

Backcountry Winter Safety

I. Introduction

There is inherent danger in performing field work in the backcountry and those hazards may be exacerbated when winter conditions are present in the study area. When preparing to access a field location, always consider the possible hazards and prepare for the worst cases with regard to personal safety and the safety of others. In addition to considering the physical and environmental hazards associated with the field location and the work the project entails, one must also evaluate the hazards that winter weather brings to the site. Safety must be the first consideration in deciding whether a field site should be accessed during inclement weather or under winter conditions.

II. Scope

Fieldwork conducted in winter can present risks that ordinarily aren't present at the field site and those sites located in the backcountry can be very dangerous. A constant awareness and preparation must be maintained to cope with the dangers associated with accessing the field site, including but not limited to recognizing avalanche potential, the need to negotiate iced over bodies of water, road/trail accessibility, hypothermia, and worsening weather conditions. The general guidelines for winter safety are found in Section III. Additional winter safety guidelines for fieldwork are listed in Section VI.

III. General Policy

Severe winter weather can be dangerous, especially for employees conducting field research. The Field Work Review Form should address winter hazards if the fieldwork will occur in winter months. Ensure the project's emergency action plan includes every contingency. If possible schedule fieldwork to avoid travel and work during winter storms. To the extent possible evaluate the risks of accessing the field site before leaving Virginia Tech and once at the field location (or jump off point), re-evaluate the conditions before traveling into the backcountry (if required). In addition if the fieldwork requires travel into a backcountry location, **before you depart Virginia Tech** leave word with a reliable person regarding your proposed route, your expected arrival and your expected return time.

For winter fieldwork be sure you

- Know the weather advisories for your travel routes and field locations and know how to interpret them.
- Carry an emergency supply kit that includes food, water, cell phone, a battery powered radio, flashlight with extra batteries, blankets and a spare change of warm clothes for each person in the vehicle.
- Keep the gas tank full (partly to keep the fuel line from freezing, but also to ensure enough fuel to run the heater if the car gets stuck).
- Plan your travel route so as to minimize your risks.
- Know the location of the safety equipment in the vehicles, snowmobiles and on other equipment
- Be attentive to personal and vehicle safety.

- When in a remote or potentially dangerous area check in daily or as frequently as possible. To prevent a false rescue make sure to check out when appropriate.
- Plan your communications from areas that will have reception. If cell phone reception is problematic, consider buying/renting a satellite capable cell phone for the project
- Do a continual site survey, as conditions may change. Have a back up plan.
- Have current training in first aid and CPR. Wilderness first aid and a wilderness survival orientation is suggested.
- Dress appropriately for the conditions expected. Have an extra set of clothes just in case.
- Carry extra food and water.
- Practice good lifting techniques to prevent back injuries.
- Avoid working alone if possible. Nobody should be out of earshot during ANY hazardous operations.
- Fall protection is required if working above 4' from the ground.
- Wear your Personal Protective Equipment.
- Equip your off road vehicles (snowmobiles/ATVs) with first aid, trauma, rescue and bivouac equipment.
- Equip your truck/car with food; water; trauma, first aid, and rescue equipment; pots and stoves.
- Know the signs of cold injuries, such as frostbite, hypothermia and high altitude sickness (if working at altitude) and how to prevent and treat each.
- Stay in place if caught in a storm. Build a shelter, make a fire and stay calm.
- You can use gas, rubber, plastic, etc. to create signal fire.

IV. Responsibilities for Safety Compliance

- All employees need to consider safety first in the day-to-day conduct of work activities.
- Virginia Tech management is responsible to ensure that all safety policies are implemented and monitored at the field level. Both supervisors and employees will be held accountable if safety policies are not followed.
- Project supervisors/team leaders must ensure that employees are informed of safety policies; that the policies are integrated into field operations; and that they are carried out in a proper and consistent manner. Failure to provide adequate safeguards for yourself or those for whom you are responsible is considered a breach of duty.
- Compliance with environmental and safety regulations, policies and programs is considered a condition of employment.