



## **Health and Safety Plan for Midwest Institute of Geosciences and Engineering**

This is the general health and safety plan (HASP) for the Midwest Institute of Geosciences and Engineering. It is not site specific.

We are all responsible for our own safety and those around us.

If you see something unsafe, report it. It doesn't matter if it is the work of others or a natural unforeseen hazard.

It is none of our business if you have specific medical conditions. However, you must be responsible for any medication you may be on. Please bring ample supply if applicable. It is also your responsibility to make sure your emergency contact knows.

Some hikes will be physically taxing. Pace yourself. We will allow extra time for people. If at any point you feel that you cannot do a physical task, let a field trip leader know! We will never force you to do anything physical that you do not think you can handle.

You will be required to wear a safety vest when along the roads. We can supply those.

These guidelines are for your information and will be adhered to if you are on a field trip run by MIGE. Assuming it's applicable.

## **1. Weather**

Weather is always a problem in the field. In many areas it can go from good to bad in a short amount of time. Check the forecast at least once before you start your day. You should always carry rain gear into the field with you.

### **1A. Rain and Thunderstorms**

When you see bad weather on the horizon, do not assume you have enough time to finish up. If it is light drizzle or rain you can wait it out.

If you hear thunder or see lightning, you should stop all work, pack up, and head back immediately, or seek shelter until it passes.

### **1B. Snow and Ice**

We usually only think about snow and ice hazards when it pertains to driving, however, it applies to hiking and climbing as well.

It is better to be overdressed than under dressed. You can always remove clothing.

As always, have the appropriate gear with you. When walking through snow in the woods, it is common for branches to be under the snow. Be careful not to catch your foot.

Snow shoes are recommended when possible. Stay off large flat ice areas devoid of any plants and topography. You could be on top of a frozen creek or lake. You risk falling through.

Be careful walking up and around steep slopes. You could fall down a cliff. It is advised you go another way if possible.

### **1C. Sunny and Calm**

Don't be fooled by a nice day. Sunburn is always a risk, even when cloudy. Wear sunscreen and an appropriate hat.

You should avoid shorts and tank tops, especially if you are allergic to the flora. Then there is also a risk of being bitten by insects and larger animals.

Quite often it is colder in the morning than in the afternoon. It is better to be overdressed than under dressed. You can always remove clothing.

## **1D. Severe Wind**

High winds are usually a judgment call. If you expect a tornado in the clouds, leave as soon as possible and seek shelter.

Even if a tornado isn't likely, you must be aware of flying objects. This applies to all terrain. Whether in the forest or the desert.

Stay hydrated. Wind dries your skin faster. You may be sweating and not even know it. Wearing long sleeves and pants also prevents rapid loss of moisture, regardless of what season it is.

## **1E. Extreme Cold**

You should avoid work in the extreme cold. If you must, make sure you keep the wind off you and stay dry. Do not wear foot gear that can easily soak through. Keep your extremities out of the cold. Cover up as much as you can.

Wear glasses for snow blindness, if applicable.

Wear a face mask to breathe if the temperature is below -15°C (5°F) or if the cold air is bothering your lungs.

Be aware of frostbite and the treatments. Add attachments to this HASP discussing them if necessary.

Stay hydrated, even in the cold. Keep drinking fluids near your body so they don't freeze.

Also, see sections 1B and 1D.

## **1F. Heat Stress**

Humans are sub-tropical creatures. Yes some of us do better than others in the heat, but we are better adapted for it than extreme cold. e.g. there's no such heat equivalent to frostbite. Our skin is thin, and we sweat more than any other animal. But we are also mammals. This means we have a high body temperature that is fairly constant. So we can also overheat if we stress ourselves too far or stay in the sun unprotected.

Depending on conditions drinking more water may not help you, but still stay hydrated. We use to think that drinking water would fight off heat illness. It doesn't. Your body can only absorb so much in any time frame. Losing salt (a.k.a. electrolytes) through

excessive sweat is another problem. You should keep something salty to eat or carry Gatorade.

It is always best to have someone who is first aid trained with you. But if not you must recognize the symptoms of heat stress and heat stroke. You must take them seriously. Listing the symptoms is beyond the scope of this HASP. Attachments should be added if needed.

The only thing pushing yourself harder will do, is get you dead. You also tend to make bad decisions when you're over heated and dehydrated.

Also see sections 1C and 1D.

## **2. Field partners**

Bringing at least one other person with you is always the best option. That cannot be stressed enough. Solo work is never advised; even if you have a radio, satellite phone, or cell phone. None of those will matter if you fall hard off a 10 m (30 foot) cliff. It does not matter if it is a week long hike up a mountain, or a short hike on a well maintained trail. Always bring someone with you!

### **2A. Markings and Seeking Help**

Always carry something that is brightly colored and can be tied or placed somewhere, preferably fluorescent in color. You do this in case one of you needs to leave the other and you can mark their location. Leaving someone is a last option. It should not be your first choice.

Even if someone can't haul you out at least they can get help and administer first aid and/or CPR.

### **2B. Severe Injuries**

If you are injured, your partner should only move you if you are conscious and you have no head or neck injury. Your partner should only leave you if the situation is dire. That is a decision you must make. You should only do it if you think the injured person is in a life and/or limb situation. If it comes to that, make sure the person going for help has your GPS location and your area is marked with bright colors. Leave plenty of food and water for the injured person, even if they are unconscious, they could wake up. But when doing this, be mindful of bears and other wildlife attracted to human food. This may prevent you from leaving food. But always leave water. If the person can walk

and is conscious but has an upper body injury that can be immediately life threatening, stand them up and move them to a place where they can be easily found and have some minor shelter (e.g. in a shaded area or in the corner of a rock formation). Leave them provisions, once first aid has been rendered. Tell them to stay put and not to wonder.

## **2C. Equipment**

You should always have a GPS receiver and fully charged cell phone on short trips. The cell phone is important even if you do not get signal. You may ping off a tower and never know about it.

On longer trips you should still bring a GPS and a cellphone. You should preferably bring a satellite phone, but those are expensive. You should also bring at least a locator and a flare gun. You can let someone who is not with you know your planned route. You can also bring tape for marking your trail. Just make sure someone not with you knows what you are marking your trail with. Let emergency services or park rangers know your route, if applicable. The more people that know, the better.

You should always have a paper map as well. Preferably a topographic one. The entire U.S.A. is available online for free at

<https://ngmdb.usgs.gov/topoview/viewer/#4/39.98/-100.06>

## **3. Emergency Contacts**

Your partner should have your emergency information, and they should have yours. Written down. Not on a phone that can die.

## **4. Biological hazards**

This is perhaps the most neglected part of health and safety. Biological hazards are also regional and locally dependent. But there are some general guidelines.

### **4A. Clothing**

Wear clothing that at least covers you. This can keep things like ticks off you and reduce contact with poisonous plants.

### **4B. Foot Gear**

You should never ever wear open toed foot wear. Open toes can not only lead to foot infections but give animals such as snakes a striking point. You should at least wear ankle highs; this will help you from twisting your ankle.

## **5. Further Important Notes**

Please read this. This HASP is a general HASP and covers a lot of material in a general way. Specific site safety meetings and waivers (which will require emergency contact information) will be presented at any group tail gate meeting.

Tail gate meetings are health and safety meetings before field work for the day.