

Safety Guidelines for Field Research

Fieldwork is an important part of teaching and research at WCU. Since fieldwork activities take place off campus, this information is intended to help plan and prepare for health and safety problems that might be encountered in the field.

The same general safety considerations that govern work in indoor laboratories must govern work in field situations (hereafter considered “field laboratories”). In addition, specific hazards exist in the field which are not encountered indoors. Thus, work in field laboratories involves safety considerations not addressed in the usual laboratory safety plan. The following guidelines are applicable to research field work as well as instructional courses that are held outdoors.

Emergency Contact Information

It should be possible for safety personnel to locate any employee or student in case of an emergency. Since field laboratories are, by definition, away from the normal laboratory meeting room, there should be information on record in the responsible departmental office noting the location of such laboratories or field research. A course syllabus listing local destinations should be adequate in most cases. For overnight, or longer trips, a detailed itinerary with emergency telephone contacts should be filed in the departmental office. Participants should be advised to leave a copy of the itinerary with a responsible party before the trip.

Motor Vehicle Safety

The use of motor vehicles represents the greatest potential hazard experienced by field laboratory participants. Since many field laboratories involve transporting participants in University vehicles, certain precautions must be observed.

1. All drivers must be State employees with a valid NC driver’s license. Each driver must have a photocopy of his/her license on file with the University Motor Pool.
2. All North Carolina traffic safety laws must be observed at all times. All drivers should exercise the utmost care. No driver should be under the influence of alcoholic beverages or any intoxicating drug, prescription or otherwise.
3. All passengers are required to wear seat belts.
4. Special care should be taken to alert participants to traffic hazards when leaving or boarding vehicles, or when walking along highways. Trips should be planned to minimize exposure of participants to highway traffic.
5. The University assumes no responsibility for mishaps that occur when participants provide their own transportation.

Field Safety Guidelines

1. Use a “buddy system” for field work such that each individual has a partner who knows his or her whereabouts at all times.
2. A small first-aid kit should be carried by a designated person who is familiar and trained with basic first aid and CPR.
3. The field lab leader should be aware of the nearest location for emergency medical care (clinic, emergency center, park ranger station, etc.).
4. Participants should report any special medical problems they may have to the field lab leader prior to participating in field laboratories. Examples include allergies to insect stings, diabetes, asthma, physical disabilities, etc.
5. Participants should be made aware of any environmental hazards they are likely to encounter. These may include, but are not limited to:
 - Stings from venomous insects such as bees, wasps, hornets, yellow jackets. Medication for immediate relief from stings should be carried in the first aid kit, and participants who know they react severely to such stings should carry any special medication they might need.
 - Bites from venomous snakes are a risk and care should be taken to avoid snakes in the field. Participants should have recognition for common snakes in the area. If someone does get bitten, the best plan is to return to the vehicle and seek medical attention immediately.
 - Poisonous plants. Participants should be shown how to identify common poisonous plants and should avoid them. This includes plants that can cause contact dermatitis (poison ivy, poison oak, and poison sumac) and plants poisonous upon ingestion (some mushrooms and berries). In general, don’t eat plants or fruits collected in the field. Information about poisonous plants can be found at <https://poisonivy.aesir.com/view>
 - Ectoparasites such as ticks and chiggers are a serious threat to individuals conducting field work during warm weather. Participants should inspect their entire body carefully after returning from the field and remove any ticks found. If they do find a tick attached, note the day in the event that symptoms of Rocky Mountain Spotted Fever or Lyme Disease appear later. A physician should be consulted if symptoms such as fever, joint aches, swollen glands, and reddish flushing of the skin occur in the weeks following a tick bite. Avoid contact by tucking and taping pant legs, using repellents, wearing a hat, and doing frequent tick checks.
 - Endoparasites (Giardia, tapeworms, etc.) are a risk from untreated water sources, so participants should always carry plenty of water with them. Water obtained from field sources should be boiled, filtered, or chemically treated before consumption. Wash hands after handling soil, especially before eating.
 - Lightning occurs frequently, especially during the warmer months, and North Carolina has one of the highest frequencies of lightning-caused fatalities in the U.S. 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), and don't stand under isolated tall objects, such as trees or power poles. Boaters should seek shelter on shore immediately. The safest places outdoors are in topographically protected areas such as valleys or ravines, and away from the tallest trees.

- Steep topography presents hazards from falling. Participants should exercise caution when hiking in steep terrain, overlooks, observation towers, waterfall areas, etc.
- Aquatic field exercises should involve the use of personal floatation devices for boating trips and wading in high water. Water deeper than knee height, even with a moderate current, becomes very hard to wade in safely.
- Wade with caution and watch for signs of rip currents and unexpected drop-offs.
- Cold weather trips present hazards for frostbite and hypothermia and hot weather trips present hazards for heat exhaustion and heat stroke. Participants should be aware of the symptoms and field treatment for these and the first aid kit should include specific directions and supplies for treating these symptoms.

Compliance Requirements

Research involving vertebrate animals requires registration with and approval from the [Institutional Animal Care and Use Committee](#) (IACUC).

Research involving microorganisms (including isolating, concentrating, culturing or growing field samples) and recombinant or synthetic nucleic acids requires registration and approval from the [Institutional Biosafety Committee](#) (IBC).

If a University employee suffers a job-related illness or injury, his/her supervisor must be notified and the required paperwork filed with the [Safety and Risk Management Office](#) within 24 hours, or immediately for serious cases involving overnight hospitalization, amputation, permanent disfigurement, or fatality.