonal Interaction Trainings

- General Anti-Racism toolkit (<https://guides.library.georgetown.edu/c.php?g=1046869&p=8321198>)
- Article on LGBTQIA+ safety in the field (<https://massivesci.com/notes/diversity-fieldwork-field-work/>)
- Bystander intervention training (free): (<https://righttobe.org/>)
  - Bystander intervention protocol: 5Ds Distract, Delegate, Document, Delay, and Direct
- UW Green Dot bystander training program (<http://www.uwyo.edu/greendot/>)

### Reporting

#### Injury Protocol

- UW statement on potential hazards:  
([http://www.uwyo.edu/safety/\\_files/Docs/Plans/uw-safety-and-health-program-final-21apr21.pdf](http://www.uwyo.edu/safety/_files/Docs/Plans/uw-safety-and-health-program-final-21apr21.pdf))

- Report injury and apply for workers compensation:

(<http://www.uwyo.edu/safety/procedures/incident-injury-reporting.html>)

## **Misconduct**

- UW Report It: (<https://www.uwyo.edu/reportit/make-a-report/index.html>)
- Contacts:
  - Title IX office (Jim Osborn): 307-766-5200
  - Dean of Students office: 307-766-3296

## **Establishing expectations**

- Fill out field safety plan and make sure all members of the group have a copy
- Discuss expectations of work hours, privacy and boundaries, alcohol protocols, camp/field station chores, driving arrangements, group check-ins, etc.
- Some resources that give examples of group norms and expectations and how to create them:
  - From U Penn Medicine:  
<https://www.med.upenn.edu/uphscovid19education/assets/user-content/documents/leading/guide-to-establishing-team-norms-final.pdf>
  - From UC Berkely Public health: [https://publichealth.berkeley.edu/wp-content/uploads/2020/01/On\\_Setting\\_Group\\_Norms.pdf](https://publichealth.berkeley.edu/wp-content/uploads/2020/01/On_Setting_Group_Norms.pdf)
  - From Monroe County Community School:  
<https://www.mccsc.edu/cms/lib/IN01906545/Centricity/Domain/259/developingnorms.pdf>

## **Suggested Personal Equipment Checklist**

These items are important for each person to have every time you go into the field for the day. If you don't have all of the gear you need, your supervisor/advisor should be able to help. You don't need to get fancy gear, you just need things that are comfortable and safe. If you are worried about funds to get the gear you need, ask your PI to see if they have any grant money to purchase supplies you need to safely do field work.

Here are some online stores that often have good deals on new outdoor gear:

- <https://www.rei.com>
- <https://www.rei.com/rei-garage>
- <https://www.backcountry.com>
- <https://www.steepandcheap.com>

It's also great to look for second hand gear! It's often pretty easy to find used gear in really good condition for a *lot* cheaper than you can buy it new:

- NU2U (320 S 5th St) and NU2U Sports (116 E Custer St.) here in Laramie are good places to look for used clothing and outdoor gear
- <https://www.rei.com/used>
- <https://wornwear.patagonia.com>
- Goodwill (harder to find but sometimes useful for things like water bottles or clothes)

## Gear List

- **Plenty of water** When it's hot out, try to drink at least 24oz. of water every hour (this is  $\frac{3}{4}$  of a nalgene water bottle). Be sure to plan ahead and bring enough! Even if it's not hot, be sure to drink water. You can still get dehydrated, even if it isn't hot! However, don't drink more than 48oz. per hour (1  $\frac{1}{2}$  of a nalgene), which can lead to nutrient depletion. If it's very hot out, it can be nice to use an insulated bottle so that your water stays cold. Consider adding some electrolyte powder to your water to help stay hydrated when it's really hot--here's a [tutorial](https://theplantedrunner.com/homemade-hydration-diy-nuun-electrolyte-powder/) to make your own!  
(<https://theplantedrunner.com/homemade-hydration-diy-nuun-electrolyte-powder/>)
- **food/snacks** Always bring a little extra, just in case! It's handy to keep utensils and a handkerchief to use as a napkin in your backpack so you always have them.
- **Hat, sunscreen, sunglasses** It can be nice to have a hat with a full brim, especially if you're bending over a lot and exposing the back of your neck. It's also important to have sunglasses that have 100% UV protection. Sunscreen should be broad-spectrum with an SPF of at least 15, and should be applied at least every 2 hours. Make sure to check the expiration date on the sunscreen you're using--expired sunscreen can lose its efficacy really quickly! Here's [more information](https://www.fda.gov/drugs/understanding-over-counter-medicines/sunscreen-how-help-protect-your-skin-sun) about sunscreen.  
(<https://www.fda.gov/drugs/understanding-over-counter-medicines/sunscreen-how-help-protect-your-skin-sun>)
- **Footwear** Good shoes can make or break a day in the field. You should always wear closed-toe shoes, and you should be ready for them to get dirty. If you'll be hiking a lot and carrying a heavy pack, it can be helpful to have hiking boots with ankle support. If you won't be walking as much, tennis shoes can be sufficient. Wool socks, even in warm weather, are worth the investment. They dry-out much faster than cotton socks, whether from water or sweat, are still warm when they're wet, and are somewhat naturally antimicrobial. I like to carry a spare pair if I know that my feet are likely to get wet.
- **Appropriate clothing** Clothing depends on when and where you are working, but there are a few guidelines that apply in most places. It's a good idea to ask lab-mates what they wear in the field to get a good idea of any necessary items specific to your field site. Long pants are always a good idea to protect your legs. It also is often good to wear long-sleeves, even when it's hot outside! A loose-fitting shirt, especially with built-in UPF (sun-protection) is really great for protecting your skin from the sun. It also saves you from needing to re-apply sunscreen to your arms. Make sure your clothes are comfortable and allow you to move around easily. The fabric that your clothes are made out of is also important, especially if you'll be sweating or getting your clothes wet at all. Cotton fabric doesn't dry quickly and loses most of its insulating qualities when it's wet. It's better to use clothes made from wool or synthetic fibers instead, because they dry quickly and still have some insulating ability when they're wet. If you don't know the materials a piece of clothing is made from, look at the tag inside. It should give the percentage of each of the fibers used to make the garment.
- **Rain gear and extra layers** Even if rain isn't in the forecast, it's always a good idea to be prepared for bad weather. It's good to have a raincoat that you know will keep you dry, and can also be helpful to have rain pants, especially if you will be stuck outside for a while if it starts to rain. Rain pants can also help keep your legs dry if you're working

early in the morning when vegetation is dewy or after it stops raining. Having an extra warm layer or two is also important, just in case the temperature dips or something bad happens and you need to stay out longer than you anticipated. A puffy jacket is a good option because it packs down very small but is still warm.

- Any **personal medications** that might be required (e.g. epi-pen, insulin, dramamine, ibuprofen, etc.)
- If you don't have access to a bathroom, anything you need to do what you need to do **outside** (<https://www.rei.com/learn/expert-advice/hygiene-sanitation.html>). Similarly, for people who have periods (<https://www.rei.com/learn/expert-advice/backpacking-with-your-period.html>) and another helpful video link (<https://www.youtube.com/watch?v=jjFZ1nzijrl>)
- **Backpack** Big enough to hold all of your personal gear, as well as any fieldwork materials you need to carry. Make sure that it's comfortable if you need to hike for a while!

### **Suggested Group Equipment List**

These lists include safety gear that is important to have for your entire group, but isn't necessary for each person to carry. Your supervisor should provide these materials, or help you access them. You shouldn't be responsible for providing these with money from your own pocket!

The first list has material that should be carried while doing work (i.e. in a backpack) by at least one person in each group. This can be the 'supervisor' of the group, or a different designated person, but either way, make sure that everyone in the group knows who is carrying this equipment. The second list has equipment that can be kept in your vehicle, but is still important to have accessible. Make sure that at least one person in your group knows how to *use* all of this equipment!

#### **Carry one of each with each group**

- Charged cell phone (if in cell service). It's a good idea to have a portable battery and charging cable
- If you're not in cell service, it's ideal to have one of the following
  - Two-way radio that allows you to contact someone that does have cell service
  - Satellite phone
  - Wildland radio
  - Personal locator beacon with an active subscription (i.e. inReach, Spot, etc.)
- Map of the area, either on a GPS, or on paper (in which case you should carry a compass also, and know how to use it!)
- First aid kit, containing generic equipment as well as anything to address first aid concerns specific to your setting. Make sure it has been restocked after previous use, and that medications are not expired.
  - Basic first aid kit contents: <https://blog.nols.edu/2016/06/03/27-considerations-for-a-first-aid-kit>
- Emergency kit
  - Space blanket/rescue tarp/lightweight bivy sack

- Light source (flashlight or headlamp) with spare batteries
- Matches, lighter
- Water treatment system (Iodine tablets, Aqua-Mira drops)
- Knife or multi-tool
- Duct tape
- Copy of your group's field safety plan (see below for example), as well as any additional relevant protocols

**Keep one of each in each vehicle**

- Copy of your group's field safety plan (see below for example), as well as any additional relevant protocols
- Insurance information, emergency contacts, and allergy information for all members of the field team. Additionally, you can invite participants to place any information that they would not like to publicly disclose but would be essential for an ER doctor to have in a sealed envelope. This envelope will be given to emergency personnel only if an emergency occurs, and otherwise will be destroyed after fieldwork ends.
- Printed directions to the nearest medical center as well as a paper map.
- A list of important phone numbers (i.e. supervisor number, land management contacts, non-emergency law-enforcement, participant emergency contacts, etc.)
- Copies of relevant permits
- Copies of drivers' licenses, driver authorization forms (if applicable)
- Copies of vehicle insurance policy and registration
- Vehicle safety supplies: Jumper cables, a jumper battery pack if you're not with other vehicles, tire gauge, spare tire (make sure it's not flat), jack, tire wrench, tow strap, traction mats, the knowledge to use all of these tools!
- Basic tool kit: pliers, screw driver, shovel, duct tape, bungee cords, paracord, garbage bags
- First aid kit, extra water, emergency snacks
- If you work in dry vegetation, emergency fire extinguishing supplies: Fire extinguisher, shovel, bucket of sand