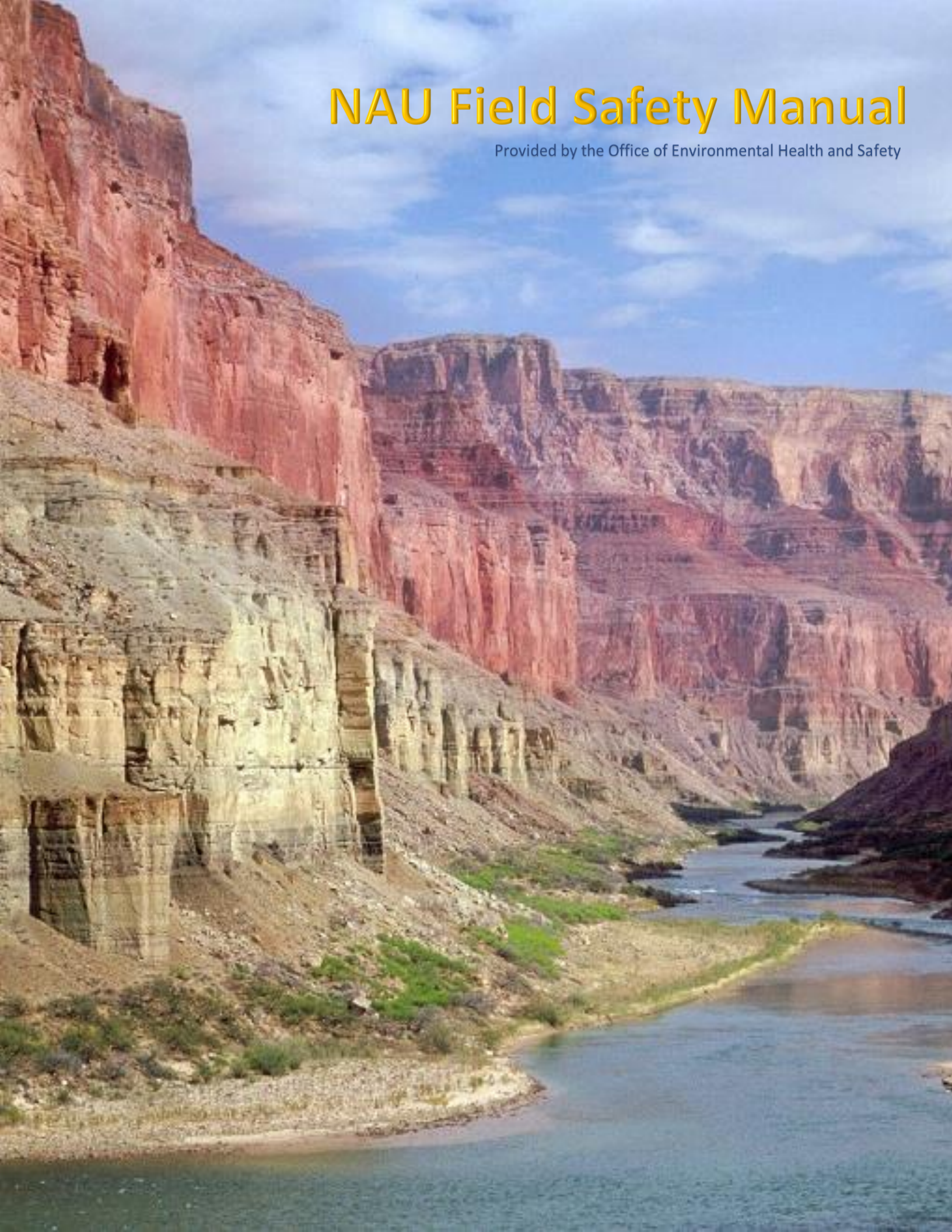


# NAU Field Safety Manual

Provided by the Office of Environmental Health and Safety



**This page intentionally left blank.**

## Acknowledgements:

This Field Safety Program was revised in 2022 as part of NAU's Campus Safety Collaborative Active Working Group Series. Many thanks to the following contributors who gave their time and expertise to shape this program. Your input helped EHS prepare a more effective, user-friendly program and develop a comprehensive collection of resources for field teams.

Sarah Ells, Director, Environmental Health and Safety

Shelley Jones, Director of Biological Safety, Environmental Health and Safety

Scott Halle, Assistant Director, Environmental Health and Safety

Becky McGaugh, Risk Manager/Associate Vice President, Contracts, Purchasing and Risk Management

David Faguy, Associate Vice President, Office of Research Compliance

Catherine Propper, Professor, Department of Biological Science

Amy Whipple, Associate Professor/Associate Chair, Department of Biological Sciences

Kimberly Cohen, Veterinarian, University Core Facilities

Robert Lenegan, Instructional Lab Manager, School of Earth and Sustainability

Brandon Cruikshank, Professor and Chair, Department of Chemistry and Biochemistry

## Introduction

This manual provides guidance and best practices for leading safe field courses, research trips, and field trips. It serves as one element of NAU's Field Safety Program. Additional elements and resources are identified within this document and presented in the following format:

[Chapter 1: Program Scope and Application](#)

[Chapter 2: Roles and Responsibilities](#)

[Chapter 3: Planning and Documentation](#)

[Chapter 4: Best Practices and Resources](#)

[Chapter 5: Incident Reporting and Crisis Management](#)

As field safety resources will be updated frequently, please visit the [NAU Field Safety website](#) often for more information.

## Chapter 1: Program Scope and Application

NAU's Field Safety Program covers a wide range of off-campus activities in a vast variety of environments. Though the terms "field work" and "field research" are used to describe various off-campus activities, the following examples are common field activities to which the program can be applied:

- Work at research stations and sites
- Field sampling
- Temporary, off-campus learning settings
- Work/learning in remote locations and/or on or near open water
- Off-campus human social/behavioral observation or assistance
- Animal observations, feeding, etc.
- International internships with field work components
- Off-campus field trips (in populated or remote areas)
- Off-campus site visits (in-home and in urban settings)

In general, any off-campus activity that may present risks to participants (due to the activities being performed or the characteristics of the off-campus location) requires planning, risk assessment, and risk management. NAU's Field Safety Program provides applicable framework and support for that process.

## Chapter 2: Roles and Responsibilities

**Fieldwork Director:** This person designates the activity to be performed in the field, the location for that activity, and defines the scope of work or learning.

The **fieldwork director** is typically a faculty member, principal investigator, or employee supervisor and provides leadership and direction to the field team. **Fieldwork directors** are responsible for the planning, hazard assessment, and risk management process for field activities under their direction. This includes the completion of the Field Safety Plan, the preparation of any additional resources to mitigate

risk, and assurance that all necessary documentation (including any applicable permitting and protocol submission and approval) has been completed prior to the field activity. They are also responsible for maintaining awareness of departure, activity and return dates for field teams under their direction, ensuring that the completed Field Safety Plan is uploaded to the Employee Service Center (ESC) travel case associated with the field activities, and serving as an on-campus emergency contact for field teams (if not participating at the field site) or identifying an alternate on-campus emergency contact (if joining their field teams on site). If the **fieldwork director** will not be on-site for the duration of the field activities, they will designate a **field team leader** and will ensure that the **field team leader** has all necessary resources to fulfill their responsibilities safely.

**Field Team Leader:** The **field team leader** is the person who will organize travel to and from the site, remain on-site for the duration of field activities, oversee the activities of all **participants**, and provide on-site supervision of the field activities.

**Field team leaders** may be principal investigators, supervisors, graduate assistants, teaching assistants or research assistants with leadership experience. **Field team leaders** are responsible for reviewing all field safety resources with participants prior to field work and while in the field and managing necessary communication and emergency response procedures for field teams. If the **field team leader** is a designee of the **fieldwork director**, the **director** will ensure that the **field team leader** has all necessary resources to carry out their responsibilities safely.

**Participant(s):** A **participant** is any person travelling for and participating in off-campus field activities. **Participants** are typically students or staff members, and occasionally may be volunteers or university affiliates. **Participants** are responsible for participating in field safety plan review(s) with **field team leaders** prior to travel and must adhere to the scope of the field activities assigned.

**The Office of Environmental Health and Safety (EHS):** The **EHS** Office develops and manages the Field Safety Program, including efforts to revise it as needed and add and incorporate resources and input from subject matter experts. Contact [nauehs@nau.edu](mailto:nauehs@nau.edu) for additional assistance, to provide program feedback or to suggest additional resources for field activities.

**The NAU Emergency Manager (EM):** The **EM** facilitates pre-planned emergency response procedures by leveraging the collective efforts of the Emergency Management Advisory Group (EMAG) in the event of serious field incidents. On-campus emergency contacts must contact the **EM** to initiate a field emergency response when notified of a serious field incident (see Chapter 5).

## Chapter 3: Planning and Documentation

The importance of pre-planning and preparation cannot be overstated when facilitating a safe field experience. **Fieldwork directors are responsible for this process, and the associated documentation even when some of these steps are delegated to a field team leader.** The planning process can be described in three phases:

### First Phase | Hazard Assessment and Mitigation:

It is the responsibility of the fieldwork director to determine what hazards are presented by the activities and the environment selected for each field experience. Based on that determination,

it is also the responsibility of the fieldwork director to provide resources to mitigate risks for field teams.

It is best practice to design field activities that are low risk with a low likelihood of accidents. If your fieldwork will involve higher risk activities, be prepared to plan for and provide more complex risk mitigation methods in response. A low-risk trip may require very basic field safety practices such as taking headcounts for participants and requiring appropriate clothing and gear for the forecasted weather. Higher risk field activities such as diving, animal handling, working at heights, or the use of chemicals or specialized machinery in the field will require additional training, skills assessment and/or even certification for participation. Keep these things in mind when initiating your planning process and allow time to prepare for any special circumstances. Contact EHS if you would like additional guidance on the hazard assessment and mitigation process.

Initiate your first phase of hazard assessment and mitigation by reviewing the following questions:

- ✓ What are the risks associated with the field activities?
- ✓ What are the risks associated with the field environment?
- ✓ What regional hazards might exist (e.g., hunting seasons, travel alerts, endemic illnesses)
- ✓ What are the risks associated with participants' mode(s) of travel?
- ✓ How will field teams communicate on-site, and with off-site contacts?
- ✓ What resources will be required to mitigate risks?
- ✓ What special personal protective equipment, gear and supplies will the team require?
- ✓ How will your field team be equipped to respond to emergencies?
- ✓ No-go considerations: under what circumstances would you cancel or suspend field activities?

The resources in the following phases will help you document the hazards you identify during this first planning phase and connect you with the hazard mitigation resources you will prepare for your team so that they can work safely in the field.

## **Second Phase| Documentation:**

Once fieldwork directors have identified the site and activity specific hazards associated with field work, the Field Safety Plan template can be used to document your process and cover additional required details for your field team(s). EHS also maintains a collection of [online resources](#)\* for your use in this process. Additional applicable resources should be attached to your Field Safety Plan. This is meant to save field teams preparation time, but it is important to plan to assemble all necessary resources applicable to your field work and for all field team members to review the information you compile *prior* to field activities.

*\*To suggest an addition to our collection of field safety resources, or request the development of a new resource, contact [NAUEHS@nau.edu](mailto:NAUEHS@nau.edu).*

The following steps will guide you through the assembly of your required documentation PRIOR to leaving campus:

- ✓ Complete all sections of the Field Safety Plan.
- ✓ Decide who your field participants will be and secure any waivers and permissions for volunteers, minors, and students.
- ✓ Determine the mode of travel for all participants and confirm that any drivers are NAU [Authorized Drivers](#).
- ✓ Acquire and prepare the equipment/gear that you have identified as necessary for your trip, and ensure that field team members have acquired required gear.
- ✓ Ensure that you have secured any applicable protocol approvals and permits specific to your scope.
- ✓ Initiate your ESC Travel Case process.
- ✓ Attach applicable additional trip specific safety resources to your completed Field Safety Plan.
- ✓ Upload a copy of your completed Field Safety Plan to your ESC Travel Case.
- ✓ Designate on-campus departmental contacts in your “watch list” in your travel case who can access your Field Safety Plan in case of emergency (these should be contacts in department coordinator or leadership roles).

### **Third Phase| Use your field safety documents to prepare your Field Team**

Your completed Field Safety Plan, and any other trip-specific resources you have selected will reflect the risk assessment and hazard mitigation you have completed to support safe work for your field team. This document will be made available to your field team for review prior to departure and will go into the field with your team(s). Because field work often takes place in areas without cell service or internet connectivity, a print copy of the Field Safety Plan is necessary for most sites. To review, your field safety documentation will be comprised of the following:

- ✓ Your completed Field Safety Plan
- ✓ Any additional activity-specific safety resources that will help mitigate risks for participants

While it is the fieldwork director’s responsibility to ensure that all documentation has been prepared, shared, and uploaded to the travel case file, the field team leader (if the duty is delegated by the fieldwork director) will ensure that all participants have reviewed the information, and know how to access the documents in the field.

#### **Effective Field Team Leaders Communicate Early and Communicate Often.**

As a leader of your group, you have the most influence on the safety practices that will be adopted by your field team. The most leverage you have is at the planning and early stages of your trip. Organize a pre-trip orientation meeting with your whole group as early as possible to share your completed Field Safety Plan. This will help your team plan appropriately and obtain answers to any questions they may have, and make sure that they have any necessary gear. It will also help you establish yourself as a reliable source of guidance and information throughout

the field activity. Arrange an additional kick-off safety meeting once your team is at the field site to explain how the Field Safety Plan will be used, and where it will be located for the duration of your field activities. Explicitly go over the important rules associated with your field activities. Communicate frequently thereafter and revise your Field Safety Plan as needed if field conditions change.

## Chapter 4: Best Practices and Resources

When students, faculty and staff perform field activities, these temporary environments become an extension of our classrooms, office environments, and laboratories. On extended trips, they can become our temporary living spaces.

In addition to practices described in previous chapters to promote physical safety, fieldwork directors and field team leaders need to have an awareness of additional NAU policies and support programs that will continue to apply to field environments and can help support a positive field experience. The following topics address important considerations for field activities, best practices, and resources to support participants:

### Codes of Conduct

Depending on your participants' respective roles at NAU, various codes and standards will likely apply to your field team's conduct while in the field. It can be helpful to remind field teams that this is the case while they are participating in NAU activities, even when they are not on campus.

### Best Practice:

- Determine which codes of conduct and rules will apply to your field team, keeping in mind that staff, faculty, and students are covered by different standards.
- Check with your college or department to see if they have additional field conduct guidance.
- Once you've identified the applicable standards and codes, communicate the expectation that all field participants will conduct themselves in a way that is applicable to their role and supports a positive and safe field experience for all.

### Resource(s):

[NAU Student Code of Conduct](#)

[NAU CERT Standards and Expectations of Conduct](#)

[NAU School of Earth and Sustainability Code of Conduct](#)

### Diversity, Equity, Access, and Inclusion:

In alignment with NAU's commitment to foster diversity, equity, access and inclusion in all areas, fieldwork directors are encouraged to mindfully select field activities and field environments that enable and invite broad participation.



**Best Practice:**

- Incorporate the objectives of [NAU's Diversity Strategic Plan](#) into your interactions with field team participants.
- Reach out to campus experts and advocates for guidance on program and activity design, and effective methods for removing barriers to participation.

**Resource(s):**

[NAU Equity and Access Office](#)

[NAU Disability Resources](#)

[NAU Center for Inclusive Excellence and Access](#)

[NAU Title IX Coordinator](#)

**Personal Hygiene and Toilets:**

When working in the field, access to toilets, changing and washing facilities can be unpredictable and/or challenging. In rustic settings, participants will need to understand types of supplies they will need to bring with them (toilet paper, hygiene products, hand sanitizer, etc.) and what will be provided by the field team leader.

**Best Practice:**

- To the extent possible, let field participants know what types of facilities will be available during field time, and when access may be limited due to remote environments. This can help alleviate anxiety around those topics for any concerned participants.
- Using language such as “toilet breaks” or “hygiene breaks” that is applicable to all participants can promote ease of discussion of this important topic.
- Similarly, if participants will need to bring their own supplies, let them know ahead of time so that they can feel prepared with their own hygiene kits.
- When enclosed facilities are not available and make-shift toilets are required, extra effort will be required to ensure privacy. Field trip leaders should state privacy as a priority for participants.
- When plumbed water is not available, field team leaders will need to provide another water source, or hand-sanitizing methods.

**Resource(s):**

[Tips for Handwashing When Water is Not Available](#)

**Sleeping arrangements:**

On overnight trips, field trip leaders must make extra effort to consider the privacy and comfort levels of participants when making sleeping arrangements.

**Best Practice:**

- Communicate to participants that personal privacy and respect for the privacy of others is a team priority and expectation.
- If participants are asked to share sleeping spaces (tents or rooms), they must be given the opportunity to participate in the arrangement.

**Resource(s):**

[NAU Title IX Guidance](#)

**Communication:**

Field team leaders must be prepared to communicate with field participants on site and with outside parties in the event of an emergency. Your pre-planning process will help determine your means of communication.

**Best Practice:**

- Use the Field Safety Plan template to help pre-plan your means and modes of communication on and off site.
- When working at remote locations, consider establishing a regular check-in schedule with your fieldwork director, or your designated on-campus contact.

**Resource(s):**

Check with your fieldwork director to determine if your department has check-in guidance or requirements.

Check with your department on the availability of field communication devices for field teams working in areas with no cellular service.

**Participant Health and Health Resources:**

Traveling in an unfamiliar or remote environment can be stressful, both mentally and physically. If a field participant has the need for urgent medical or mental health support, contact the local medical facility that you identified in your Field Safety Plan. Otherwise, NAU professionals may be able to provide guidance remotely to assist in non-urgent situations.

**Best Practice:**

- Communicate that the health of participants is a top priority during field activities.
- Let participants know that you have contact numbers for participant assistance and encourage them to ask for help if they are feeling ill, injured, or in need of mental health support.

**Resource(s):**

[NAU EAW Counselling Services for Employees](#)

[NAU Campus Health Services Medical Assistance](#)

[NAU CHS Counseling Services for Student Health and Wellbeing](#)

### **Personal security/public safety**

Though the Field Safety Program is largely focused on mitigation of hazards associated with activities that involve working remotely outdoors, there are off-campus activities in indoor or other public settings that also require risk management.

#### **Best Practice:**

- Check for regional alerts for hunting seasons, hazardous weather, political unrest, risk of terrorism and escalation in crime
- Follow NAU's travel requirements and personal safety guidance
- Avoid working alone when possible
- Pre-plan means of communication in case participants are separated from the group

#### **Resource(s):**

[NAU Police Department Personal Safety Tips](#)

[U.S. Department of State \(travel advisories and other travel resources\)](#)

## **Chapter 5: Incident Reporting and Crisis Management**

Accidents and injuries can and do occur in the field. Your pre-planning process will help ensure that teams are prepared to respond in the best way possible for your field environment. All participants must be aware of the on-site location of your Field Safety Plan, be familiar with means to communicate in the event of accidents and injuries, the on-site location of first aid supplies\* and the location of (and directions to) the nearest medical facility.

*\* It is not currently an NAU requirement for field team leaders, but it is strongly recommended that at least one member of the team is certified in first aid and CPR. Some departments have more stringent requirements.*

### **Non-urgent Injuries or Illnesses:**

For the purposes of this guidance, a non-urgent injury or illness is one that does **not** require medical attention beyond first aid, nor emergency intervention, or assistance from law enforcement. In these scenarios, no immediate reporting process is required (unless requested by your fieldwork director). [NAU's accident reporting process](#) can be initiated either remotely (contact your department for assistance), or as soon as reasonably possible upon your return. Note there are separate online processes for reporting student and employee injuries.

### **Serious Field Incidents and Injuries:**

For the purposes of this guidance, a "serious" incident is one that is urgent in nature and involves the following:

- ◆ Fatality
- ◆ Severe injury (threat to life or limb) requiring inpatient hospitalization
- ◆ Serious illness (threat to life) requiring inpatient hospitalization
- ◆ Major environmental or weather event, political disturbance, act of terrorism or other real threat to field team members' safety and wellbeing

Field team leaders must be prepared to communicate with emergency services from the field. Your pre-planning process will help determine your means of communication (cell phone, satellite communication device, etc.).

In the event of a serious field incident, contact emergency services **closest to the area of your field activity**. If you are travelling in the United States, call 911. If you are travelling internationally, you will need to confirm what emergency number is used for emergency services and include that information in your completed Field Safety Plan.

After calling for emergency services, and after the immediate threat has been addressed, designate a field team member to notify the on-campus department emergency contacts designated on your Field Safety Plan that there has been a serious field incident or injury. That field team member should be prepared to provide a field contact name and method of contact in the field, and basic information about the incident. Once you have reached your on-campus department emergency contact and exchanged information, you will need to call NAUPD Dispatch (928) 523-3611 and let them know that you have been involved in a serious field incident. You can ask your on-campus emergency contact to make this call for you if they can provide the same pertinent information. Based on the information provided, NAU Dispatch will notify the Emergency Manager who may initiate NAU's pre-planned response to serious field incidents. Communication and support for field teams will be arranged as appropriate from that point forward.