UNIVERSITY OF NORTH CAROLINA
CHARLOTTE
ANIMAL CARE AND USE PROGRAM

Guidelines for Field Research, Training, & Teaching Risk Mitigation

Objective:	To identify and mitigate risks of research or teaching in the field
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Date:	August 26, 2024

NOTE: If doing field studies (research, teaching, or projects) involving vertebrate animals or collection of their tissues, please contact the IACUC Office (704-687-1872 or uncc-iacuc@charlotte.edu) prior to initiation of the study.

I. General Purpose

Many research and teaching activities are conducted in the field. This can occur on campus, locally, within the United States or internationally. There are many potential risks while doing these activities. These guidelines are designed to mitigate harm to researchers, teachers, and students, the animals they study, and the environment where the animals are living.

II. Defined Terms

Field Activities: Data collection, training, or teaching while a subject (plant, animal, or person) is in a natural environment.
Fomite: Objects or materials which are likely to carry infection, such as clothes, utensils, and furniture.
Pathogen: A bacterium, virus, or other microorganism that can cause disease.
Specialized Activities: Activities that require or involve detailed and specific knowledge or training.
Vector: hosts (e.g., mosquitoes, ticks, and fleas, but could be any animal or plant) that spread pathogens.
Zoonotic Disease: A disease or infection that can spread between people and animals.

III. Background

In terms of risk assessment, field work has fewer levels of control than working in a laboratory. Animals cannot be eliminated or substituted in the field. Engineer controls (e.g., laminar flow hoods) are not present. The only levels of control available for risks when working in the field are administrative controls (plans and limitations) and personal protection equipment (PPE). Therefore, these last two controls must be well defined and implemented.

The success or failure of field activities depends on the types of activities being undertaken, experience, knowledge, and care taken by the individuals involved, and the environmental conditions.

IV. Covered Parties

These guidelines apply to all persons responsible for conducting research, teaching, training, breeding, and/or related activities involving live vertebrate animals conducted at or under the auspices of UNC Charlotte. This includes off-campus activities.

All individuals to whom these guidelines apply are responsible for becoming familiar with and following these guidelines. The PI is responsible for taking appropriate steps (e.g., training staff) to help ensure compliance.

V. Zoonoses

Animals being studied in the field can be hosts to a plethora of zoonotic diseases including (but not limited to) bacteria (e.g., Salmonella, Yersinia, Shigella, Campylobacter), fungal diseases (e.g., Histoplasma, Blastomyces, Pseudogymnoascus, etc.), parasites, and viruses (e.g., SARS-Covid2, Rabies, etc.). Additionally, other vectors and fomites in the same environment can transmit diseases. For further zoonotic disease information, please review the *Occupational Health Surveillance for Personnel with Animal Exposure and/or Entering the Vivarium*.

VI. Oversight

The Animal Care and Use Program and Institutional Animal Care and Use Committee within the Office of Research Protections & Integrity are responsible for promoting, overseeing implementation of, and ensuring compliance with these guidelines.

"*The IACUC is responsible for oversight of vertebrate animal activities supported by the PHS and those supported by NASA, NSF, and VA, in accord with PHS Policy. To conduct such activities in the field, the investigator must provide the IACUC with the following information:*

- *where the activity will be conducted*
- *what procedures will be involved*
- *a brief overview of how those procedures are likely to affect the biology and behavior of the individual study animals and their ecology (e.g., surroundings and social setting), the interrelationship of those animals with their habitat and with other species, including the nature and duration of potential effects; and*
- *assurance that permit requirements of applicable local, state, national, and international wildlife regulations will be obtained before work begins.*

If the IACUC determines that the proposed activity is likely to alter or influence the biology, behavior or ecology of the study animals or other species, then protocol review and approval is required. However, if the IACUC determines that the proposed activity is purely observational and will not alter or influence the biology, behavior or ecology of the study animals or other species, IACUC review and approval is not required. Investigators are encouraged to consult relevant professional societies, available guidelines, wildlife biologists, and veterinarians, as applicable, in the design of the field studies (Guide page 32, Appendix A). Studies with the potential to impact the health or safety of personnel (Guide page 18) or the animal's biology, behavior, ecology or other species may need

IACUC oversight, even if described as purely observational. When capture, handling, confinement, transportation, anesthesia, euthanasia, or invasive procedures are involved, IACUC review and approval is required, and the IACUC must ensure that proposed studies are in accord with the PHS Policy and Guide (page 32). A study of free-living wild Animal Welfare Act-regulated species that involves invasive procedures, harms, or otherwise materially alters the biology, behavior, or ecology of an animal under study is covered by USDA animal welfare regulations and requires IACUC review and approval." [OLAW FAQ A6]

In addition, there are other programs (e.g., Biosafety, EHS, etc.) that will be involved depending upon travel location, biosafety concerns, faculty/staff or student attendance, etc. Each program will have additional requirements and guidance to address.

VII. Guidelines Specific to Animal Research

1. **Know the Legal Requirements and Guidelines** – local, federal, and international.
   a. The IACUC should also ensure that appropriate permits are in place. USDA animal welfare regulations exempt areas containing free-living wild animals in their natural habitat from inspection [See Quick Reference Guide: 9 CFR, Part 2, Section 2.31(c)(2)].
   b. Permits that may be required:
      - Import/Export (e.g., CDC, USDA, USFWS, USCBP, Natl. Park Service) and Transport Permits
        - CDC Import Permit Program (IPP): https://www.cdc.gov/orr/ipp/index.htm#:~:text=The%20CDC%20Import%20Permit%20Program,that%20facilities%20receiving%20permits%20have
        - USDA: https://www.aphis.usda.gov/aphis/resources/permits
        - USFWS Permits: https://www.fws.gov/service/permits
        - NCWRC Permits: https://www.ncwildlife.org/hunting-trapping/hunting-trapping-licenses/other-licenses-permits
        - US Customs and Border Protection: https://www.cbp.gov/border-security/protecting-agriculture/importing-biological-materials-united-states
      - Endangered Species (e.g., CITES, IATA)
        - Home Page: https://cites.org/eng
        - Lists: https://checklist.cites.org/#/en
        - NCWRC: https://www.ncwildlife.org/hunting/hunting-trapping-licenses/other-licenses-permits/endangered-species-permit

      Collection Permits in a foreign country – you will need contacts in the country where research or teaching will be conducted

2. **Know the Field Site Risks**

   "While semiannual IACUC inspections of field study sites are not required and in many circumstances are impractical, IACUCs should be apprised of the circumstances under which studies are conducted so that they can consider risks to personnel and impact on study subjects. This may be partially accomplished by written descriptions, photographs, or videos that document specified aspects of the study site. [See Quick Reference Guide: 9 CFR, Part 2, Section 2.31(c)(2)]."

a. The local area
    - environment - weather (time of year, local weather, etc.), altitude, cave, etc.
    - animals & plants that could be harmful
    - local populations (e.g., societal unrest)
b. What PPE is needed based on identified hazards, the environment, the ability to decontaminate the equipment?
c. What decontamination chemicals are available and how will the chemicals affect the environment, humans, and animals?
d. Wastes transportation in/out of field site, handling of waste products (biological, chemical, sharps). Know and follow all local, state, and federal regulations for each location – for PPE and decontamination/wastes.
e. Is specialized training needed for animal collection (e.g., setting up traps or nets, seining, etc.) biohazard safety, chemical safety, bloodborne pathogens, research specific agents, research specific processes/procedures, animal handling, outdoor training, first aid, wilderness/survival training, etc.? – Train prior to going into the field to collect data.
f. An Emergency Plan (in case someone gets bit by an animal) Local – Who? What? Where? How?

The University should be notified of any adverse events including bites, injuries, etc.

3. Know the Specific Risks to Research Animals in the Field

a. Animal Health & Welfare
    - Time of year – hibernation, breeding, etc.
b. Potential animal pain and distress
    - Will animals undergo more than momentary pain or distress?
    - If so, will sedation, anesthesia, and/or analgesia be used?
    - Has this been defined in an approved IACUC protocol?
    - Have time limits been set and justified for capture, handling and/or release?
c. Disease transmission & zoonoses
    - Consider Researcher to Animal or Vice Versa
    - Consider Animal to Animal transmission
    - Consider each route of transmission – direct contact, inhalant, fomite (e.g., your hands and gloves).
    - Prevention? What PPE and/or equipment? When? How often? (e.g., between each animal, between each site – how will they be decontaminated or disposed of?)
    - Animal Safety – avoiding pathogen transmission between animals and field sites will increase PPE (gloves, gowns, masks, etc.) needs. To calculate the amount of PPE and decontamination chemicals, estimate the number of samples to be collected X the number per activity (field site, sample type collected, etc.) and add (at least) another 20 percent to the total estimate.
d. Decontamination/Wastes
    - How will the PPE & equipment be disinfected?
    - What disinfectants are going to be around people and animals? Are they allowable?

- How often and when will decontamination of equipment occur? (e.g., Between each animal? Between different field sites? When transporting home?)

VIII. Additional Information / Requirements not under IACUC Purview but may be required by the Institution and are highly recommended considerations

1. Required Travel Insurance
2. Institution Legal Requirements (e.g., Risk Management Forms, General Counsel, and additional Import/Export Info)
3. Guidelines for a 'safe and inclusive' work environment – as mandated by NSF & UNC Charlotte Code of Conduct
4. Occupational Health Risks for Individuals that could affect their ability to work with animals in the field
   - Fears (e.g., afraid of heights [climbing & rappelling], claustrophobia [caves], or other limits
   - Known medical disabilities or (e.g., diabetes, amputee, etc.)
   - Proper vaccinations and prophylactic medications (e.g. antibiotics for malaria), or prescribed treatment medications (e.g., transport of insulin for diabetes treatment)
5. **Risk Assessment**
   - Fill out Appendix A of the EHS Field Researchers Manual.
     (On the EHS Laboratory & Research Safety Webpage, scroll down to "BIOSAFETY" to find the Field Research Safety Manual).
     NOTE: *All risks with mitigation plans should be listed in the risk assessment form.*
   - A risk assessment should be attached to the corresponding IACUC protocol for each different planned trip.
   - Risk assessment should be performed in the IACUC protocol proposal phase and amended as needed for travel to different locations.

   NOTE: *Additional information can be found in/at:*
   - UNC Charlotte EHS Field Researchers Manual *and includes information and links to needed departments and resources.*
     (On the EHS Laboratory & Research Safety Webpage, scroll down to "BIOSAFETY" to find the Field Research Safety Manual).
   - *UNC Charlotte Legal Topics: Field Research Guidelines*
   - *UNC Charlotte Legal Topics: Field Trip Planning & Compliance Procedure*
   - *UNC Charlotte Legal Topics: Field Trip Planning*

IX. Training

The IACUC requires training (on-line and hands-on) for field research / wildlife research.

X. Consequences of Violating These Guidelines

Violation of these guidelines as well as required laws and regulations for field work may be considered a serious event of noncompliance that is reportable to the IACUC, funding and accrediting agencies, and other regulatory agencies. Violation of these guidelines may adversely affect both the ability to perform animal work and acquire funding sources.

Failure to comply with this and related policies is subject to disciplinary action in accordance with applicable (e.g., staff, faculty, student) disciplinary procedures.

XI. Related Information

UNC Charlotte is a community in which employees are encouraged to share workplace concerns with university leadership. An individual may call the Office of Research Protections & Integrity at 704-687-1872 or -1876. Additionally, the Animal Welfare Concern Report allows anonymous and confidential reporting on matters of concern online.

XII. Resources & References

- Quick Reference Guide: 9 CFR, Part 2, Section 2.31(c)(2)]."
- Guide for the Care and Use of Laboratory Animals. p 18; p32; Appendix A
- OLAW FAQ A6 & E4. FAQs | OLAW (nih.gov)
- Living our Values: NSF Code of Ethics. National Science Foundation. https://nsfinternational.widen.net/s/fwvwkvwcgj/nsf_code-of-ethics_a4_en_lco272
- Arizona State University online seminar

Document History

Approval: August 26, 2024