

UTRGV™



UT Health
Rio Grande Valley™

PRE- TRIP FIELD OPERATIONS SAFETY TRAINING

DEPARTMENT OF ENVIRONMENTAL, HEALTH, SAFETY & RISK
MANAGEMENT

Course Objectives

- Planning for Potential Field Hazards
- Assembling a Field Safety Plan
- Incident Response and Reporting
- Best Practices for Trip Leaders



Introduction

- A field instructor or researcher must also be an effective risk manager who understands and anticipates risks and acts appropriately to reduce the likelihood of negative consequences.
- Accidents often result from a combination of challenging conditions:
 - Inadequate preparation
 - Poor communication
- Effective trip leader must incorporate many attributes of leadership including:
 - Preparation
 - Competency
 - Effective communication
 - Appropriate judgment
 - Self and group awareness
 - Tolerance for adversity and uncertainty

Assess Potential Field Hazards

Hazard assessment for field activities may be triggered by various entities:

- Animal protocol review
- Part of the research/lab safety program
- Department procedures

All fieldwork warrants a pre-trip discussion regarding foreseen hazards, appropriate precautions, communication options, and emergency procedures.



Pre-Trip Discussion Topics

Destination

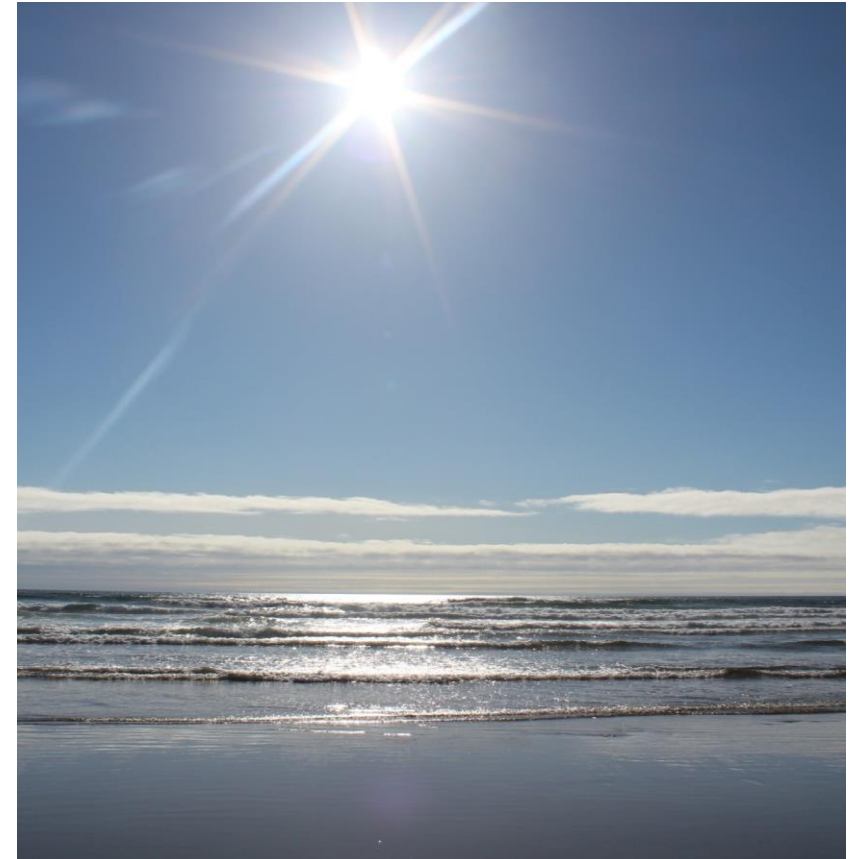
- Will you be traveling internationally?
- Does your “Trip Brief”, the CDC, or State Department recommend vaccinations or prophylaxis for your destination?
- Will you be visiting sites with hazardous terrain, climate, wildlife, zoonotic risks, poor sanitation, other environmental hazards, or remote sites with limited services (e.g. more than 30 minutes from emergency medical services)?

Participation

- Are you responsible for students registered in a field course?
- Will volunteers be helping on your project?

Field Activities

- Working outdoors with temperatures over 80 degrees F?
- Will anyone be boating (motorboats, kayaks, canoes, or other paddlecraft)?
- Will anyone be diving?





Assemble a written field safety plan

For field work in remote locations - or hazardous work off campus - develop a field safety plan with site information and emergency procedures. Serves as a hazardous assessment tool and can include Go/No Go criteria.

Field safety plan is appropriate for the following activities:

- Conducting field research or teaching field courses off campus.
- Work performed at field stations, nature reserves, or controlled sites.

Verify Insurance Coverage



Insurance Requirements

- The State of Texas provides basic insurance coverage for University-owned buildings and building contents for specific causes of loss, as well as liability coverage for UTRGV faculty, staff, and official volunteers for their actions within the course and scope of their jobs.
 - UTRGV does not automatically extend coverage for scientific equipment, electronics, or other property brought into the field, including vehicles.
 - For more information regarding insurance coverage options for scientific or other equipment, or for other questions regarding insurance or liability, please contact Environmental, Health, Safety, and Risk Management at (956) 665-3690.



Identify appropriate equipment, gear and first aid supplies

Fieldwork often requires travel and work at sites that lack basic services such as plumbed water, reliable communications, or prompt emergency medical services.

Any excursion into the field should include carrying some basic first aid supplies.

- Get trained and know how to use everything you put in your kit.

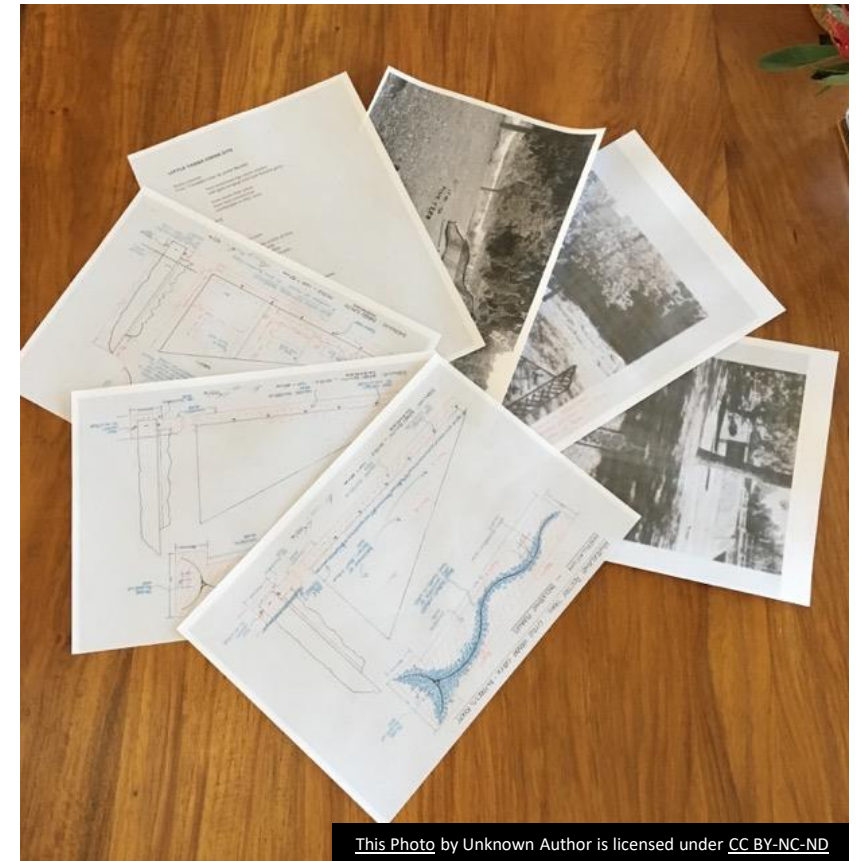


Important safety equipment to bring in the field

- First aid kit
- Map, compass, GPS
- Charged cell phone, field radios, satellite phone/device or personal locator beacon; extra battery or charger
- Extra water and/or water purification methods
- Extra food/snacks
- Hats, sunscreen, sunglasses
- Emergency shelter, e.g. shade canopy or lightweight tarp, bivvy sack or emergency space blanket
- Appropriate footwear and clothing, layers
- Flashlight or headlamp
- Matches or fire starter
- Signal/mirror, whistle
- Knife or multi-tool; duct tape for basic repairs
- Your field safety plan with emergency procedures, other protocols if applicable
- Other equipment specific to your class or project

Complete other forms/documentation

- Relevant permits (such as scientific collecting permits, animal use protocols)
- Participant medical forms, if applicable
- Liability waivers, if applicable
- Copies of drivers' licenses, driver authorization forms (if applicable)
- Copies of passports for all participants on international courses/trips
- Copies of medical prescriptions (if applicable)
- Include a participant list with emergency contacts as part of your field safety plan, dive plan, or float plan



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Communicate with participants before your trip

Your students/field team members need to be physically, mentally and logistically prepared for their field experience. Help prepare your participants to have a safe experience:

- Schedule an orientation “pre-trip” meeting before heading out in the field
- Send or give your participants information regarding your course or project. This can include a personal equipment list, a description of what to expect, a participant medical form, syllabus, waivers and contact information of leaders and other participants.
- Review your Field Safety Plan, expected hazards and conditions, security concerns, code of conduct, and travel logistics.
- Encourage participants to get medical procedures (including dental procedures) taken care of before extended field excursions.
- Initiate direct communication with your participants. It may be necessary to talk directly with participants beforehand to determine whether a field class or research expedition is the right choice for them.



A man in a light-colored uniform and cap is seated on a boat, looking down at a piece of equipment. A woman in a light-colored uniform is leaning over the side of the boat, interacting with the same equipment. The background shows a body of water and some trees. The image is overlaid with a semi-transparent dark layer containing text and a list.

Required training as prerequisites in a Field Safety Plan

- First CPR/AED Training
- Pre-trip Field Safety Training
- Heat Stress Training
- Specialized “Task-Based” Skills
- Scientific Diving and Boating

Handling Wildlife

Wildlife biologists face environmental hazards in the field, as well as risk of zoonotic and vector-borne diseases and the physical threat of a wildlife attack or bite.

It is standard precaution for gloves to be worn when handling any wildlife, and additional controls are warranted for species that transmit life-threatening diseases:

- wearing a respirator for handling deer mice (hantavirus),
- getting a rabies vaccination for handling bats or other carriers.
- Animal procedures require hands-on demonstration and training;



Clinical Work or Handling Biological Specimens

Clinical work or collecting/handling human biological specimens should be covered under an Exposure Control Plan that includes careful consideration of vaccinations, safe work practices, appropriate PPE, post-exposure prophylaxis, and incident reporting.

Follow standard precautions to help prevent the spread of bloodborne pathogens and other diseases whenever there is a risk of exposure to blood or other body fluids.

Standard precautions include maintaining personal hygiene and using personal protective equipment (PPE), engineering controls, work practice controls, and proper equipment cleaning and spill cleanup procedures



Underwater Diving

Underwater diving is a high-risk activity which requires mandatory certification. Participants must have:

- A current physical fitness evaluation
- Complete a safety diving course offered by an appropriately certified professional--the Diving Safety Officer.
- A dive plan must be completed for each research dive.



Boating

Participants operating a motorized boat must complete a Motorboat Operator Certification Course. Participant should complete a safety course in practical boating skills offering instruction in the following skills:

- Familiarity with boating terminology and types of boats
- Basic boat inspections
- Paddling techniques
- Weight distribution in a small boat
- Safety equipment such as personal floatation devices (PFD)
- Emergency procedures
- Weather and water conditions for safe boating
- Knots, lashings, and tiedowns
- Basic/survival swimming instructions

Float plan A float plan must be completed for each boating trip.



Common Field Hazards

- Heat Illness
- Wildfire
- Infectious Organisms/Disease
- International Planning Resources
- Extreme Conditions and Weather
- Wildlife Biology
- Specialized Work (in development)
- Common Field Situations
- Leave No Trace & Outdoor Ethics



Incident Response & Reporting

It's impossible to foresee all injuries or incidents that may occur when working in uncontrolled environments, but first aid skills and having emergency plans in place will help manage situations effectively and potentially mitigate negative consequences.

- Call 911 or seek medical care immediately.
- Scene Size Up form an initial impression
- If the Person is NOT Breathing Send someone to call 911 or the designated emergency number and obtain an AED and first aid kit.
- If the Person is Awake and Responsive and there is no severe life-threatening bleeding:
 - Obtain consent and provide care consistent with knowledge and training according to the conditions you find





Evaluating the “Accident Potential”

- Objective factors: These are environmental hazards presented by the natural world, such as weather, darkness, falling rocks, moving water, lightning, snow, exposure, avalanche, cold, hot, or deep water, etc.
- Subjective factors: These are human characteristics that often play a role when accidents occur. They include complacency, overconfidence, distraction, differing perception of risk, expectations and peer pressure, fatigue, stress, haste and lack of competence.

Effective Communication

The success and overall safety of a team is more associated with the quality of its leadership, teamwork and communication than it is with its overall skill level.

- Explicitly State Leader Expectations
- Get input from your group
- Explicitly go over the important rules
 - Personal physical safety





Review

- Plan for Potential Field Hazards
- Assemble a Field Safety Plan
- Prepare for Incident Response and Reporting
- Implement Best Practices for Trip Leaders

Contacting the EHSRM Occupational Health & Safety Program

Contact Information

Environmental, Health, Safety & Risk Management (956) 665-3690

Website : www.utrgv.edu/EHSRM/

Website: <http://www.utrgv.edu/emergencypreparedness/>

Waste email : waste @utrgv.edu

**Environmental, Health,
Safety, and Risk
Management**



Safety
Is In Everybody's Job Description