# Institutional Animal Care & Use Committee

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**IACUC Guidelines for Field Safety**

**Introduction**

Field research and study are an integral part of the biological sciences. Frequently, the nature of data collection or study requires the investigator to encounter physical and biological hazards as part of their fieldwork. Recognizing the inherent hazards associated with field work can help prevent injuries and illnesses associated with the tasks and result in a successful collection or field study. This document is intended to minimize the risk of illness and injury associated with field work and to serve as a guideline for all labs, field courses, and research activities.

It is an individual’s responsibility to ensure proper personal protective equipment (PPE) and safety standards are maintained at all times while working in the field. The principal investigator, faculty advisor, or course instructor is responsible for ensuring that all personnel are properly trained in the usage of PPE and general field safety. Encourage all personnel to be trained in basic first aid techniques.

**Before Entering the Field**

Safety must be considered before entering the field for any course or research project. Before going into the field, taking visitors or students into the field, or allowing them into the field without direct supervision, consider hazards that will be encountered including terrain, biological hazards, weather, crime, disease, or trauma and follow the common-sense protocols included in this document along with any other specific procedures identified in site-specific or process-specific plans.

Consider the relative fitness level of all field workers before embarking on arduous tasks. Everyone going to the field should be queried regarding special conditions (visible or hidden disabilities), special medical conditions (e.g., diabetes, allergies, epilepsy, etc.), or special accommodations needed. Consider all of the potential environmental hazards listed below. Develop a safety checklist, and have a plan! Discuss safety concerns ahead of time and you will be much more in control in the event of a problem.

**Communication:**

* Whenever possible, work with someone else in the field. Do not work in remote areas or dangerous settings alone unless it is not practical to have a companion.
* Always take some communication device (e.g. cell phone) with you in the field. Check that you have service.
* The basic “buddy system” requires that someone should always know where you are when you are working in the field. That person should have a map showing where you will be, know a time when you are expected to return or to contact him/her, and a time when he/she should consider that you have encountered some problem if he/she has not heard from you by that time.
* Give your contact a list of people who know your field site and could help to find you in an emergency. Include their emergency contact information (phone numbers).

**Knowing where you are:**

* Always have a map/aerial photograph and a compass or GPS with you when you are working away from a road.
* If you become disoriented, know which direction to head to find the nearest road or development.

**Safety Equipment:**

* A list of safety equipment should be prepared and checked over before leaving. Examples include emergency road repair kit, flashlights, flares, proper clothing, water purification, medications, safety equipment required for power tools, and a GPS or compass.
* Have a basic first aid kit (at least bandages and something to clean a wound) in your vehicle or with you if you are in remote areas.

**Proper clothing for field work:**

* Always wear closed-toed, sturdy shoes or boots. Most accidents are related to slip, trip or fall; wear proper footwear.
* If you are working in brushy areas, wear eye protection. A serious eye injury is a substantial risk in many field situations.
* Wear a hat, or have one with you.
* Proper field clothing usually involves long pants and a long-sleeved shirt. Clothing can also protect you from biting insects, including ticks and chiggers. Carry a bandana; it can be very useful in case of an emergency or injury.
* Have enough clothes to keep from getting too cold. Take rain gear appropriate for when and where you are working.
* Protect yourself from the sun with a hat and clothing. Wear sunglasses in the snow in winter. Apply sunscreen.
* Know whether it is hunting season, especially deer gun season, and if it is, wear a blaze orange vest and bright hat.

**Working with animals in the field:**

* Have and use proper Personal Protective Equipment when working with animals. This includes appropriate gloves to prevent bites or zoonotic disease. Appropriate PPE is specific to the species with which you work. Learn all of the specific hazards and have a plan to avoid them.
* Hygiene is important to prevent infections of zoonotic disease. Wash your hands before eating, smoking, or touching your face, so have a way to wash your hands. Take off other protective clothing before you remove your gloves.
* Change or disinfect your PPE before moving from one site to another to prevent spreading disease from on animal population to another.

**Working on or in water:**

* Always have, and wear, a personal flotation device (PFD) if you are on water deeper than 5 feet.
* Surprisingly-shallow flowing water can sweep you off your feet. It can be nearly impossible to stand in just 1.5 ft. of rapidly flowing water, especially if the bottom is slick.
* Wear a PFD when working in water more than waist-deep while wearing chest waders.
* Have a way to dry and warm yourself (e.g. a spare set of clothing and a “space blanket”) if there is any risk of falling in the water.
* Don’t hold anything (e.g. pencils) in your mouth; that is equivalent to drinking untreated water.
* Work on ice only if you have been trained to use an ice chisel to test the ice safety. Use the ice chisel to ensure the ice is safe, and carry ice picks to pull yourself out should the ice break and you fall in.

**Nutrition and hydration:**

* Always carry plenty of water, summer and winter.
* Have some high-energy emergency food with you if you are working in a remote location.

**Use of tools and power equipment:**

* Never use any power equipment without first reading the operating and safety manual. If you don’t have the one that came with the tool, you can find it online.
* Power equipment such as chain saws and brush cutters must be adequately maintained and routinely inspected to be safe to use. Users should be well-acquainted with proper tool and equipment use. Tools such as chainsaws require safety equipment (eye and ear protection and chaps) and should never be used by anyone without proper training.

**Vehicle safety**

* The greatest risk of mortality associated with field work is an accident driving to or from your field site. Pay attention to the road. Don’t drive tired, distracted, or impaired.
* Field work sometimes involves stops along busy highways. Plan your work to minimize the need to stop along busy highways to the extent possible. Find a place to stop where you can pull completely off the road. Make sure you, and all passengers, use care when leaving or entering the vehicle.
* Park your vehicle in a visible place in case you need to be located in an emergency.
* Use caution and drive slowly off of paved roads. Do not drive through any water unless you get out and walk through it first to see how deep it is. Check out all ruts and holes before you drive into them to make sure your vehicle has the necessary clearance. Check your spare tire for proper inflation before you go to the field, make sure you have a jack and know how to use it.

**Crime or Violence:**

* Areas with dangerous activities should be approached with prudence. Some areas very close to home can be potentially dangerous when alone or if working at night. If a threatening condition occurs, relocate to a safer location such as locked car, populated area, or well-lighted area if possible. If at all possible, never work alone in areas of high crime and maintain a group or buddy system. Unfortunately, this is especially important for female workers.

**Environmental hazards in the field:** (This is not a complete list – make one for your field site.)

* Stings from venomous insects, such as bees, wasps, hornets, and yellow jackets. Workers who know they react severely to such stings must carry any special medication they might need.
* Bites from venomous snakes. Know if there are any venomous snakes where you work and take care to avoid them. Protective gear (long pants, boots, leggings) should be worn in areas where poisonous snakes are common. In case someone is bitten, seek medical attention immediately. Field treatments such as tourniquets, cutting or sucking should NOT be applied by amateurs.
* Skunks, raccoons, and opossums can carry rabies and/or distemper. Skunks are the greatest risk because they live a long time after they are infected with rabies. If you see a skunk (or any of these animals) active during the day, give it a wide berth. Do not touch bats. Do not touch animal droppings as they may be contaminated with parasites.
* Poisonous plants. Workers should know how to identify common poisonous plants that can cause contact dermatitis. In our region, these include poison ivy, poison sumac, and wild parsnip. If you know that you have a severe allergy to poison ivy, you really should not work at all where poison ivy or sumac are present. Here is how to avoid being injured if you are not severely allergic: 1) Wear long pants and shirt, 2) When you come out of the field, take a shower as soon as possible, 3) Wash thoroughly with Fels-Naptha laundry soap or Technu soap; these soaps remove the heavy oil rather than spreading it, 4) Put all your field clothing in a bag and be careful with it until it is laundered.
* Ectoparasites (ticks and chiggers).Tick-borne diseases constitute a serious threat to individuals conducting field work during warm weather. Workers should inspect their entire bodies carefully after returning from a day in the field, and to remove any ticks found. This is almost impossible to do alone, so it is best to have someone else look at the parts of you that you can’t see. It is a good idea for individuals to note the date they found a tick firmly attached, in the event that symptoms of Rocky Mountain Spotted Fever or Lyme Disease appear later. A physician should be consulted if suspicious symptoms (fever, joint aches, swollen glands, reddish flushing of skin) occur in the weeks following a tick bite. Chiggers are annoying, although not likely to threaten health. In areas known to have either ticks or chiggers (practically everywhere in the summer), employees should use means of avoiding contact (tucking and taping pant legs, using repellents, frequent tick checks, etc.).
* Endoparasites. Exercise care to avoid contact with water- or soil-borne parasites *(Giardia,* tapeworms, etc.). Never drink untreated water. Always carry enough drinking water for anticipated personal needs. Water obtained from sources in the field should be boiled, filtered, or chemically treated before consumption. Wash hands before eating. Don’t hold equipment (e.g. pencils) in your mouth.
* Lightning and severe storms.If a thunderstorm threatens, the best response is to seek shelter in a building or vehicle. When this is not feasible, avoid open areas and exposed portions of the landscape (peaks, hilltops, ridges). Boaters should seek shelter on shore immediately. Never stand near or under isolated tall objects, such as trees or power poles. The safest places outdoors are in topographically protected areas (valleys or ravines), away from the tallest trees.
* Wind. Avoid work in forests during very windy periods. The danger associated with falling trees or large limbs is especially severe in many forests that have a large number of ash trees killed by Emerald Ash Borer.
* Steep topography. Some trips may involve hiking in areas of steep topography, where a real risk of injury caused by accidental falls may exist. Exercise caution when hiking in steep terrain (such as rock outcrops). Similar precautions should be exercised in other areas where falls could occur (overlooks, observation towers, waterfall areas, large canals, etc.). Even wet or mossy rocks on a path can be a serious hazard.
* Wetlands, swamps. Be careful of your footing so that you don’t get mired down.
* Cold weather work. Special precautions should be observed to avoid hazards of frostbite and hypothermia.Become familiar with symptoms of these two hazards and the field treatment should someone be affected. The field first aid kit for cold weather trips should include specific directions for determining and treating hypothermia, and needed supplies to do so.
* Hot weather work. Avoid hazards of heat exhaustion and heat stroke. Become familiar with symptoms of these two hazards and the field treatment should someone be affected. The field first aid kit for hot weather trips should include specific directions for determining and treating heat stroke, and needed supplies to do so. Always carry and consume ample amounts of water.

**Act Appropriately:**

* Dangerous horseplay, or other risky behaviors not related to research (e.g., firearm use, rock climbing, placing oneself in other harmful situations unnecessarily), should not be tolerated. The use of alcohol and non-medicinal drugs during university business is prohibited.

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