Safety Information - Base Template

General

- Take the lab Garmin or check out one from the front office
- Check out a first-aid kit from the front office, we have a small kit in the basement lab

Working Outside – General Summer

- **Sunlight** contains UV radiation, which can cause cataracts and skin cancer. Be sure to cover up and bring sunscreen and wear a wide brimmed hat and UV absorbent sun glasses.
- **Heat.** Drink plenty beforehand and bring plenty of water. Generally, for a half day trip with activity in the sun, bring 2-3 L or 1L with a filter system. Wear light loose clothing. Take frequent short breaks in the shade. Eat smaller meals.
- Use the buddy system and learn the signs of **heat-related illness** – clammy, profuse sweating, dizziness. Place an overheated worker in the shade or a cool room. Loosen clothing and apply a cool wet cloth to face and neck. **Vomiting suggests medical attention is needed.**
- **Hiking:** Wear appropriate footwear for the terrain and loose synthetic clothing – **no cotton.**
- **Rain.** Always prepare for changing weather conditions, especially if working in mountain environments. Bring a rain jacket with hood, rain pants, waterproof boots. If potentially hiking in snow or swampy areas, bring gators. When ground is wet, move slowly and safely as ground may become slippery.
- **Food.** Bring food, protein bars, nuts, dried fruit, etc and eat smaller meals.

Working in Mountain Environments – General Summer

Mountain environments are dynamic and when working in these areas one should be prepared for all weather conditions (including snow in July) and to potentially stay the night.

- Exposure to severe lighting storms when above tree line is possible. Exit water immediately.
- Mountain environments experience rapid changes in weather including temperature and precipitation regimes. Ensure you have adequate clothing including,
  - Rain Jacket with hood, rain pants, waterproof shoes/boots, gaters,
  - Extra clothing layers made of wool or synthetic materials.
  - Food and water (include a water filtration unit)
  - Shelter – tent or bivy sack

Working in Mountain Environments – General Winter

- **Sun protection:** Snow reflects sunlight at all different angels, so ensure you have adequate sunscreen and put in places you wouldn’t think (e.g. the bridge between your nostrils). I like to use an oil based sunscreen in the winter because water based sunscreens can freeze and irritate your skin
- **Layers:** Bring multiple layers of clothing including a synthetic, silk, or wool baselayer, a mid-layer, and a water proof shell with pit-zips. Maintaining body temperatures that are not too low or too high is critical. If you are too warm you will sweat and your clothing will get wet and your will be cold and uncomfortable.
- You should have waterproof pants, boots, gaters, a hat, and sunglasses. Sunburned eye balls don’t seem like fun.
- Bring water and a water filter
- Bring plenty of dried food for a day.
• If working in mountain environments each participant should have a full avi kit and know how to use it.

Working Near and In Water
• Hazards related to working in and near swift water include: Drowning, which may occur due to shock from immersion in cold water, weight of waterlogged clothing, no life jacket, incapacity due to injury, fatigue or hypothermia. Mitigate these risks by always wearing a life jacket. If working in and around swift water, swift water training and rescue course are available – ask PI Brahney if required.
• Risks to falling into river include sloughing ground, varied water depth, swift currents, and bridge failure.
• Working in lakes during thunder and lightning storms is not recommended. If caught in a lightning storm, take precautions as described below

Thunderstorms and Lightning
• If in water, get out as soon as possible
• Avoid isolated tall trees. Lightning is likely to strike the tallest object in a given area (try not to be the tallest object). Avoid open areas. Retreat to dense smaller trees, low lying areas, and avoid water. Avoid metal objects like fencing and do not lean on concrete as it may have metal scaffolding inside. Never lie flat on the ground.

Working in grizzly bear country
You are grizzly bear food. Bear spray is more effective than firearms, making noise and practicing bear-safe behaviors is even safer.

Like all bears, grizzlies are curious and attracted to different smells.
• Food: Keep ALL food in bear food in bear safe containers. I mean ALL food, ALL. Even scarp of old food or spilled food on your clothing or bag can attract a bear to your tent at night. Bears can smell food up to 40 miles away. A bear is smelling you right now.
• Toiletries: Keep all toiletries in bear safe containers or in smell proof bags. You soap, shampoo, and toothpaste smell yummy. Your bad human stank is your only defense.
• Cooking: Cook all food WELL AWAY FROM your sleeping area
• Store food in bear safe containers WELL AWAY FROM your sleeping area

Stay in a group. It is easy for people to get separated when hiking due to different paces and abilities. This can be dangerous in grizzly country. If you stray ahead and are not generally paying attention you can round the corner on a bear surprising both of you. I personally know a colleague who lost part of his stomach to a grizzlies doing just this. A grizzly has never charged a group of four or more people – keep that in mind.

Make noise when hiking. Keeps bears away. If you don’t feel like talking, it is common practice to ensure that every few minutes someone yells ‘hey bear’ (I say ‘go away bear’).

Unlike black bears, brown/grizzly/Kodiak bears are primarily tundra bears. This means they are generally exposed over long distances (as opposed to sheltered in a forest) and their first line of
defense is to attack (as opposed to hiding). This requires some behavioral modifications when working in grizzly country. If you notice a grizzly in the distance, avoid at all costs. If you happen upon a grizzly at a medium distance, slowly back away. If the grizzly charges – stand your ground, it may be a bluff charge. It is possible the bear will charge and reach up to a few meters in distance, stamp the ground, roar, and then walk-away. Use this opportunity to spray the bear, and be careful as bear spray will also incapacitate YOU. If the bear swipes and knocks you down, play dead. If the bear starts to eat you, fight like hell.

Grizzlies are no joke. But this is funny [http://www.collegehumor.com/post/6576889/10-reasons-why-bear-week-would-be-better-than-shark-week](http://www.collegehumor.com/post/6576889/10-reasons-why-bear-week-would-be-better-than-shark-week)

**Safe Driving - Follow all university policies, these include**

- All students and employees who operate university vehicles or personal vehicles for university business must complete an approved driving course every 2 years ([https://wwwou.usu.edu/riskmgt/vehicles/drivers-training](https://wwwou.usu.edu/riskmgt/vehicles/drivers-training))
- Every driver must possess a valid and appropriate license

**Wear seatbelts**

- do not use your cellphone while driving under any circumstances
- wear seatbelts
- do not drive under the influence of any drug or while sleep deprived.