

ENVIRONMENTAL HEALTH & SAFETY

UNIVERSITY *of* WASHINGTON

# **UW FIELD OPERATIONS SAFETY MANUAL**

JUNE 2025 EDITION



Environmental Health and Safety Department

University of Washington

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[www.ehs.washington.edu](http://www.ehs.washington.edu)



## FORWARD

The policies and procedures in this manual were developed by the University of Washington Environmental Health and Safety (EH&S) Department to provide information to protect workers and the surrounding environment and to achieve compliance with applicable standards and regulations. This manual is developed in coordination with the University of Washington Institutional Chemical and Physical Safety Committee (ICAPS) with the expectation that updates will be necessary as changes in regulations, policies and procedures dictate.

Implementation of these policies and procedures is the responsibility of the Responsible Party or Principal Investigator and depends largely on the efforts of supervisors and employees. It is essential that they seek additional advice and training when needed to conduct research in a manner that is safe for employees, students, and the surrounding community. To assist in this endeavor, the services of the Environmental Health and Safety Department are available at the University of Washington.



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## EMERGENCY INFORMATION

	Telephone
Principal Investigator/Supervisor: _____	_____
Building Coordinator: _____	_____
Department Safety Team Lead / Safety Coordinator: _____	_____
Custodial or Environmental Services: _____	_____

### UW SEATTLE CONTACTS

University of Washington (UW) Police (On Seattle Campus)	911
Fire Department	911
Employee Health Center	206-685-1026
Seattle Campus, South Lake Union	206-897-1327
Harborview	206-744-3081

### ENVIRONMENTAL HEALTH AND SAFETY (EH&S)

EH&S Main Office (Seattle)	206-543-7262
Research Safety Section (Seattle)	206-221-7770
Tacoma Campus, EH&S Manager	253-692-4425
Bothell Campus, EH&S Liaison	425-352-3763

### AFTER HOURS, WEEKENDS AND HOLIDAYS

UW Police (On Seattle Campus)	911
Seattle Fire (On Seattle Campus)	911
Environmental Health and Safety Staff-On-Call	Page through 206-685-UWPD (8973)

### SITE-SPECIFIC EMERGENCY CONTACTS

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**Department's Supplemental Accident Prevention Plan can be accessed here:**

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## A. PURPOSE OF THE MANUAL

The University of Washington (UW) has committed to create, maintain, and enhance a safe and healthful environment for all individuals associated with the institution, including students, faculty, staff, hospital patients, and visitors. This commitment, including policies and responsibilities, is stated in [UW Presidential Executive Order 55](#). Part of demonstrating this commitment is providing guidelines and resources to lead safe, successful field courses and research trips.

The content in this manual focuses on risk management issues that are relevant for field courses and research, international trips, research expeditions, and other outdoor excursions. Links to other safety manuals published by Environmental Health & Safety (EH&S) are noted when applicable. Field sites may include field stations, natural reserves, public lands or parks, wilderness areas, coastline or waterways, or more controlled sites such as construction areas, excavations, or mines. This manual was developed to serve as a reference document and teaching tool, as well as to highlight applicable UW policies and state/federal laws.

## B. SCOPE

The manual covers roles and responsibilities, planning, training, incident response, best practices, common field hazards, and campus resources. Document templates are included in the Appendices. Use the information in this manual to complete your Field Safety Plan for your work and activities.

Integration of field safety planning into routine instruction and training will meet key objectives and regulatory requirements of your department's [Accident Prevention Plan \(APP\)](#). The Accident Prevention Plan is a written safety program to protect employees from illnesses and injuries per the [Washington Administrative Code 296-800-100](#) and [Washington Industrial Safety and Health Act \(WISHA\)](#), by establishing a safety management framework for identifying and correcting workplace hazards, ensuring employee training and compliance, and communicating information related to safety and health issues. Department-specific and task-specific requirements for activities to be conducted in a safe and appropriate manner in addition to the requirements outlined in this manual are defined, managed, and approved by your department in their [Supplement Accident Prevention Plan \(aka Health and Safety Plan\)](#).

## C. RESPONSIBLE PARTY AND SAFETY OFFICER

Each research or instructional group must have a single responsible party (RP), who is most often the principal investigator (PI), field instructor or director. The RP is an individual who is designated the authority by a University department, school or administrative unit to direct the research or teaching program or project. The RP has scientific and technical direction for the research or activities conducted. The RP has the responsibility and authority to enforce safety regulations and policies.

Based on state requirements, each research or teaching group must also have a designated safety officer who is knowledgeable about the procedures, is actively involved or observant of those procedures performed, and has the authority to enforce correct procedures.



The safety officer is often the RP. If the RP has other commitments that prevent knowledge of day-to-day activities and assigns another person to be the safety officer, the RP is still considered the responsible party for the group. The responsible party may assign a supervisor, manager, or other senior-level person with authority familiar with activities within the group to be the safety officer. The safety officer must be identified by name in the Field Safety Plan, protocols, and any other field safety documents for the group.

The RP must ensure the following is accomplished:

- Create a list of chemicals, equipment, and materials transported.
- Create a list of chemicals stored on UW property.
  - An accurate list of chemicals stored on UW property must be entered into the UW MyChem inventory management system and reviewed annually, at minimum. If they are not already online, upload SDSs to the MyChem Inventory when received in the laboratory. MyChem procedures are described in [Section 2.B](#) of the UW Laboratory Safety Manual. Additional information can be found on the [EH&S website](#).
- Identify hazards and assess risk
  - Recognizing risk and the possibility of loss or injury is integral to experiential learning and is inherent in field environments where teaching and research are conducted. A field instructor or researcher must understand and anticipate risks and act appropriately to reduce the likelihood of negative consequences. Accidents often result from a combination of challenging conditions, inadequate preparation, and poor communication. For this reason, an effective trip leader must incorporate many attributes of leadership including preparation, competency, effective communication, appropriate judgment, self and group awareness, and tolerance for adversity and uncertainty (*adapted from the National Outdoor Leadership School Educator Notebook*).
  - Any group member can identify hazardous conditions that could result in personal injury or property damage. Once identified, the hazardous conditions and level of risk must be assessed and needed safety measures implemented.
  - Steps in the risk assessment include:
    1. Research locations, materials, equipment, and processes to be used.
    2. Identify and evaluate all types of hazards involved. Some evaluations to consider: what are the hazards? What is the worst that can happen? What can be done to prevent that? What can be done to minimize each risk? What should be done if something goes wrong?
    3. Consider if additional hazards may be present due to certain conditions changing.
    4. Select controls to adequately lower the risks, using the hierarchy of controls (starting with the most effective): refer to [Section 2C](#) for details.
    5. Ensure emergency response situations have been addressed,
  - Document hazards identified, assessment of risk, and safety measures for any new fieldwork projects or locations, as outlined in [Section 3](#). A [risk assessment tool and guide](#) are available on the [EH&S website](#). If the assessment results in requirements for controls, those requirements must be documented in the Field Safety Plans and work protocols.

- Supervise access to and usage of hazardous materials for work performed.
- Document and enforce health and safety requirements and guidelines.
- Ensure signage/labels are in place.
  - Appropriate signage must be posted, and hazardous material containers (including hazardous waste containers) must be labeled.
- Assess, provide and document training.
- Develop the Field Safety Plan, including contact details and emergency contacts of all field trip members, and review it with their department according to their protocols.
- Ensure staff have access to, review, and are trained on Field Safety Plans.
- Ensure staff have access to appropriate PPE and the necessary resources for usage, cleaning, and disposal.
- Ensure visiting scientist and volunteer safety.
- Before starting any hazardous activities, visiting scientists and volunteers performing procedures must receive equivalent training as other employees on the hazards and safety precautions, including requirements for use of PPE.
- Have a process in place to track procurement of hazardous materials, chemicals, equipment, and PPE used to increase awareness of work being conducted and ensure participants have access to appropriate materials.
- Ensure that applicable University requirements and safety measures for all project personnel, including [minors](#), are in place.
- Enforce Restrictions on pets/companion animals
  - [WAC 478-128](#) prohibits pets in all University facilities. Staff are prohibited from bringing pets into any University facility. Information on [UW policies](#) regarding service animals can be found on the UW Office of the ADA Coordinator website. [UW Administrative Policy Statement 46.6](#) affords individuals with disabilities who require the assistance of a service animal equal opportunity to access University property, courses, programs, and activities. A service animal may be restricted from specific areas of the University when consistent with other University policies, state, and/or federal laws/regulations. Examples of these areas may include:
    - Food preparation areas
    - Animal research facilities and grounds
    - Medically sensitive patient and clinic areas
    - Biologically sensitive or hazardous research sites
  - If a service animal is restricted from certain areas, the designated disability services offices are available to assist in evaluating reasonable accommodations for the owner. If service animals are NOT restricted from an area, then the RP for that area should manage all safety needs for the animal, including any needed PPE.
- Perform accident/incident follow-up.
  - All injuries, accidents, exposures, fires, and near misses must be investigated. Any accidents/incidents resulting in injury or illness to personnel to the extent that they need



medical attention, and accidents/incidents involving unplanned fires and explosions, must be reported to the RP and to EH&S as outlined in [Section 6](#). It is recommended that incidents that do not result in significant injury or damage, but do result in near misses, also be reported to the RP and to EH&S.

## D. DEAN, DEPARTMENT CHAIR AND DIRECTOR

The dean, department chair and director are responsible for the following:

- Ensure safety of field members by providing a safe and healthy workplace free from recognized hazards [WAC 296-800-110](#). This can be accomplished by:
  - Being aware of the [University's Accident Prevention Program](#),
  - Using the [Supplemental Accident Prevention Plan \(SAPP\) Template](#) health and safety information for a Department health and safety plan, and address site-specific employee protections that extend beyond the [University of Washington Accident Prevention Plan](#).
  - Appointing a safety officer, coordinator, team, or committee to promote and ensure safety procedures department-wide and provide a pathway for communication about safety-related matters within and outside of the department or unit.
  - Ensuring personnel are oriented to the APP and SAPP.
  - Being familiar with the activities generally being conducted, both on site and in the field.
  - Being aware of the general requirements in this manual and other safety and health requirements, and take a reasonable approach to minimizing hazards and risks.
  - Orienting new RPs, visiting scientists, and postdoctoral researchers to required safety training and safety resources.
  - Providing information on required authorizations as needed.
- Ensure that all research or instructional groups conducting field activities have a responsible party who has authority, is familiar with the activities, and is appropriately experienced and trained.
- Ensure visitor safety by having risk assessments completed by the responsible party or safety officer including considerations for visitors on events such as field trips. Conduct a visitor orientation on the potential hazards and safety measures including PPE requirements for the visit. Additional considerations apply for youth which can be found on the [Office of Youth Protections](#) website.
- Enforce hazard control methods.
- Ensure standard operating procedures (SOPs) concerning the use of [particularly hazardous substances](#) identify authorization requirements.
- Ensure that safety records are maintained.
- Review accidents and have procedures in place to become aware of accidents affecting operations within your department. Ensure corrective actions are taken, if necessary, to prevent accident recurrence.
- Review and follow up on inspection findings for responsible parties involved.

- Ensure that corrective actions are completed for safety deficiencies.
- Assume responsible party (RP) duties or assure an RP is appointed for a research or teaching group when there is an extended absence of the PI or RP.

## E. FIELD WORKERS

All field workers, including employees, students, and volunteers, have a responsibility to:

- Comply with University guidelines and policies.
- Know and comply with safety guidelines and policies required for all assigned tasks.
- Obtain appropriate training for designated activities.
- Select, maintain and use PPE and safety equipment appropriately, consistent with your training. Departments should clarify who is responsible for providing the necessary PPE and safety equipment. Students may be required to provide their own PPE for use in academic activities.
- Report unsafe conditions to your safety officer, PI/RP, a faculty member, your immediate supervisor, the departmental safety officer, or EH&S (206-543-7262).
  - If you identify a procedure or assigned task as being exceptionally risky, you can perform it only after you believe the risk has been reduced to an acceptable level.
- Report injuries, illnesses, exposures, fires, and near misses to your supervisor, and to the University using the [online accident reporting system](#) (OARS).
- Understand what to do in the event of an emergency.

## F. ENVIRONMENTAL HEALTH AND SAFETY DEPARTMENT

EH&S is responsible for the following:

- Implement University policies related to public, occupational, and environmental health and safety.
- Produce and update the UW Field Operations Safety Manual; make the manual available through the EH&S website; announce updates on the EH&S website, in the EH&S newsletters, and by email.
- Serve as the liaison between the University and the regulatory agencies enforcing environmental, health and safety regulations.
- Advise on safety practices and compliance as it applies to field operations.
- Provide occupational health recommendations.
- Assist parties (as needed) with the development of the site-specific information required to complete their Field Safety Plan.
- Develop and provide general safety training courses.
- Reference University [Executive Order 55](#) for additional roles and responsibilities.



## G. CREATING SAFE LEARNING ENVIRONMENTS

The Responsible Party (RP) for field operations has an enormous influence over how well and how safely the team will perform. Below are several key communication actions that can be employed to help more effectively steer the group in a safe and positive direction. Reference the Best Practices section in [Appendix I](#) for suggestions on how to engage certain types of discussion and topics to cover.

### 1. Set the Tone on Safety and Acceptable Behavior

The success and overall safety of a team is rooted in the quality of its leadership, teamwork, and communication more than it is in the overall skill level. Teams are consciously built by the actions of both leaders and participants. Before any risky situations arise, it's important to develop and practice good teamwork and communication within the RP/instructor/leader team and student/research groups. Studies have shown that participants are more likely to implement safety practices and engage in safety discussions when the RP/instructor/leader models those behaviors themselves and initiates safety discussions on a regular basis.

### 2. Establish and Maintain Reasonable Goals, Roles, Expectations and Behavioral Norms

As the RP, you have the most influence over creating a culture of safety within your group. By far, the most leverage you have is at the beginning of your class/trip. All your group's future endeavors are made easier or more challenging by the effectiveness of these first interactions. Two important meetings should occur at this early stage:

- Meet with your leader/teaching team prior to the beginning of your class/trip to discuss your leadership roles as well as personal and course objectives.
- Facilitate a pre-trip orientation meeting with your whole group as early as possible to establish clear goals, roles, expectations, and behavioral norms.

### 3. Brief Your Team Often

Groups operate more safely when they are frequently briefed on what to expect. Brief at the start of the day or activity. Brief when conditions change. Brief when your plans change. Excellent leaders articulate and explain goals as often as necessary.

Strive to incorporate these core ingredients into your briefings:

- What are we doing? (What are the goals?)
- How are we doing it? (What's the plan?)
- When are we doing it? (What's the timetable?)
- Who is doing it? (What are our roles?)
- What hazards can we anticipate?
- How will we manage those hazards? (What are the contingency plans?)
- What gear do we need?
- How and when will we make decisions?
- How is everyone doing? What concerns do you have?



- What is our plan if someone becomes ill or injured or lost?
- Have I been understood? (one way to check is to ask your group to repeat back the information you just gave them.)

#### **4. Practice Active Listening**

The practice of active listening can help you build a healthy group learning community but also can significantly reduce the likelihood of accidents. When you are actively listening to someone, you are supporting people to think out loud. This builds trust, group intelligence, and greater awareness of a situation or issue. It also helps leaders (and their groups) make safer decisions. More information on active listening practices can be found in Appendix I.

#### **5. Resolve Conflict**

The potential for conflict is natural among people and is an inherent part of any group's development into a safe, high functioning team. Rather than avoid conflict, effective teams manage conflict productively. While conflicts are okay, unresolved conflicts are not. They impede communication and cooperation, and they can lead to incidents. Conflict often arises when expectations, roles, and responsibilities are unclear. Participants may be missing information or lack a sense of the big picture. It's the leader's job to clarify this for your group. When conflict arises, you should acknowledge it as a sign that your team may be unraveling. As a leader, you may need to step in, acknowledge the issue, and set aside time to work through the conflict. Do this by listening to the different perspectives and opinions, restating, or revising roles and expectations, and committing to moving forward productively. Additional approaches for conflict resolution are listed in Appendix I.

### **H. ADDRESSING STUDENT/PARTICIPANT BEHAVIOR IN THE FIELD**

The board of regents of the University of Washington has established rules regarding student conduct that are set forth in [WAC 478-121](#). This conduct code applies to all students from the time of admission through the actual conferral of a degree and covers all forms of conduct prohibited on any university premises or in connection with any university-sponsored program or activity, regardless of the location of the program or activity.

One of the most difficult challenges of a field instructor/leader is to address group dynamics and individual behavior that can undermine a positive learning environment for everyone. These challenges may manifest as homesickness/disengagement, alcohol or drug use, poor performance, sexist or racist behavior, or various behaviors that prevent inclusion of everyone.

Engaging participants to collaborate involves all the following:

- Setting the tone for a safe positive learning environment.
- Using inclusive language. (e.g., use "family" instead of "parents", give people the opportunity to share their preferred gender pronouns)
- Building rapport and developing positive professional relationships with all students/participants: give regular positive and constructive feedback, spend time (structured and unstructured) with them, play games, have conversations, ask them questions, set and reinforce boundaries, and learn from your students/participants. Make the effort to individually check-in with each of your students/participants at some point during your course/project. Ask them how they're doing, ask them to give you feedback, and then listen.





Options to consider if challenges arise:

- Examine the individual's behavior and their individual experience while revisiting the structure and boundaries you set for a safe and positive learning environment, your role as an instructor, and the culture created by your group.
- Are there social dynamics at play in your group that isolate, intimidate, or threaten this individual?
- What needs of this individual are not being met? What could you do to meet them?
- What is this individual getting from their disruptive behavior? Is there any other way this individual could meet their needs in a more productive way?
- Are the boundaries you have created thwarting this individual's ability to feel capable, connected, and that their presence matters?
- Make structural changes (such as giving more time for meals or breaks occasionally) that you think might alleviate some of the stress on this individual and the group.
- Give verbal feedback and coaching first before written documentation.
- Keep a written behavior log of observations about the individual's behavior:
  - Be accurate - stick to observations and quotes; avoid speculation, interpretation, and evaluation.
  - Be specific, clear, and organized. Use dates, times of day, names, etc.
  - Use direct quotes from the individual and from their peers.
  - Be brief and avoid redundancy.

If a behavioral issue does not resolve itself after 1-2 days of trying all the above, consider creating a performance agreement, which is a structured way to:

- Document behaviors that need to change
- Clarify behavioral expectations
- Outline consequences if change doesn't occur

An effective agreement should target behavior that is specific, observable, and changeable. It needs to include a timeline for change and appropriate consequences.

Title IX, Washington state law, and UW policy prohibit discrimination based on sex, sexual orientation, gender, gender expression, pregnant or parenting status, and LGBTQ (lesbian, gay, bisexual, transgender, queer) identity. The [Office of the Title IX Coordinator](#) assists any member of the UW community with concerns or inquiries regarding Title IX-related sexual misconduct or gender discrimination. Contact them at 206.221.7932 | [titleix@uw.edu](mailto:titleix@uw.edu)

Reach out to [SafeCampus](#) regarding any inappropriate behaviors in the workplace or safety and well-being concerns for yourself or others at 206.685.7233 | [safecampus@uw.edu](mailto:safecampus@uw.edu)

## I. INSTITUTIONAL CHEMICAL AND PHYSICAL SAFETY COMMITTEE

As outlined in UW [Administrative Policy Statement 12.7](#), the [Institutional Chemical and Physical Safety \(ICAPS\) Committee](#) is one of several University-wide committees charged with promoting a safe working environment at the University of Washington. The committee has specific oversight responsibilities for chemical and physical safety in all research and teaching activities conducted in University owned and operated laboratories, and in field research.

The committee has the authority to recommend modification, suspension, revocation and/or termination of any activities that are deemed to pose an unacceptable risk to life or safety. Recommendations will be made to the EH&S Senior Director, department leadership, and University leadership as needed.

Safety concerns and issues identified by EH&S may be escalated to the committee for resolution. For additional information on the committee and the escalation process, contact [labcheck@uw.edu](mailto:labcheck@uw.edu).

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## SECTION 2 – PLANNING AND PREPARATION

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## A. INITIAL PREPARATIONS FOR A SUCCESSFUL TRIP

Planning and preparation for your trip is essential to a safe and successful venture for all participants. The responsible party or field instructor for a field operation or activity should consider these key steps of preparation in the early stages of planning the trip:

- Register your trip with the UW Office of Global Affairs for travel outside of the U.S.
- Schedule a pre-trip medical consultation.
- Develop your emergency communication plan.
- Take first aid training and procure a first aid kit.
- Consider and discuss security risks and personal safety.
- Start to draft a Field Work Risk Assessment.

Depending on the location of your activities and the tasks involved, there is a variety of additional preparations to consider and complete, which may include applications and required documents for grants and permits. Use the following lists as a starting point for this.

## B. PREPARING FOR POTENTIAL FIELD HAZARDS AND RISKS

Hazard identification and risk assessment for field activities may be triggered by various entities, such as EH&S, the [Office of Animal Welfare](#), or your own department. The list below can be used in combination with EH&S's [Field Work Risk Assessment Tool \(Field RAT\)](#) to provide an overview of resources and hazard mitigation plan for fieldwork activities.

**All** fieldwork warrants a plan addressing foreseen hazards, appropriate precautions, communication options, and emergency procedures. Recommended actions are listed in the table below.

A more detailed list of potential hazards is found in [Section 3](#) – Hazard Identification and Risk Mitigation.

DESTINATION	PROCEDURE
<input type="checkbox"/> Will you be traveling more than 100 miles from your home campus/office?	<ul style="list-style-type: none"> <li>• Register with your department and identify all participants.</li> </ul>
<input type="checkbox"/> Does your worksite lack reliable phone service?	<ul style="list-style-type: none"> <li>• Include check-in procedures in your Field Safety Plan.</li> <li>• Avoid working alone, when possible.</li> <li>• Carry field radios or satellite communication device.</li> </ul>
<input type="checkbox"/> Does UW, the CDC, or state department recommend vaccinations or prophylaxis for your destination?	<ul style="list-style-type: none"> <li>• Schedule a medical visit at least 6-8 weeks prior to your trip; contact <a href="#">Travel Medicine</a>.</li> </ul>



DESTINATION	PROCEDURE
<input type="checkbox"/> Will you be traveling internationally?	<ul style="list-style-type: none"> <li>• Register with the <a href="#">UW Office of Global Affairs</a>.</li> <li>• Be familiar with <a href="#">UW international travel policies</a> and potential travel restrictions.</li> <li>• Be familiar with <a href="#">UW Student International Travel policies</a>.</li> <li>• Be familiar with <a href="#">Insurance for Global Travelers</a>.</li> <li>• Check the <a href="#">U.S. State Department travel site</a> and <a href="#">CDC travel site</a> for current travel alerts, advisories and important safety and security information for your destination.</li> <li>• Identify any permits or permissions needed for work activities, including importing or exporting of materials or equipment.</li> <li>• Gain awareness of local laws, restrictions, and penalties that may include or impact participants and activities, e.g. bans on satellite devices.</li> <li>• Be aware of the country's financial situation. Is there access to ATMs? Can you use credit cards? Is your card set up to work internationally?</li> </ul>
<input type="checkbox"/> Will you be using third party vendors for housing, transportation, or excursions?	<ul style="list-style-type: none"> <li>• Vet any vendors, even if your local partner is arranging housing and transportation.</li> <li>• Use the <a href="#">UW Global Travel vendor vetting checklist</a>.</li> </ul>
<input type="checkbox"/> Will you be visiting sites with hazardous terrain, climate, wildlife, zoonotic risks, poor sanitation, other environmental hazards, or remote sites with limited services?	<ul style="list-style-type: none"> <li>• Complete a Field Safety Plan and review with all participants.</li> <li>• Include contacts for the nearest emergency medical services in your Field Safety Plan.</li> <li>• At least one participant should have current first aid training and carry a first aid kit.</li> </ul>

DESTINATION	PROCEDURE
<input type="checkbox"/> Will you be visiting private property or entering private homes?	<ul style="list-style-type: none"> <li>• Avoid working alone, when possible.</li> <li>• Ensure proper approvals/protocols are in place.</li> <li>• Carry UW identification.</li> <li>• Dress comfortably but professionally.</li> <li>• Carry a reliable means of communication and check in with your supervisor regularly.</li> </ul>
<input type="checkbox"/> Will you be visiting controlled sites such as construction sites or mines?	<ul style="list-style-type: none"> <li>• Request PPE and site access requirements in Advance.</li> <li>• Carry UW identification.</li> <li>• Check-in with site manager/superintendent to understand what other hazards are currently present on the jobsite.</li> <li>• Avoid working alone, when possible.</li> <li>• Request an escort if possible.</li> </ul>
<input type="checkbox"/> Will you be driving to your destination via UW, rental or personal vehicles?	<ul style="list-style-type: none"> <li>• Review <a href="#">UW Fleet Services insurance policies</a> for students, faculty and staff; complete relevant driver safety training as required by <a href="#">UW Fleet Services</a>; consider additional trainings for specific vehicles, i.e. off road/4x4 if applicable.</li> <li>• Review <a href="#">insurance coverage</a> and <a href="#">accident reporting procedures</a> for personal and rental vehicles .</li> <li>• If driving in remote locations, carry an emergency vehicle kit and be familiar with how to use its contents.</li> <li>• Determine any training, permits, or licenses needed for driving in international locations.</li> </ul>



DESTINATION	PROCEDURE
<input type="checkbox"/> Will anyone be chartering boats/planes or using other non-commercial means of transportation?	<ul style="list-style-type: none"> <li>Consult with <a href="#">Procurement</a> regarding appropriate contract procedures and insurance. Note that insurance benefits will not cover:             <ol style="list-style-type: none"> <li>travel in any off-road motorized vehicle not requiring licensing as a motor vehicle.</li> <li>an accident if the covered person is the operator of a motor vehicle and does not possess a valid motor vehicle operator's license.</li> <li>driving any motor vehicle for pay or hire.</li> </ol> </li> <li>Refer to the <a href="#">Boating Safety Manual</a> for guidance.</li> </ul>
PARTICIPATION	PROCEDURE
<input type="checkbox"/> Are you responsible for students registered in a field course?	<ul style="list-style-type: none"> <li>Obtain appropriate <a href="#">Acknowledgement of Risk Forms</a> from UW Compliance and Risk Services.</li> <li>Review Appendices on "Best Practices for Trip Leaders" and "Campus Resources".</li> <li>Consider establishing a "Student Behavior Agreement" or reviewing a "Code of Conduct".</li> <li>Set the tone for a safe trip by discussing expectations and rules before the trip.</li> <li>Carry a participant roster with emergency contact information at all times.</li> </ul>
<input type="checkbox"/> Will participants be camping or sleeping in shared dorms, housing, etc.?	<p><i>Items listed in the box above also apply here.</i></p> <ul style="list-style-type: none"> <li>Inform participants in advance of conditions.</li> <li>Review code of conduct for shared sleeping arrangements.</li> <li>Provide requested accommodations for personal privacy concerns when possible.</li> </ul>

PARTICIPATION	PROCEDURE
<input type="checkbox"/> Will you be working alone?	<ul style="list-style-type: none"> <li>• Include this information in your Field Work Risk Assessment.</li> <li>• Register with your department and notify them of your Field Safety Plan.</li> <li>• Identify contacts for immediate or local assistance in the event of an emergency.</li> <li>• Incorporate check-in times into your communication plan and Field Safety Plan.</li> </ul> <p>Consider using emergency beacons or other satellite communication devices.</p>
<input type="checkbox"/> Will volunteers be helping on your project?	<ul style="list-style-type: none"> <li>• Register volunteers formally with UW <a href="#">Office of Global Affairs</a> if traveling outside of U.S.</li> <li>• Review <a href="#">Risk Services information</a> regarding volunteers for all volunteers working in the field.</li> <li>• Fulfill any requirements per <a href="#">UW Student International Travel policies</a>.</li> </ul>
<input type="checkbox"/> Are there participants under the age of 18? (restrictions apply)	<ul style="list-style-type: none"> <li>• There are restrictions for personnel under the age of 18. Follow requirements and guidance outlined by The <a href="#">Office of Youth Protection</a> Coordinator and consult with your Dean's office.</li> <li>• Assess activities and environments that <a href="#">minors may encounter</a>.</li> </ul>
<input type="checkbox"/> Will family members, partners, or other companions be travelling with participants?	<p><i>Items listed in the box above also apply here</i></p> <ul style="list-style-type: none"> <li>• Register family members, partners, etc. who are affiliated with UW via <a href="#">UW Office of Global Affairs</a> if traveling outside of U.S.</li> <li>• Explore options for dependent insurance coverage. <a href="#">UW Office of Global Affairs</a> is able to consult on this.</li> </ul>





FIELD ACTIVITIES	PROCEDURE
<b>Note: Include all hazards associated directly with field activities in your <a href="#">Field Work Risk Assessment</a> and address them in your Field Safety Plan (refer to <a href="#">Section 3</a>)</b>	
<p>Does work involve:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Excavating soil more than 4 feet deep?</li> <li><input type="checkbox"/> Working at heights over 6 feet?</li> <li><input type="checkbox"/> Entering caves, vaults, mines, or other potential confined spaces?</li> <li><input type="checkbox"/> Handling or transporting hazardous chemicals, materials or samples?</li> <li><input type="checkbox"/> Use of powered tools or equipment?</li> <li><input type="checkbox"/> Working around loud noise (&gt;85 decibels)?</li> <li><input type="checkbox"/> Using All Terrain Vehicles?</li> <li><input type="checkbox"/> Using snowmobiles?</li> <li><input type="checkbox"/> Using Unmanned water vehicles?</li> <li><input type="checkbox"/> Clinical work or handling of biological specimens?</li> <li><input type="checkbox"/> Handling/trapping wildlife?</li> </ul>	<ul style="list-style-type: none"> <li>• Contact EH&amp;S for appropriate hazard assessment, training, and PPE selection (e.g. use of respirators, working in loud noise, handling wildlife).</li> <li>• Include training requirements and precautions in your Field Safety Plan or refer to specific SOPs, work plans, etc.</li> <li>• Consult the <a href="#">Laboratory Safety Manual</a> for information on handling and transporting hazardous materials; review additional EH&amp;S safety manuals and documents specific to certain materials.</li> <li>• Acquire appropriate emergency response kits (e.g. chemical spill kit, emergency kits for vehicles, first aid kit).</li> <li>• Ensure you have completed applications for and received approvals required for handling certain hazardous materials or tools.</li> <li>• If medical clearance or vaccinations are required, schedule your appointment with <a href="#">EH&amp;S Employee Health Center</a> at least 6-8 weeks prior to travel.</li> </ul>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Working outdoors with temperatures over 52 degrees Fahrenheit in non-breathable clothing?</li> </ul> <p>Or working outdoors in temperatures over 80 degrees Fahrenheit in other types of clothing?</p>	<ul style="list-style-type: none"> <li>• <a href="#">Conduct Heat Illness Prevention training</a> for your group. Refer to Appendix II for resources.</li> <li>• Establish a plan for assessing heat exposure and responding to heat illness.</li> <li>• Carry sufficient water, take breaks in shade.</li> <li>• Carry shades or tarps if natural shade is unavailable.</li> <li>• Maintain means of communication, awareness of worksite location, and ability to obtain Emergency Medical Services.</li> </ul>

FIELD ACTIVITIES	PROCEDURE
<input type="checkbox"/> Working in cold, possibly wet conditions?	<ul style="list-style-type: none"> <li>• Provide all participants with a recommended gear list including waterproof clothing, boots, layers for insulation, extra dry socks, tarp, etc.</li> <li>• Carry extra blankets or sleeping bag in your vehicle for emergencies.</li> </ul>
<input type="checkbox"/> Working in dry vegetation/areas with high fire danger?	<ul style="list-style-type: none"> <li>• Complete the online <a href="#">Fire Extinguisher training</a>; someone who has completed the <a href="#">Hands-On training</a> must be present at the work site at all times.</li> <li>• Carry a fire extinguisher, shovel, and bucket of sand in your vehicle.</li> <li>• Consult with <a href="#">EH&amp;S Building &amp; Fire Safety team</a>.</li> </ul>
<input type="checkbox"/> Working in areas outside cellphone coverage or in satellite dead zones?	<ul style="list-style-type: none"> <li>• Assess access to satellite devices, walkie-talkies, or radios and include this information in the Field Safety Plan.</li> <li>• Check if there are restrictions on bringing satellite devices into the country being visited for field work; local US embassies can provide this information.</li> <li>• Train personnel on usage of the communication device; all members of the work party should know how to trigger an SOS signal even if they are not fully trained on usage of the device.</li> </ul>
<input type="checkbox"/> Will anyone be boating (motorboats, kayaks, canoes, submersibles, or other paddle-craft)?	<ul style="list-style-type: none"> <li>• Ensure properly fitted personal floatation devices (PFDs) are worn at all times.</li> <li>• Consult the UW <a href="#">Boating Safety Program</a> and <a href="#">Boating Safety Manual</a> for training and guidance.</li> <li>• Complete a float plan for every trip.</li> </ul>



FIELD ACTIVITIES	PROCEDURE
<input type="checkbox"/> Will anyone be working over or alongside water that a person could fall into and drown?	Ensure properly fitted personal floatation devices (PFDs) are worn at all times.
<input type="checkbox"/> Will anyone be diving?	<ul style="list-style-type: none"> <li>• Contact the UW <a href="#">Dive Safety Program</a> and consult the <a href="#">Diving Safety Manual</a> for required training and approvals.</li> <li>• Complete a <a href="#">Dive Plan</a> for every trip.</li> </ul>
<input type="checkbox"/> Will anyone be operating Unmanned Aircraft Systems (UAS) aka drones?	<ul style="list-style-type: none"> <li>• Verify compliance with <a href="#">Federal Aviation Administration</a> (FAA) requirements.</li> <li>• Verify compliance with <a href="#">Washington State Department of Transportation</a> requirements.</li> <li>• All UAS flights require prior approval from your department and post-flight reporting; <a href="#">contact EH&amp;S</a> for assistance.</li> <li>• UW Tacoma has a <a href="#">policy for use of UAS</a> on that campus.</li> <li>• Plan for proper storage, charging, and transportation of lithium batteries needed; review <a href="#">Lithium Battery Safety Practices</a>.</li> </ul>
<input type="checkbox"/> Will any hazardous waste be generated at the work site?	<ul style="list-style-type: none"> <li>• Consult the <a href="#">Laboratory Safety Manual</a> for information on handling, transporting, and disposing of hazardous waste.</li> <li>• Plan for proper storage, labeling, and transportation of waste generated.</li> <li>• Include requirements and precautions in your Field Safety Plan or refer to specific SOPs, JHAs, etc.</li> <li>• Fill out an <a href="#">EH&amp;S Waste Evaluation Request</a> if needed.</li> </ul>

### C. RISK ASSESSMENTS AND FIELD SAFETY PLANS

Prevention of injuries and incidents in the field begins with identifying the hazards present. A risk assessment tool is one practical approach recommended to identify hazards and ways to reduce or eliminate hazards. It focuses on the relationship between the researcher, the work, the tools, and the work environment. Ideally, after you identify uncontrolled hazards, you will take steps to

eliminate or reduce them to an acceptable risk level.

Conduct a risk assessment as part of the planning process for any field operations trip being conducted for the first time. Once you have conducted a risk assessment for a particular work site, individual trips should be planned using a Field Safety Plan. The plan includes information on equipment needed, work protocols, and emergency procedures and contacts.

More information about these two tools is found in [Section 3](#) – Hazard Identification and Risk Mitigation.

The National Science Foundation now requires the UW Office of Sponsored Programs to certify that a plan is in place for safe and inclusive research when off-campus or off-site research is proposed. When applicable, you will need to attach a proposal-specific plan regarding safe and inclusive working environments to your grant application. A template Plan for Safe and Inclusive Field/Vessel/Aircraft Research (PSI-FVAR) is available in Appendix III and is designed to complement your Field Safety Plan.

## D. EMERGENCY COMMUNICATION PLAN

Knowing who to contact in an emergency is critical. As part of your preparations, identify the key emergency contacts for your work group and the site of your operation. Keep a written copy with you at all times and share it with other fieldwork participants. Plan for events such as the loss of your phone or the contact list on your phone. A little pre-planning now can save valuable time in an emergency. Consider creating a shared document with critical contact information.

Consider the following when developing your emergency communication plan:

- Who do you need to communicate with? UW contacts, local contacts, UW resources, students, staff, faculty, department leadership?
- Who is responsible for communicating to each group? What is the chain of communication to follow in the event of an emergency?
- How will you communicate? E-mail? Phone? Text? Other emergency device?
- What do you need to say? What information do responders or emergency contacts need to know?
- How often will you communicate? What additional follow-up will be required after initial contact?
- Different types of emergencies may require different communication plans with respect to privacy considerations
- Consult with [SafeCampus](#) before reaching out to an emergency contact listed in a student's records to determine if it is allowable under FERPA and is the right action. For international trips, this information will be available in their [travel registration](#).
- For international trips, emergency contacts should include information for local emergency service numbers, relevant embassies, insurance and emergency assistance providers, as well as the [UW 24/7 Global Emergency Line](#).

## E. LEGAL AND FINANCIAL SYSTEMS CONSIDERATIONS

When traveling internationally, be familiar with UW international travel policies and potential travel



restrictions. Check the U.S. State Department travel site and CDC travel site for current travel alerts, advisories and important safety and security information for your destination. Vet any vendors used for accommodations, transportation, and excursions, even if your local partner is arranging them for you. Use the [UW Global Travel vendor vetting checklist](#).

Whether a trip is to a domestic or international location, identify any permits or permissions needed for work activities, including importing or exporting of materials or equipment and access to restricted locations. Gain awareness of local laws, restrictions, and penalties that may include or impact participants and activities, e.g. bans on possession of satellite devices. Foreign countries may have specific laws for women and LGBTQ communities. Ensure you are familiar with the local laws of your destination country.

Be aware of the country's financial situation and systems. Identify if and how to access ATMs, banking options, and use credit cards. If credit cards are to be used, make sure to set your card to work internationally.

## F. INSURANCE COVERAGE

Determine what types of insurance coverage are needed and provided for a trip. This includes travel insurance, medical insurance, coverage for severe situations that require evacuation such as a natural disaster or security event, and coverage for potential damage to equipment. Factors impacting the coverage include if the participant is a student, faculty, or staff, whether the trip is domestic or international, and the types of activities taking place.

Know what is not covered in your insurance plan. Exclusions may include medication for pre-existing conditions, loss arising from participation in "high-risk activities" or non-work-related activities, elective medical care, and immunizations.

Resources for determining coverage plans available include your personal insurance company, [UW Office of Global Affairs](#), and [UW Risk Services](#).

## G. REGISTERING YOUR FOREIGN TRIP

The University of Washington's Office of Global Affairs facilitates safe and successful travel abroad for Huskies through the Global Travel Security Program.

Information regarding travel registration for faculty, staff, and students, current UW travel policies, insurance information, and connections to the Global Operations Support team can be found on their [website](#).

All UW travelers are automatically enrolled in [emergency medical and security insurance coverage](#). Student travelers will sign a payment contract and have their student accounts automatically charged for the insurance premium. Staff, faculty and academic personnel are not charged for coverage. High-risk activities (e.g., sky diving, bungee jumping) are typically excluded from certain overseas insurance coverages. Travelers should check their insurance policy for coverage exclusions.

During [travel registration](#), international travelers are prompted to create an account with International SOS (ISOS) and to download the ISOS Assistance app. ISOS is the emergency assistance provider for UW and is available to assist travelers with their medical needs abroad.

The Office of Global Affairs strongly recommends all international travelers, regardless of citizenship status, register their trip with the [Smart Traveler Enrollment Program \(STEP\)](#).

Note that vessel fieldwork requires special considerations.

## H. IDENTIFYING APPROPRIATE EQUIPMENT, GEAR, AND SUPPLIES

Field work often requires travel and work at sites that lack basic services such as plumbed water, reliable communications, or prompt emergency medical services. It's important during planning to budget for appropriate safety measures, including field safety supplies and training. It is appropriate for field safety supplies and training to be budgeted and reimbursable using University research and/or departmental operation funds.

## I. FIRST AID KITS

First aid supplies must be readily available to all employees, and should be stored in clean, clearly marked, portable containers. The containers must not be locked. They must be made of material that protects them from damage, deterioration, or contamination in the work environment. EH&S's [First Aid Plan Guidelines](#) contain instructions for creating a First Aid Plan.

Units must assess their work environments to determine if, given the hazards in the environment, additional supplies are needed.

Personal medications and prescription medicines should be kept in the possession of the person who uses them and not in a shared first aid kit.

Any excursion into the field should include carrying some basic first aid supplies. There is no perfect first aid kit, but consider the following:

- First aid kits don't save lives, people do. Get trained and know how to use everything you put in your kit.
- Commercial first aid kits are good starting points, and options are available through UW e-procurement. Vendors such as REI and Adventure Medical Kits have options designed for outdoor excursions for various group sizes.
- Customize your kit for your destination, tasks, group size, and level of training.
- Pack extra gloves!
- Re-pack your first aid kit for each trip; replenish used or expired items.
- Check for expiration dates on medications and sterile items; replace items that may have been torn open or damaged. Many vendors sell refill kits.
- Enclose an empty plastic bag in your kit for trash. Ensure that all users of the kit use the trash bag.

## J. SAFETY EQUIPMENT AND IMPORTANT DOCUMENTS

Creating a list of the safety equipment you will need for all aspects of your trip is an important part of your preparation. Reference the checklists included at the end of the manual to assist you in documenting your supplies.

Important documents, such as permits, licenses, and identification documents should also be inventoried before your trip. Reference the checklist at the end of the manual for this.

If use of firearms is involved, the appropriate permits should be acquired in advance.



## K. TRANSPORTATION OPTIONS AND PRECAUTIONS

Modes of travel, as well as vehicles or equipment used at your field site, should be included in your Field Safety Plan along with any prerequisite training or required work practices. Depending on your needs, UW Transportation Services, Fleet Services, EH&S, Office of Global Affairs, or Risk Services may be able to help. Consider contacting:

- [UW Fleet Services](#) regarding auto-insurance policies
- [UW Transportation Services](#) for assistance with parking permits and transportation passes
- [Risk Services](#) regarding insurance if chartering boats, planes, or using other non-commercial modes of transportation or personally owned vehicles.
- [UW Global Travel Health and Safety](#) can provide information on the relative safety of public transportation infrastructure.

Do not use public transportation for transporting hazardous materials or equipment. Transportation of certain hazardous materials is allowed in UW-owned and operated Motor Pool vehicles. Refer to the [Gas & Cryogen Transport focus sheet](#) for guidance on transporting compressed gas cylinders off campus. You cannot transport hazardous chemicals in your personal vehicle. For more information on transport of hazardous materials call 206.685.2849 or email [hazmat@uw.edu](mailto:hazmat@uw.edu). For information on transport of radiological materials or equipment, call 206.543.0463 or email [radsaf@uw.edu](mailto:radsaf@uw.edu).

## L. COMMUNICATING 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 a “pre-trip” orientation meeting before heading out in the field.
- Give your participants detailed 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.
- Discuss expectations, practices, and policies regarding after-hours or non-work-related activities that may occur while in the field.
- Review your Field Work Risk Assessment, 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.

Refer to Best Practices in Appendix I for more suggestions on setting the tone for a safe trip.

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## SECTION 3 – HAZARD IDENTIFICATION AND RISK MITIGATION

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## A. HAZARD IDENTIFICATION

Prevention of injuries and incidents begins with identifying hazards. Include all hazards you might potentially encounter in the Field Safety Plan for your work or activity. The following tables list common hazards, appropriate responses for them, and appropriate prevention measures. This information is based on materials published by Duke University.

### 1. Physical and Environmental Hazards

General physical and environmental hazards exist in every location worldwide. All field team members, regardless of the work location, should be familiar with this list of possibilities and information on how to respond to them.

Details about first aid practices and appropriate prevention measures for items on this list can be found in the tables listed in [Section 6](#) – Emergency Response.

- Assault
- Carbon monoxide
- Cold water shock
- Dehydration
- Drowning
- Electrical shock
- Extreme weather
- Frostbite
- Hazardous terrain
- Heat exhaustion
- Heat stroke
- High-altitude sickness
- Hunting season
- Hypothermia
- Impure water
- Interpersonal violence
- Poisonous plants
- Sunburn
- Travel-related accidents
- Wildfire smoke



## 2. Chemical Hazards

Field projects that involve the use of chemicals and hazardous materials must comply with requirements outlined in the UW [Laboratory Safety Manual](#). Use the manual to determine suitable containment, labeling, transport, handling and waste management for all chemicals used in the field. Ensure that chemical and process-specific SOPs are developed. Safety Data Sheets (SDSs), SOPs, personal protective equipment (PPE), and spill kits required for all chemicals in use should be readily available for all participants. In addition, all field personnel should complete applicable EH&S training prior to commencement of field activity, including Managing Lab Chemicals if chemicals are being used.

Chemicals taken aboard research vessels should be inventoried in the UW [MyChem system](#). Caution Signs informing visitors and first responders to the chemical hazards present can be printed through MyChem and should be posted on any doors opening into the space where chemicals are being used. Refer to EH&S's [Caution Signs and Warning Signs webpage](#) for more information.

Include information in your Field Work Risk Assessment, Field Safety Plan, and SOPs about how to address chemical exposures in the field. Consider what types of and access to safety equipment will be available in your location.

Chemical hazards that may already be present in the area where field projects are being conducted should also be managed according to information in the UW [Laboratory Safety Manual](#) and included in your Field Safety Plan.

## 3. Diseases

Viruses, bacteria, fungi, and parasites cause diseases in nearly every location worldwide. Diseases that are carried or transmitted by animals are known as zoonotic diseases. Diseases that are carried or transmitted by insects (arthropods) are called arthropod-borne diseases. Vector-borne diseases are human illnesses caused by parasites, viruses, and bacteria that are transmitted by vectors. The following tables list diseases with the scientific name of the disease organism and/or the vector in italics.

This manual is not intended to cover every health risk in every location, but it provides information about some common diseases. Always check with your health care provider before travelling out of the country to learn about specific health risks for the region in which you will conduct your research. All field researchers, regardless of the work location, should read through the following tables to learn more about some general diseases. The following tables summarize certain diseases that exist worldwide and in and outside of North America.

Table 1 - Diseases

Location: Worldwide					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Food-borne Diseases:</b> <i>Campylobacter</i>		Poultry, cattle, pig, sheep products; unpasteurized or contaminated milk; contaminated water or ice	Fever, diarrhea, nausea, vomiting, abdominal pain; gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist for longer than 3 days.	Always cook food thoroughly. Do not drink impure water.
<b>Food-borne Diseases:</b> Cholera ( <i>Vibrio cholerae</i> )	Africa, Asia, Latin America	Contaminated food and water	Diarrhea, vomiting; gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist for longer than 3 days.	Always cook food thoroughly. Do not drink impure water.
<b>Foodborne Diseases:</b> <i>E. coli</i>		Beef, unpasteurized milk, unwashed raw vegetables, contaminated water	Diarrhea, abdominal cramps; gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist for longer than 3 days.	Always cook food thoroughly. Wash vegetables before consuming. Do not drink impure water.
<b>Foodborne Diseases:</b> Hepatitis A	Under-developed countries	Contaminated water, shellfish, unwashed raw vegetables	Fever, diarrhea, abdominal cramps; gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist for longer than 3 days.	Obtain a vaccine. Consult with your doctor at least 1 month before departing. Always cook food thoroughly.  Wash vegetables before eating. Do not drink impure water.
<b>Foodborne Diseases:</b> <i>Salmonella</i>		Beef, poultry, milk, eggs, unwashed raw vegetables	Fever, diarrhea, abdominal cramps; gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist for longer than 3 days.	Always cook food thoroughly. Wash vegetables before consuming.



Location: Worldwide					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Foodborne Diseases:</b> Typhoid Fever ( <i>Salmonella Typhi</i> )	East and Southeast Asia, Africa, Caribbean, Central and South America	Contaminated food and water	Fever, cough, diarrhea or constipation, abdominal pain; gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist longer than 3 days.	Obtain a vaccine. Consult with your doctor at least 1 month prior to departure. Always cook food thoroughly. Do not drink impure water.
<b>Bacterial Diseases:</b> Tetanus ( <i>Clostridium tetani</i> )		Infection occurs after a wound has occurred	Stiffness and painful muscle contractions	Visit a doctor if you suspect tetanus.	Obtain a tetanus shot every 10 years.
<b>Fungal Diseases:</b> Histoplasmosis ( <i>Histoplasma capsulatum</i> )	Mississippi & Ohio River Valleys	Inhalation of fungus from soil contaminated with bat or bird droppings	Mild flu-like symptoms; occasionally can turn into acute pulmonary histoplasmosis	Visit a doctor if you suspect histoplasmosis. Typically clears up in 3 weeks.	Use caution when disturbing dry soils or working near bat or bird droppings. Keep surfaces wet to reduce dust.
<b>Arthropod-borne Diseases:</b> Lyme Disease ( <i>Borrelia burgdorferi</i> )	United States, Europe, and Asia	Bite of an infected tick	Spreading rash. Early: Flu-like symptoms Later: Arthritis and neurological problems	Visit a doctor if you suspect Lyme Disease.	Avoid tick-infested areas. Wear long pants and long-sleeved shirts. Use a repellent. Check clothing and hair for ticks and remove any ticks.
<b>Arthropod-borne Diseases:</b> Typhus Fever ( <i>Rickettsia</i> species)		Bite of infected lice, fleas, ticks, or mites	Headache, fever, rash	Visit a doctor if you suspect typhus fever. Treatable with antibiotics.	Wear repellents. Wear long-sleeved shirts. Tuck pants into boots.

Location: Worldwide					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Arthropod-borne Diseases:</b> Zika virus	Central and South America, Southeast Asia, Southern United States  Check CDC travel advisories.	Bite of a mosquito carrying the virus; can be transmitted through sexual contact with an infected person	Many people have no symptoms or only mild symptoms (rash, fever, joint pain, red eyes). Note: Zika is linked to severe birth defects.	Treat symptoms accordingly.  Visit a doctor if you suspect that you have (or had) Zika.	<i>Pregnant women:</i> Do not travel to any area with Zika or have unprotected sex with a partner returning from an affected area. If trying to become pregnant, consult your doctor about travel plans. Use repellents. Wear long pants & long sleeves. Treat clothes with permethrin. Avoid being bit by mosquitoes. Avoid areas of standing water where mosquitoes breed. Wear insect repellent after returning from endemic areas to prevent spread. Use condoms for sex.
<b>Arthropod-borne Diseases:</b> Chikungunya virus	Africa, Asia, Europe, Indian and Pacific Oceans	Bite of a mosquito carrying the virus	Fever, joint pain, headache, muscle pain, joint swelling or rash	Treat symptoms accordingly.	Use repellents. Wear long pants & long sleeves, and treat clothes with permethrin. Avoid being bit by mosquitoes. Avoid areas of standing water where mosquitoes breed. People with virus should avoid mosquito bites during the first week of illness to minimize transmission to others.



Location: Worldwide					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Arthropod-borne Diseases:</b> Leishmaniasis <i>(Leishmania)</i>	Tropics, subtropics, southern Europe	Bite from infected sand flies	Some people have no symptoms. Cutaneous leishmaniasis: some may develop one or more sores on their skin that end up as ulcers or usually painless, swollen glands. Visceral leishmaniasis: fever, weight loss, enlarged spleen and liver.	Visit a doctor if you suspect leishmaniasis.	Wear long-sleeved shirts and long pants. Use repellents.
<b>Arthropod-borne Diseases:</b> Lymphatic filariasis or Elephantitis <i>(Filarididea)</i>	Tropics and sub-tropics of Asia, Africa, Western Pacific and parts of Caribbean and South America	Bite from a mosquito infected by the thread-like worm	Most people do not have symptoms. Acute attack associated with local pain and swelling with fever and chills. Inflammation of the lymphatic system leads to lymphedema and elephantitis.	Visit a doctor if you suspect filariasis or elephantitis.	Wear long-sleeved shirts and long pants. Use repellents. Use a mosquito net.

Location: Worldwide					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Zoonotic Diseases:</b> Plague ( <i>Yersinia pestis</i> )		Bite of an infected flea (fleas are infected by rodents)	Flu-like symptoms; nonspecific symptoms; swollen and painful lymph nodes	Visit a doctor if you suspect plague.	Use care when working in areas where plague is found. Use caution when working with wild rodents. Wear gloves and wash hands frequently
<b>Zoonotic Diseases:</b> Rabies ( <i>Rabies lyssavirus</i> )  Review CDC guidance on Rabies <a href="https://www.cdc.gov/rabies/animals/index.html">https://www.cdc.gov/rabies/animals/index.html</a>		Direct contact (such as through broken skin or mucous membranes in the eyes, nose, or mouth) with saliva or brain/nervous system tissue from an infected animal.	Fatal without prompt treatment. First symptoms may be flu-like. Symptoms progress to cerebral dysfunction, anxiety, confusion, and agitation. As disease progresses, person may experience delirium, abnormal behavior, hallucinations, fear of water, and insomnia. Once clinical signs appear, the disease is nearly always fatal.	Visit a doctor <b>IMMEDIATELY</b> if bitten by a rabies-carrying species (e.g., bats, carnivores). If you need rabies vaccination, it should be started soon after exposure; so talk to a healthcare provider right away to assess.	All University personnel <a href="#">working with bats</a> are required to be vaccinated prior to work with bats.  Vaccination is recommended for personnel who may have contact with warm-blooded mammals while conducting field work in locations where rabies is endemic (including in Washington state). Review <a href="#">EH&amp;S Rabies Information document</a>





Location: Worldwide					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Zoonotic Diseases:</b> Leptospirosis ( <i>Leptospira</i> )		Ingestion, swimming, or other activities in water contaminated with the <i>Leptospira</i> bacteria	Flu-like symptoms, occasionally more serious symptoms	Visit a doctor if you suspect leptospirosis.	Use care when working in the water, especially after a flooding event. Avoid entering the water with open wounds.
<b>Zoonotic Diseases:</b> Giardiasis ( <i>Giardia</i> )		Ingestion, swimming, or other activities with soil, food, or water contaminated with the <i>Giardia</i> Parasite; highly contagious	Gastrointestinal symptoms, fat in stool, nausea, vomiting, fatigue, loss of appetite, malaise, or malnutrition	Visit a doctor if you suspect giardiasis. Severe cases are treated with antibiotics.	Practice good hygiene, including frequent hand washing. Do not drink water that may be contaminated. Peel or wash fresh fruit and vegetables before eating

Location: North, Central, and South America					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Fungal Disease:</b> Valley Fever <i>(Coccidioidomycosis)</i>	Arid regions of North and South America	Inhalation of <i>Coccidioides</i> fungus when soil is disturbed	Flu-like symptoms; occasionally becomes severe lung disease	Visit a doctor if you suspect Valley Fever.	Use caution when in close contact with soil or dust and keep surfaces wet to reduce dust. African Americans, Filipinos, and the immuno-compromised are at greater risk than others.
<b>Arthropod-borne Diseases:</b> Viral Encephalitis (St. Louis encephalitis Virus, West Nile Virus)	North and South America	Bite of an infected mosquito	Mild: Fever and headache Severe: Headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, occasionally, death	Seek medical attention immediately if you suspect encephalitis.	Use repellents. Wear long pants and long-sleeved shirts. Avoid being bitten by mosquitoes. Avoid areas of standing water where mosquitoes breed.



Location: North, Central, and South America					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Arthropod-borne Diseases:</b> Rocky Mountain Spotted Fever ( <i>Rickettsia rickettsia</i> )	United States, southern Canada, Mexico, and Central America	Bite of an infected tick	Sudden onset of fever, headache, muscle pain, spotty rash	Visit a doctor if you suspect Rocky Mountain Spotted Fever.	Avoid tick-infested areas. Wear long pants and long-sleeved shirts. Use a repellent. Check clothing and hair for ticks and remove any ticks.
<b>Zoonotic Diseases:</b> Hantavirus Pulmonary Syndrome (HPS)/ "Sin Nombre Virus"	North and South America	Inhalation of dusts or aerosols from the infected rodent's feces, urine, or saliva Vector: Deer mouse ( <i>Peromyscus maniculatus</i> )	Early (1 to 5 weeks): Fatigue, fever, muscle aches, and sometimes headaches, dizziness, chills, and abdominal problems Late (4 to 10 days after early symptoms): Coughing, shortness of breath	Seek medical attention IMMEDIATELY if you suspect HPS. The likelihood of survival is greatly increased with early diagnosis and treatment.	Avoid contact with rodents, especially their feces.
<b>Zoonotic Diseases:</b> White Water Arroyo (WWA) ( <i>mammarenavirus</i> )	North America	Inhalation of dusts or aerosols from infected rodent's feces, urine, or saliva; carried by Woodrats ( <i>Neotoma fuscipes</i> ) and other <i>Neotoma</i> species	Fever, headache, muscle aches; occasionally, severe respiratory distress	Seek medical attention IMMEDIATELY if you suspect WWA. The likelihood of survival is greatly increased with early diagnosis and treatment.	Avoid contact with rodents, especially their feces.

Location: North, Central, and South America					
Type	Prevalent In	Exposure Route	Symptoms	First Aid	Prevention
<b>Vector-born Diseases:</b> Chagas Disease or American Trypanosomiasis ( <i>Trypanosoma cruzi</i> )	Mexico, Central America and South America	Contact with the feces of an infected triatomine bug ("kissing bug" or conenose bug)	Acute phase: fever, fatigue, body aches, headache, rash, diarrhea, vomiting, eyelid swelling, enlargement of spleen or liver. Chronic phase: cardiac complications, gastrointestinal complications	Visit a doctor if you suspect Chagas disease.	Avoid contact with triatomine bugs, especially their feces.

Location: Outside of North America					
Type	Location	Exposure Route	Symptoms	First Aid	Prevention
<b>Arthropod-borne Diseases:</b> Dengue Fever	Africa, Southeast Asia and China, India, the Middle East, South and Central America, Australia and the Pacific Islands	Bite of an infected mosquito	Flu-like symptoms, rash. Takes up to 1 month to recover.	Visit a doctor if you suspect dengue fever	Wear long-sleeved shirts and long pants. Use repellents. Use a mosquito net.
<b>Arthropod-borne Diseases:</b> Yellow Fever	South America and Africa	Bite of an infected mosquito	Flu-like symptoms, jaundice. Can be fatal.	Visit a doctor if you suspect Yellow Fever.	Visit doctor at least 10 days before travel for vaccine. Wear long pants and long-sleeved shirts. Use repellents Use a mosquito net.



Location: Outside of North America					
Type	Location	Exposure Route	Symptoms	First Aid	Prevention
<b>Arthropod-borne Diseases:</b> Malaria	Central and South America, Hispaniola, Africa, India, Southeast Asia, the Middle East, and Oceania	Bite of an infected mosquito	Flu-like symptoms, anemia, jaundice. May take 10 to 30 days for symptoms to appear. Can be fatal.	Visit a doctor if you suspect malaria.	Visit a doctor 4 to 6 weeks before travel for anti-malarial drugs. Wear long pants and long-sleeved shirts. Use repellents. Use a mosquito net.
<b>Arthropod-borne Diseases:</b> Schistosomiasis	Brazil, Egypt, sub-Saharan Africa, southern China, the Philippines, and Southeast Asia	Swimming in contaminated fresh water	Can be asymptomatic. Acute: (2 to 3 weeks) Fever, lack of appetite, weight loss, abdominal pain, weakness, headaches, joint and muscle pain, diarrhea, nausea, and cough Chronic: Disease in the lungs, liver, intestines, or bladder	Visit a doctor if you suspect schistosomiasis.	Avoid freshwater wading or swimming in endemic regions. Heat bath water over 50°C for at least 5 minutes before use.
<b>Arthropod-borne Diseases:</b> Onchocerciasis or River Blindness ( <i>Onchocerca volvulus</i> )	Africa, Yemen, Latin America	Bite of a blackfly ( <i>Simulium</i> species) infected by the worm's larvae	Some people do not have symptoms. Many have itchy skin, rashes, nodules under the skin. Some have vision changes including blindness and swollen glands.	Visit a doctor if you suspect River Blindness	Wear long-sleeved shirts and long pants. Use insect repellent.

Location: Outside of North America					
Type	Location	Exposure Route	Symptoms	First Aid	Prevention
<b>Zoonotic Diseases:</b> Hantavirus and Arenavirus	Central and South America and Asia	Inhalation of dusts or aerosols from the infected rodent's feces, urine, or saliva Vector: rodents, especially <i>Neotoma</i> and <i>Peromyscus</i> species	Fever, headache, muscle aches; occasionally severe respiratory distress \	Seek medical attention IMMEDIATELY if you suspect hanta or arenavirus. Early treatment greatly increases the odds of survival.	Avoid contact with rodents, especially with their feces.
<b>Zoonotic Diseases:</b> Ebola virus	Primarily Africa but could spread to other areas.	Direct contact (via broken skin or mucous membranes) with blood or body fluids of a person who is sick with or has died from Ebola, objects contaminated with blood or body fluids from a sick person, or infected fruit bats or primates	Fever, severe headache, muscle pain, weakness, fatigue, diarrhea, vomiting, abdominal pain, unexplained bleeding or bruising. May occur 2 – 21 days after exposure; average is 8 – 10 days. Fatal in about 50% of cases.	Seek medical attention IMMEDIATELY. Early treatment greatly increases the odds of survival.	Avoid contact with persons sick with Ebola. Avoid travel to areas with outbreaks. Staff caring for Ebola patients must follow prevention advice from the WHO and CDC.



Location: Outside of North America					
Type	Location	Exposure Route	Symptoms	First Aid	Prevention
<b>Vector-borne</b> <b>Diseases:</b> Japanese Encephalitis (flaviviruses)	Asia	Bite from an infected mosquito of the <i>Culex</i> species	Usually mild: fever, headache. Severe disease characterized by rapid onset of high fever, headache, neck stiffness, disorientation, coma, seizures, paralysis. Can be fatal.	Visit a doctor if you suspect Japanese encephalitis	Obtain a vaccine. Consult with your doctor at least 1 month prior to departure. Wear long-sleeved shirts and long pants. Use repellents. Use a mosquito net.
<b>Vector-borne</b> <b>Diseases:</b> African Sleeping Sickness or African Trypanosomiasis ( <i>Trypanosoma brucei</i> )	Sub-Saharan Africa	Bite from an infected Tsetse fly	First stage: fever, headache, malaise, fatigue, itchiness, joint pain, swollen glands. Second stage: neuropsychiatric manifestations – sleep/wake cycle reversed, hallucinations, delirium, anxiety, emotional lability, motor weakness, gait disturbance, speech disturbance, tremor, sensory disturbances including visual problems, seizures, coma.	Visit a doctor if you suspect African Sleeping Sickness.	Wear long pants and long-sleeved shirts of medium-weight material in neutral colors that blend into environment. Tsetse flies are attracted to bright or dark colors and can bite through lightweight clothing. Use insect repellent. Avoid bushes.

Location: Outside of North America					
Type	Location	Exposure Route	Symptoms	First Aid	Prevention
<b>Vector-borne Diseases:</b> Tick-Borne Encephalitis	Russia, as well as additional areas of Europe and Asia	Transmitted from tick eggs, larvae, and adults	7-14 day incubation period. Common symptoms include fever, malaise, anorexia, muscle aches, headache, nausea, and/or vomiting. After 8 days of remission, may experience onset of central nervous system symptoms of meningitis (e.g., fever, headache, and a stiff neck), encephalitis (e.g., drowsiness, confusion, sensory disturbances, and/or motor abnormalities such as paralysis), or meningoencephalitis.	Visit a doctor if you suspect tick-borne encephalitis.	Use insect repellents and protective clothing to prevent tick bites. A vaccine is available in some disease endemic areas (though not currently in the United States).





#### 4. Additional Diseases (General)

There are other diseases to be aware of when travelling outside the United States. While risk of infection is generally low, it is important to be aware of them and take appropriate precautions to guard against diseases such as tuberculosis, HIV/AIDS, SARS CoV-1 and CoV-2 (COVID-19), and viral hemorrhagic fevers. Always check with your health care provider to learn more about specific diseases that exist in the region where you will be conducting your research.

#### 5. Animals and Pests

Dangerous animals and other pests are present worldwide and may be encountered during field work. General safety rules can help protect you from these hazards. Keep in mind that animals encountered during fieldwork may expose you to some of the diseases mentioned in the previous parts of this section. All field researchers, regardless of the work location, should read through the following tables for some general guidelines to avoid unwanted animals and pests.

Follow these general guidelines to prevent close encounters of the painful kind:

- Keep garbage in rodent-proof containers and store away from your campsite or work area. Food crumbs and debris may attract insects and animals.
- Thoroughly shake all clothing and bedding before use.
- Do not camp or sleep near obvious animal nests or burrows.
- Carefully look for pests before placing your hands, feet, or body in areas where pests live or hide (e.g., woodpiles or crevices).
- Avoid contact with sick or dead animals.
- Wear clothes made of tightly woven materials and tuck pants into boots.
- Wear insect repellent.
- Minimize the amount of time you use lights after dark in your camp or work site because they may attract pests and animals.
- Use netting to keep pests away from food and people.
- Carry a first aid manual and kit with you on any excursion so you can treat bites or stings. If the pest is poisonous or if the bite does not appear to heal properly, seek medical attention immediately.
- Be aware of the appearance and habitat of likely pests, such as those described in the following pages.

**Table 2 – Animals and Pests**

Found Worldwide					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Cats and dogs</b> (feral and domesticated)	Worldwide	All	Avoid or move away from any animal displaying aggressive behavior.	Seek medical attention for serious injuries or wounds.	Keep food stored in sealed containers. Do not handle, provoke or scare animals that are or may be feral.
<b>Triatomine bugs</b> (kissing, conenose, or vampire bugs)	North and South America	Refer to Section: Diseases		Use topical ointments to soothe itching. Take victim to the hospital in case of anaphylactic shock.	Use an EPA-registered insect repellent. Use caution when working near nests and wood rat dens. Use extra caution when working near rock shelters.
<b>Crocodiles and alligators</b>	Tropics and subtropics of North America, Australia, Eastern China, and Africa	American alligator (North America), Estuarine crocodile (Australia), Nile crocodile (Africa)	Do not provoke an alligator or crocodile.	Seek medical attention for serious injuries or wounds.	Avoid waters known to be home to crocodiles or alligators. Keep at least 30 feet away from any crocodile or alligator.
<b>Mosquitoes</b>	Wet areas conducive to breeding	Refer to Section: Diseases		Use topical ointment to relieve itching.	Use an EPA-registered insect repellent to deter mosquitoes. Avoid creating or being near standing pools of water if possible.



Found Worldwide					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Rodents</b>	Worldwide	May carry disease. Refer to Section: Diseases	Wear appropriate personal protective equipment (gloves) if you must touch a rodent.	Clean wounds thoroughly if bitten or scratched.	Keep areas clean to avoid attracting rodents. Keep food stored in sealed containers.
<b>Sharks</b>	Shores of oceans, including the U.S., Africa, Central and South America, Australia, and the Pacific Islands	Great white, bull, Tiger, Oceanic Whitetip	Call for help; swim towards safety. Punch or kick the shark if necessary.	Seek medical attention for serious injuries or wounds.	Never swim alone. Avoid areas where sharks are known to feed. Be aware of your surroundings. Don't carry dead fish on you or attempt to feed sharks. Don't enter the water when bleeding.
<b>Venomous fish and invertebrates</b>	Australia, also in other tropical and subtropical areas	Blue Ringed Octopus, Box Jellyfish, Portuguese Man of War, and Irukandji Jellyfish (Australia); Stonefish – worldwide	Never touch an unidentified octopus or jellyfish. Avoid stepping on stingrays.	<u>Jellyfish/ Octopus sting:</u> Use seawater to remove nematocysts. Pour vinegar on the wound to deactivate nematocysts. Physically remove deactivated tentacles that remain on skin. Seek medical attention immediately. Treat coral and hydroid stings similarly.	If entering waters known to be inhabited by jellyfish, wear appropriate skin protection to prevent stings. Avoid known jellyfish blooms.  Do not handle or touch unidentified octopus.  Wear sandals in the water to avoid stepping on a stonefish.

Found Worldwide					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
				(cont. on next page)	(cont. on next page) .
<b>Venomous fish and invertebrates (continued)</b>				<p><u>Stonefish sting:</u> Rinse/soak in hot water (45° C or 113° F) and seek medical attention.</p> <p><u>Blue-ringed octopus sting:</u> Provide basic life support and first aid. Use the Pressure Immobilization Technique if trained. Monitor vitals and be prepared to initiate CPR. Seek medical attention IMMEDIATELY.</p> <p><u>Stingray sting:</u> If spine breaks off in wound, leave it in, treat bleeding and pain. Seek emergency medical attention immediately. If no spine or just fragments of spine remain, irrigate wound to remove spine fragments. Apply pressure to stop bleeding. Soak wound in hot water or apply heat pack then clean wound; seek emergency medical attention.</p>	<p>Avoid contacting sea floor while diving to avoid stonefish.</p> <p>Shuffle in the water or throw stones in before wading to avoid stepping on a stingray</p>



Found in North America					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Bears</b>	All North America	Black bear (North America), grizzly bear (Alaska, Western Canada, Pacific Northwest), polar bear (Arctic)	Never run. Move slowly and speak in a low soft voice. If attacked by a grizzly bear, lay in the fetal position and protect head. Play dead. Punch a black bear in the face if it attacks you.	Seek medical attention for serious injuries or wounds.	Keep food out of sleeping areas. Never approach a bear or bear cub. Wear a bell or other noisemaker. Stay away from the bear's food supply.
<b>Bees, wasps</b>	All North America	Bees, wasps, hornets, and yellow jackets, Africanized killer bees (southeastern U.S.)	Avoid contact with these insects whenever possible.	Remove the stinger quickly. Place an ice pack and elevate to heart level. Use an antihistamine if needed.	Bring medication if you have an allergy (the sting may be fatal). Keep scented foods and meats covered.
<b>Elk, moose, mountain goats</b>	All North America		Do not disturb, corner, or provoke them.	Seek medical attention for serious injuries or wounds.	Keep your camp area free of garbage and food waste. Never feed or approach them, especially calves. Stay away from their food.

Found in North America					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Fleas and ticks</b>	All North America	Refer to Section: Diseases	Avoid contact with animals or areas where fleas and ticks might be found.	Remove the flea or tick with tissue or tweezers and clean wound with antiseptic. Pay attention for signs of illness (refer to Section: Diseases) and seek medical attention if needed.	Wear clothing of tightly woven material. Wear an EPA-registered insect repellent. Tuck pants into boots. Stay on widest part of path. Drag cloth across campsite to check for fleas or ticks.
<b>Mountain Lions</b>	Most of North America: Western Canada, south into Wyoming, California, parts of Texas, Florida Everglades	All	Do NOT run. Fight back. Protect your neck and head. Don't play dead.	Seek medical attention for serious injuries or wounds.	Do not corner it. Make yourself look larger (arms overhead). Use loud voice. Throw sticks or rocks. Carry pepper spray.
<b>Scorpions</b>	All North America, especially Mexico, Arizona, southeastern California, and Utah	All	Avoid contact with scorpions whenever possible.	Clean wound and put a cool pack on the area. Keep area immobilized at heart level. Use painkiller or antihistamine if desired. Take victim to hospital if he or she shows no signs of improvement.	Always shake out clothing and bedding before use. Avoid lumber piles and old tree stumps.



Found in North America					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Venomous Snakes</b>	All North America	Rattlesnakes, cottonmouths, coral snakes, moccasins, and copperheads	Do not pick up, disturb, or corner a snake. Move away from the snake.	Let the wound bleed freely for 30 seconds. Apply a cold pack. Keep area immobilized at heart level. Take victim to hospital (alert ahead if possible).	Walk in open areas. Wear heavy boots. Use a stick to disturb the brush in front of you.
<b>Venomous Spiders</b>	All North America	Black widow and brown recluse	Do not pick up or disturb a spider.	Clean wound and put a cool pack on the area. Keep area immobilized at heart level. Take victim to hospital (alert ahead if possible).	Use care around rock piles, logs, bark, outdoor privies, and old buildings. Shake out clothing and bedding before use.

Found Outside of North America					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Bears</b>	Arctic, South America, Asia	Polar bears (Greenland and N. Russia), spectacled bears (N. and W. South America), Asiatic black bears (S. and E. Asia)	Never run. Move slowly and speak in a low soft voice. If attacked, lay in the fetal position and protect head. Play dead.	Seek medical attention for serious injuries or wounds.	Keep your camp area free of garbage and food waste. Never feed or approach a bear, especially a cub. Stay away from the bear's food.





Found Outside of North America					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Large cats</b>	Africa and Asia	Lions, Bengal and Siberian tigers, leopards, jaguars	Do not provoke any large cats.	Seek medical attention for serious injuries or wounds.	Stay inside the vehicle if travelling near large cats. Do not camp near areas frequented by large cats.
<b>Other large land dwellers</b>	Africa, Asia	Hippos, African elephant, rhinos, and buffalo (Africa); Asian elephants	Do not provoke these large animals.	Seek medical attention for serious injuries or wounds.	Stay inside the vehicle if travelling near large animals. Do not camp near areas frequented by large animals. Keep a lookout in open spaces.
<b>Scorpions</b>	Worldwide, especially North Africa, the Middle East, South America, and India	All	Avoid contact with scorpions whenever possible.	Clean wound and put a cool pack on the area. Keep area immobilized at heart level. Use painkiller or antihistamine if desired. Take victim to hospital if he or she shows no signs of improvement.	Always shake out clothing and bedding before use. Avoid lumber piles and old tree stumps.

Found Outside of North America					
Type	Prevalent In	Most Dangerous Species	Defensive Action	First Aid	Prevention
<b>Venomous Snakes</b>	Worldwide	Russel's viper and Indian cobra (India); tiger, black, brown and sea snakes (Australia); Egyptian cobra, puff adder, and saw scaled viper (Africa); Ferdelance (Central and South America), sea snakes (tropical oceans)	Do not pick up, disturb, or corner a snake. Move away from the snake.	Let the wound bleed freely for 30 seconds. Apply a cold pack sparingly. Do NOT tourniquet. Keep area immobilized at heart level. Take victim to hospital (alert ahead if possible).	Walk in open areas. Wear heavy boots. Use a stick to disturb the brush in front of you.
<b>Venomous Spiders</b>	Worldwide	Funnel web and redback spiders (Australia); Brazilian wandering spider, brown recluse, and tarantula (South America)	Do not pick up or disturb a spider.	Clean wound and put a cool pack on the area. Keep area immobilized at heart level. Take victim to hospital (alert them first). Kill spider for positive ID (if possible).	Use care around rock piles, logs, bark, outdoor privies, and old buildings. Shake out clothing and bedding before use.



## 6. Worksite Hazards

Many of these common worksite hazards are covered in other EH&S safety manuals and on the EH&S website. Here is a list that includes links to relevant manuals and webpages for additional guidance and information:

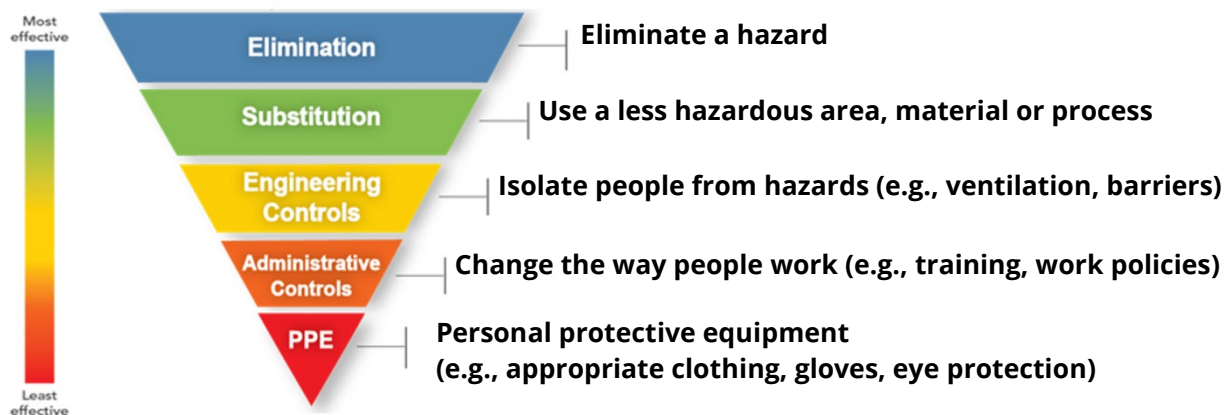
- [Animal work](#)
- [Boating](#)
- [Biohazardous materials](#)
- [Chemicals \(including explosives\)](#)
- [Confined spaces](#)
- [Electrical Safety](#)
- [Fall Protection](#)
- [Fire hazards](#)
- Firearms – consult with your department about acquiring necessary permissions for the inclusion of firearms in your work
- [Lasers](#)
- [Noise](#)
- [Outdoor Heat Exposure](#)
- [Radioactive materials](#)
- [Respiratory Protection](#)
- [SCUBA diving](#)
- [Sharps \(needles, scalpels, lancets, etc.\)](#)
- [Shop equipment](#)
- [Wildfire Smoke](#)
- [Working at heights](#)

## B. HAZARD CONTROLS

Document how the hazards you plan to encounter will be controlled using engineering controls, administrative controls, and personal protective equipment. Tools to help with documentation include your Field Work Risk Assessment, research protocols, and Field Safety Plan documents.

In your planning and assessments, it is important to consider and include information relevant to personnel or agencies that are not part of UW but are involved in your field work or project.

### HIERARCHY OF CONTROLS



## C. RISK ASSESSMENT

### 1. Risk Assessment Tool

A risk assessment tool can provide essential information for enhancing safety practices, establishing proper procedures, and ensuring all field operation participants are properly trained. You may need to get assistance from experts about certain hazards involved in your work or worksite. EH&S's [Field Work Risk Assessment Tool \(Field RAT\)](#) provides a framework for risk assessment complimenting the process researchers already use to answer scientific questions. This tool provides a format for individuals to systematically identify and control hazards to reduce the risk of injuries and incidents.

Conduct a risk assessment as part of the planning process for any field operations trip being conducted for the first time. Review the [Field RAT Guidelines](#) for additional details on how to complete the document.

### 2. Evaluating the Accident Potential

This is an important step in risk assessment. Always ask yourself: If we get into an accident right here, could I justify my actions and decision-making when I describe this back home? Two forces overlap when most accidents occur:

**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, 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.

Use the Equation: Risk = Likelihood\*Consequences of an Accident Occurring

	Severity of Consequences – Personnel Safety				
Likelihood of Incident Occurrence		No injuries	Minor Injury	Significant Injury	Life threatening
	Very Likely	Low	High *	Unacceptable **	Unacceptable **
	Likely	Low	Medium	High *	Unacceptable **
	Possible	Low	Medium	High *	High *
	Rare	Low	Low	Medium	High *

Are these risks acceptable? Use this table to determine the action to take based on the risk rating. What are the highest risk steps? What more can you do to control the risks? Return to planning and use the hierarchy of controls to design a safer trip.

Hazard Risk Level	Action
Unacceptable **	<b>STOP!</b> Additional controls needed to reduce risk. <b>Consult with PI.</b>
High *	Additional controls recommended to reduce risk. <b>Consult with PI.</b>
Medium	Ensure you are following best practices. Consult with peers, PI, and EH&S as needed.
Low	Perform work within controls

### 3. Health and Safety Restrictions for Minors

There are additional health and safety restrictions for personnel and participants under the age of 18, including any minors accompanying University personnel. Please consult with your dean's office and follow the requirements of the Office of Youth Protection Coordinator.

Those who have interactions with youth as part of their UW duties must follow the specific requirements outlined by [The Office of Youth Protection Coordinator](#).

## D. ASSEMBLING A FIELD SAFETY PLAN

Once you have conducted a risk assessment for a particular work site, document plans for individual trips in a Field Safety Plan with site information and emergency procedures included. Taking the time to compile a thorough safety plan and discussing it with your team will prepare you to more effectively manage risks that arise in the field. It can be used to brief your field team or course participants on trip logistics and precautions. Developing and using a 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

Established site procedures may be available but should be supplemented with a safety plan for hazards specific to your research or tasks.

Field Safety Plan templates (reference Appendix III) and assistance are available via EH&S. For scientific diving or boating, a dive or float plan serves a similar purpose. Links to these resources are available on the EH&S website.

Information that should be included in your plan include:

- Site location and description
- Participants and contact information
- Modes of travel and site access
- Modes of communication
- Equipment needed, including personal protective equipment (PPE)
- Work practices for tasks being conducted
- First aid considerations
- Emergency services at the site
- Emergency contact information

## E. FACILITATING SAFE GROUP DECISION MAKING

As a field leader you have to accurately assess risks, mitigate hazards and carry out safe actions. You also have to facilitate your group making safe decisions together. This can be challenging and requires both competency in risk analysis as well as solid communication and leadership skills. Consider the following four ways that groups make decisions:

**Directive:** The leader decides and informs the group.

**Consultative:** The leader decides after consultation with the group. This can happen in two different ways: the leader might first solicit input from the group and then decide, or the leader might tentatively decide and get input and reaction from the group before making the final decision.

**Group decides:** All group members (including the leader) contribute equally to the decision-making process. This could happen through a vote or through consensus.

**Delegation:** Leader delegates the decision-making to the group after defining the appropriate boundaries and conditions. Before delegating, the leader must feel comfortable with any decision made.

Many experienced leaders employ all these decision-making styles depending on the situation and the expertise of their groups. By doing so, leaders help maintain a safe learning environment while at the same time helping groups take ownership and responsibility for their collective experience.

## F. PREVENTING AND RESPONDING TO HARASSMENT AND VIOLENCE

Standards for behavior and practices in the field should match those for activities on campus. This includes preventing harassment and discrimination based on culture, gender, race, sexual orientation, immigration status, and ability. Field leaders should ensure that all participants in their group are aware of this and have access to support and guidance in the field.

When traveling to areas off campus, be mindful of discriminatory behaviors and practices that may be encountered. Know who to contact to report harassment or discrimination in the field and include that information in your Field Safety Plan.

**If you are aware of misconduct:** If you become aware of a situation that involves sexual assault, relationship violence, domestic violence, stalking, sexual harassment, related retaliation, or other forms of sexual misconduct, you are strongly encouraged to make an [online Title IX report](#) and get connected with a Title IX Case Manager who can provide options, resources, and information. You can make a Title IX report anonymously if you prefer.



**Title IX Official Required to Report:** If you have been notified that you are a Title IX Official Required to Report, you must make an [online Title IX report](#) when you become aware of sexual misconduct or potential sexual misconduct. You can learn more about this designation on the [Title IX Employee Reporting Expectations](#) page.

**SafeCampus:** [SafeCampus](#) is the University of Washington's violence-prevention and response program. They support students, staff, academic personnel and faculty. Individuals can reach out when they or someone else experiences inappropriate behavior or threats or when they have safety or well-being concerns for themselves or others. An incident does not need to occur on a campus location for SafeCampus to provide support.

When you call SafeCampus, a trained response specialist will listen to your concerns in a nonjudgmental, empathetic way and develop a tailored response. When requested they can connect you to additional relevant resources. 206.685.7233

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## SECTION 4 – TRAINING

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## A. TRAINING DOCUMENTATION

Mentoring is essential for transferring knowledge and practical skills from experienced faculty, staff, and researchers to new researchers and students, and is often provided informally. However, documented training is a critical part of University safety programs in order to comply with regulatory requirements, accrediting agencies, and in many situations, funding organizations. Commercial trainers typically provide documentation via certification that an individual should maintain and be able to provide upon request, (e.g., a first aid card). EH&S safety training is documented through the [Safety Training Report Tool](#), but University trainings outside of that system are not centralized. Departments, research groups or field course instructors can integrate training on safe practices into lab meetings, hands-on demonstrations, or field lectures, and document completion in paper or electronic format. It is appropriate to list required training as a prerequisite in a Field Safety Plan that is reviewed and signed by all participants. Field-related training typically falls into two categories:

- Preparation for working at specific remote sites
- Specialized task-based training directly relevant to specific field activities

A template for documenting trainings is provided in [the Checklists and Templates section](#) of this manual. Training documentation can also be incorporated directly into Field Safety Plan documents.

## B. FIRST AID SKILLS

First aid training is appropriate for working off campus and at remote field sites because emergency medical services may be limited or delayed. Compliance with WISHA under [WAC 296-800-150, "First Aid,"](#) requires the University to ensure that first aid trained personnel are available to provide quick and effective first aid. The University's [Administrative Policy Statement 10.3](#) also states the requirement to ensure that employees have access to first aid. CPR/AED training is also recommended.

The [First Aid Plan Guidelines](#) by EH&S contains instructions for creating a first aid plan for UW employees on UW campuses, UW-owned sites, UW-leased space, temporary field locations, and field trips that are under the control of University operations and staff.

The UW [Bloodborne Pathogens Program](#) requirements apply to all UW personnel with a reasonably anticipated exposure to human blood and [other potentially infectious materials \(OPIM\)](#), including personnel assigned to provide emergency first aid as either a primary or secondary duty. Personnel in the program follow procedures in their site-specific Exposure Control Plan, complete initial and annual training, and are offered the Hepatitis B vaccine. Consult with EH&S Employee Health Center at 206.685.1026 / [emphlth@uw.edu](mailto:emphlth@uw.edu)

The UW EH&S offers first aid training and can arrange for specialized training from [CPR Seattle](#) in CPR, First Aid, AED, and Wilderness First Aid for a fee. [Washington Red Cross](#) provides several first aid trainings.

Wilderness first aid training is appropriate for outdoor fieldwork or visiting remote sites because it covers more first responder information and relevant scenarios than a typical four-hour community first aid class. The National Outdoors Leadership School (NOLS) offers [training courses in coordination with REI](#).

Additional options for wilderness first aid and wilderness first responder training are provided by [The Mountaineers](#).

For trip leaders, field scientists, or students who plan to pursue a career doing outdoor work, wilderness first aid training is highly regarded professionally and will prepare individuals to manage a

broad range of emergency situations, illnesses, and injuries.

## C. LEADERSHIP SKILLS

Facilitating field research or teaching field classes can require leadership skills that go beyond the expectations of a lab instructor or classroom teacher. This manual attempts to provide a comprehensive resource for helping instructors learn more of these skills. Many other organizations offer much more in-depth training. An excellent written resource is the National Outdoor Leadership School (NOLS) Leadership Educator Notebook, which can be ordered from the [NOLS](#).

[Field Safety in Uncontrolled Environments](#) (published by the American Association of Petroleum Geologists) provides excellent guidance on planning and leading field excursions, and [UC's Fields Research Safety Center of Excellence](#) has published field safety guidance documents and templates that were used to develop this manual.

## D. BASIC OUTDOOR SKILLS

Working in the field can require knowledge of many outdoor skills, such as map-reading, compass use, cross-country navigation, camping, cooking over a fire or with a camp stove, field sanitation practices, and treating drinking water. Campus outdoor recreation programs may be able to help provide additional training in these skills or provide referrals. Outdoor skills workshops are offered on many campuses. Some examples of noteworthy training models include the [University of Alaska Fairbanks Field Safety 101](#) and [NSF's Arctic Field Training](#).

## E. SITE AND TASK-SPECIFIC SKILLS

To make accurate risk assessments in the field, you need knowledge about specific hazards. Get the training you need in the specific skill areas you plan to use, as listed in your Risk Assessment. Even a little training can go a long way towards making more accurate assessments and performing safer actions in the field. Mentoring is critical to transfer knowledge and practical skills from experienced faculty and researchers to new researchers and students. Brief your team often - at the beginning of an activity and as conditions change.

Evaluate any environmental conditions that may be encountered as part of the work and include relevant trainings required, such as [wildfire smoke safety training](#) and [outdoor heat safety training](#).

Consult with EH&S for guidance and to establish safe work practices that include the following activities.

### 1. Climbing or Work at Heights

Falls from height are consistently among the top causes of work-related fatalities in the U.S. Climbing trees, towers, or other structures; using ladders or lifts like "cherry pickers"; or other work at height or near edges or cliffs all warrant careful review of equipment and safe practices. Consult with EH&S to select appropriate fall protection equipment. EH&S provides fall protection, ladder safety, and equipment training. Review the UW Fall Protection Program Manual on the [EH&S Fall Protection webpage](#).

Full-body harnesses, helmets, and other safety gear must also be properly fitted, diligently inspected, and properly used to avoid injuries and ensure compliance with state regulation [WAC 296-880](#). Please note: seat harnesses commonly used for sport rock-climbing with dynamic (elastic) rope are not acceptable for working at heights because of the potential to be suspended upside down and because they are not designed to absorb shock after a fall, as full-body harnesses used in conjunction with



shock absorbing fall arrest systems are designed to do. Compliant full body harnesses have a dorsal D-ring to attach fall arrest systems and/or to be used during rescue.

## 2. Clinical Work or Handling Human Biological Specimens

Clinical work or collecting/handling human biological specimens should be covered under a [Bloodborne Pathogens \(BBP\)](#) Exposure Control Plan that includes careful consideration of vaccinations, safe work practices, appropriate PPE, post-exposure prophylaxis, and incident reporting. Washington state [WAC 296-823](#) requires that any employees who may be exposed to human blood, bodily fluids, or cells be provided BBP Training and offered hepatitis B vaccination at no cost. Consult with EH&S Employee Health Center at 206.685.1026 / [emphlth@uw.edu](mailto:emphlth@uw.edu)

## 3. Entering Confined Spaces such as Caves, Vaults, or Mines

Hazards related to entering confined spaces include:

- Physical hazards from unstable structural integrity, low overhead clearance, sloping floors
- Engulfment from rapid rainfall or water source filling the confined space
- Internal configurations that may result in being trapped or asphyxiated
- Changes in thermal environment
- Atmospheric hazards from unsafe environmental conditions, such as hydrogen sulfide gas or lack of oxygen
- Increased risk due to access limitations, unreliable communications, and isolated, often dark, and rugged/uneven conditions

Spaces that present these hazards may only be entered through a specific permitting system and with specialized training, equipment, and a rescue plan. Consult with EH&S for confined space entry training and to establish safe work practices. Refer to the [Confined Space Entry Program webpage](#).

## 4. Excavating or Trenching

Hazards related to excavating or trenching include:

- Physical hazards from use of digging equipment or being trapped/buried by collapsing soil
- Respiratory hazards caused by disturbing soil that contain *Coccidioides* fungi (which causes Valley Fever) or other environmental contaminants
- Trips/falls if the edge is not clearly flagged or protected. Excavations greater than 4 feet deep have regulatory requirements for evaluation and shoring

This type of work falls under state regulation [WAC 296-155](#).

## 5. Firearms

Firearms include, but are not limited to, air guns or rifles, BB guns, and pellet guns, as well as any instrument used in the propulsion of shot, shell, bullets, or other harmful objects by the action of gunpowder or other explosives, compressed air, or power of springs or other forms of propulsion. [WAC 478-121-143](#) states that possession or use of firearms, explosives, or other dangerous weapons is prohibited on university premises, unless specifically authorized by the university president or delegate.

If your field operations require you to carry or use firearms, ensure that the proper permits, authorizations, and trainings have been acquired in advance.

## 6. Handling Wildlife / Animal Work

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. Review common hazards and controls encountered in animal work on the [Animal Worker Occupational Health and Safety](#) webpage. During required institutional review of animal protocols best practices for trapping or darting of wildlife should be adopted, but broader field hazards should not be ignored. As with all field work, working alone, extreme weather conditions, unreliable communications, and limited or delayed emergency medical services may exacerbate any research-related incidents.

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, e.g., wearing a respirator for handling deer mice (hantavirus), or getting a rabies vaccination for handling bats or other carriers. Animal procedures require hands-on demonstration and training; consult with the [Office of Animal Welfare](#) for guidance and never perform work that is not specifically approved in your [Animal Use Protocol by the Institutional Animal Care and Use Committee \(IACUC\)](#). Note that work with some invertebrates is exempt from the IACUC process; contact the [Office of Animal Welfare](#) to determine if this applies to your research.

## 7. Operating Powered Tools or Equipment

In general, consult with EH&S prior to using powered tools or equipment. This includes handheld items such as drills and saws, as well as large equipment, such as all-terrain vehicles (ATVs) and snowmobiles. Follow manufacturer's instructions and keep a manual accessible. Identify and document prerequisites, including requirements for worker training, certification, authorization, etc., and safe work practices for the use of powered tools or equipment in your Field Work Risk Assessment, research protocols, and Field Safety Plan documents.

## 8. Use of Chemicals

All faculty, staff, and students handling or working with chemicals for research purposes must complete EH&S's online [Managing Lab Chemicals training](#). This course covers chemical hazards, protective measures, chemical storage, safety data sheets, hazardous waste disposal and chemical spill prevention, and response in laboratories, including the unique hazards and specific emergency response procedures for working with hydrofluoric acid. The class partially fulfills federal and state chemical safety and hazardous waste training requirements and must be supplemented with task-specific training on chemical hazards and waste management.

Policies and practices related to working with chemicals, including compressed gases, are covered in the UW [Laboratory Safety Manual](#).

## 9. Use of Drones (Unmanned Aircraft Systems)

Operators of drones are required to follow all [Federal Aviation Administration \(FAA\)](#) regulations, [Washington State Department of Transportation](#) requirements, and any additional site-specific requirements, including state and local requirements outside of WA. Non-commercial pilots are expected to adhere to the [FAA's Small UAS Rule \(14 CFR part 107.\)](#)

The [Unmanned Aircraft Systems Focus Sheet](#) provides information to support the safe and compliant use of small, unmanned aircraft systems (UAS, including drones) for University of Washington (UW) personnel and students engaged in University-approved activities at a UW location. Individual campuses may have their own policies, such as the one at [UW Tacoma](#)



## 10. Use of Unmanned Water Vehicles

All faculty, staff, and students operating unmanned water vehicles, including unmanned underwater vessels (UUVs), autonomous underwater vehicles (AUVs), and unmanned surface vehicles (USVs), for research need to include this in their field safety plan and complete the appropriate trainings on hazards involved, safety practices in place, and emergency response specified by their supervisor.

Collision avoidance rules for unmanned water vehicles are not regulated, but safety plans are recommended to include planned routes and any considerations necessary regarding additional users of the area. As UUVs spend most of their time underwater, the number of potential collisions with manned vessels is lower than for vessels operating on the surface. Nonetheless, it is important to implement water space management.

The [Automatic Identification System \(AIS\)](#) is an automatic tracking system used on ships and by vessel traffic services (VTS) around the world to identify and locate vessels by electronically exchanging data with other nearby ships, AIS base stations, and satellites. Tracking AIS information enhances situational awareness and enables operators to make informed decisions.

## 11. Use of Radioactive Materials

Faculty, staff, and students handling or working with radioactive materials should complete EH&S's [Radiation Safety Training](#). Radiation Safety Training consists of several online modules satisfying the basic training requirement for radiation workers as set forth in the UW Radioactive Materials License. Additional training focused on the intended use of equipment should be coordinated with the RP. Establish a plan for transportation of equipment that may have license and security issues. Public transit should be avoided when carrying such equipment.

Policies and practices related to working with radioactive materials are covered in the [Radiation Safety Manual](#).

## 12. Use of Radiation Producing Machines

Faculty, staff, and students operating or working in the vicinity of research radiation producing machines or devices must receive safety training before operating the device. Personnel operating or working near research radiation producing machines should complete EH&S's [Radiation Safety Training for Research Radiation Producing Machines Online](#). This course covers the production, controls, and machine types of radiation producing machines. It reviews engineering controls, administrative controls, and personal protective equipment and closes with a discussion of registration, safe operating procedures, machine maintenance, and emergencies. Coordinate additional device-specific training focused on intended use of radiation producing machines with the RP. Contact [EH&S Radiation Safety](#) before transporting any radiation producing machines. Public transit should be avoided when carrying such equipment (e.g., [handheld X-Ray Fluorescence \(XRF\)](#)).

Policies and practices related to working with radiation producing machines or devices are covered in the [Radiation Safety Manual](#) and on the [EH&S Radiation Producing Devices webpage](#).

## 13. Use of Lasers (Class 3B and Class 4)

All faculty, staff, and students engaged in research activity involving Class 3B or Class 4 lasers, or working near them, are required to complete the [Laser Worker Safety Training offered online by EH&S](#). In addition, training on the specific laser equipment and the Laser Safety Procedures used in the field must be provided by the supervisor, Principal Investigator (PI), or an experienced user. All laser users must adhere to the policies outlined in the EH&S Laser Safety Program and the UW Laser Safety Manual, both of which can be accessed on the EH&S website.

Examples of field operations involving Class 3B or Class 4 lasers:

- Surveying and mapping: Topographical mapping or geospatial surveys
- Environmental monitoring such as atmospheric particles analysis and water quality measurements
- Astronomical research such as laser guide star systems
- Archaeology Preservation- 3D scanning laser system

Additional guidance on [safe use of lasers](#) is available on the EH&S website.

## F. WATER-BASED ACTIVITIES TRAINING

Ensure that anyone working over or alongside water that a person could fall into and drown is wearing a properly fitted personal floatation device (PFD) at all times. This may include work on docks, piers, or platforms alongside or above water.

### 1. Scientific Diving

UW scientific divers come from various backgrounds and engage in many types of scientific activities underwater. UW divers can be staff, faculty, students or volunteers affiliated with the University. Because they are diving as part of their employment, all divers must meet the requirements of the OSHA [Scientific Diving Exemption](#) and follow the UW's Scientific Diving Safety Manual found on the [EH&S Diving Safety Program](#) webpage.

Reference the requirements and steps to become a UW scientific diver in the [Requirements for Scientific Diver Certification](#). This document includes links to the diver registration form, medical evaluation form, and other required forms needed for diver certification. If diving overseas, check insurance policy for exclusions to coverage.

### 2. Boating (including Occupied Submersibles)

There are federal, state, local, and University requirements for safely operating boats that apply to both motorized and non-motorized vessels. The requirements are included in the [UW Boating Safety Manual](#). The [UW Boating Safety Program](#) is administered by the EH&S boating safety program manager and all vessels owned and operated by the UW fall under the program's purview. University boats included in the [University National Oceanographic Laboratory System \(UNOLS\)](#) must adhere to any additional UNOLS requirements.

## G. TRANSPORTING CHEMICALS, HAZARDOUS MATERIALS, HAZARDOUS WASTE, OR BIOLOGICAL SPECIMENS

Chemicals, biological specimens, and hazardous materials (including waste) should be transported in a container that prevents leakage. The container should be closed. Avoid transporting containers which may have contamination on the outside (i.e., avoid the need to wear gloves or other PPE). If the container is breakable, it should be placed in a secondary container.

Moving regulated hazardous materials can be complex. Most biologicals are not stable for shipping and are typically stored in dry ice or liquid nitrogen. DHL offers a [Shipping Dangerous Goods](#) option. [World Courier](#) handles infectious materials and replenishes dry ice. They also keep materials in pressurized cabins and forgo x-rays. [Cryoport](#) and [FedEx](#) will ship a liquid nitrogen vapor carrier internationally.

Regulated hazardous materials include:





- Infectious and biological substances
- Genetically modified organisms or microorganisms
- Chemicals
- Radioactive materials
- Compressed gas cylinders (whether filled or empty)
- Dry ice
- Liquid nitrogen
- Certain batteries
- Equipment containing batteries (including but not limited to PCs, tablets, cell phones and eVapor cigarettes)
- Gasoline

Plan for proper storage, charging, and transportation of any lithium batteries needed. Review EH&S's [Lithium Battery Safety Practices](#),

Anyone shipping hazardous materials should complete EH&S's required [Shipping Hazardous Materials training](#) and comply with labeling practices. Also, please note, to move research materials between a UW campus and outside institutions, there must be a [Material Transfer Agreement](#) in place. Contact your department office for more information. Prior to shipping research equipment or materials out of the country, work with your department and EH&S to determine whether an export license is required.

More information on chemical transportation practices is in the UW [Laboratory Safety Manual](#).

Information on transportation practices for biological specimens is in the UW [Biosafety Manual](#).

Additional information resources:

- [Radiation Safety Manual](#)
- [UNOLS](#)

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## A. WASTE MANAGEMENT

As part of your Field Safety Plan, identify the types of and determine the appropriate disposal method for all wastes generated on your trip, including hazardous and non-hazardous wastes. Types of hazardous waste may include chemical waste, biological waste, sharps, and universal waste (e.g., CFLs, batteries, ballasts, electronic waste). Types of non-hazardous waste may include uncontaminated waste and broken glass, regular trash, and recyclables.

Items commonly used for field work that are classified as hazardous waste include, but are not limited to, paints, fuels, lubricants, gas, oil, propane, aerosols, large batteries, hand warmers, and Sterno products.

Consult the EH&S website for additional information on how to dispose of specific types of waste:

- [Chemical waste](#)
- [Biohazardous waste and sharps waste](#)
- [Radioactive waste](#)
- [Sewer disposal](#)

For assistance with determining how to manage a specific waste stream generated, fill out a [Waste Evaluation Request](#).

All hazardous material containers (including hazardous waste containers) must be labeled appropriately with the content names and words signifying their hazards.

Hazardous chemicals, materials, and samples brought to the work site or collected during field operations must be transported back to UW campus in the manufacturer's original containers, UN-rated containers, or other approved transportation vessels. Consult the UW [Laboratory Safety Manual](#) for additional information on transportation practices and requirements.

Package hazardous waste generated during field work operations appropriately and return it to UW campus for disposal. Requirements for transportation are the same as for unused materials. Consult with your department and EH&S's Environmental Programs section (206.616.5835 / [chmwaste@uw.edu](mailto:chmwaste@uw.edu)) to develop a plan for appropriate disposal of items once they have been returned to campus. Options vary depending on the exact location of campus. Include practices for waste in the Field Safety Plan for your work or activity.

## B. LEAVE NO TRACE AND OUTDOOR ETHICS

Many field sites are fragile and can easily be damaged by even light use. It's important, whenever possible, to adopt field practices that minimize lasting negative impacts. The national educational program called [Leave No Trace \(LNT\)](#) has developed a set of principles that can be generally applied when working in wilderness conditions. More guidelines are available for specific habitats (e.g., river, deserts) and areas outside the United States on the LNT website and describe how to adhere to the following seven LNT principles:

- Plan ahead and prepare
- Travel and camp on durable surfaces
- Dispose of waste properly
- Leave what you find

- Minimize campfire impacts
- Respect wildlife
- Be considerate of other visitors

## C. WILDFIRES

Please check burn restrictions with local natural resource agencies before lighting any fire. In Washington State, consult the [Department of Natural Resources Burn Risk Map](#). The [Department of Natural Resources](#) (DNR) regulates outdoor burning on all forestlands where DNR provides wildfire protection. DNR works to prevent wildfires through education and the use of burn restrictions, Industrial Fire Precaution Levels and burn permits, which help people to modify their activities in accordance with the risk.

Items to include in your trip preparation if relevant:

- [Burn Restrictions](#)
- [Burn Permits](#)
- [Wildfire Smoke Response Plan](#)

### 1. Safety Tips for Preventing Wildfires

- Be sure vehicles have operating spark arrestors
- Do not park vehicles in dry, grassy areas as residual heat from exhaust systems can ignite the dry grass
- Know the current wildfire risk in your county, destination, or area you may be working in

Note: It's always illegal to light fireworks or use incendiary ammunition or exploding targets on DNR-protected lands

### 2. Take Responsibility When Choosing To Have a Campfire

If your fire escapes, you will be responsible for paying for fire suppression personnel and equipment, as required by state law.

- Campfires are allowed only when a campfire burn restriction is not in place
- Campfires are permitted on DNR-managed lands only in approved fire pits
- Never walk away from a smoldering campfire. Put the fire out cold before leaving - if it's too hot to touch, it's too hot to leave
- Ensure there is a shovel and buckets of water close by

Protect forestlands by reporting illegal or unsupervised campfires to 911 or the DNR region office.

### 3. Wildfire Smoke Health Hazards

Wildfire smoke is a mixture of gases and fine particles from burning trees and plants, buildings, and other material. The primary concern with exposure to wildfire smoke is that it contains fine solid particles (also known as particulate matter) that are 2.5 micrometers (PM<sub>2.5</sub>) in size or smaller. These tiny particles are harmful because they can reach deep into the lungs.

Breathing in wildfire smoke can produce harmful health effects and can impact individuals with certain preexisting health conditions and those who are sensitive to air pollution.



For specific information, including the five different action levels and guidance on developing a [Wildfire Smoke Response Plan](#), pertaining to the protection of UW students, staff, and faculty from wildfire smoke hazards, please refer to the EH&S [Wildfire Smoke](#) webpage.

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## A. INCIDENT RESPONSE

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. Once a situation is stable and urgent medical care needs are met, report incidents to campus via the [UW's Online Accident Reporting System \(OARS\)](#) to trigger University support and evaluation. Reporting procedures, as well as mechanisms to debrief and review lessons learned, are outlined below. Related campus-specific policies and resources are listed in Appendix II.

## B. FIRST AID AND INITIAL RESPONSE

[Washington Administrative Code 296-800-15005](#) states that in the absence of an infirmary, clinic, or hospital in near proximity to the workplace, which is used for the treatment of all injured employees, a person or persons must be adequately trained to render first aid. This section outlines established protocols for first aid reference, but in no way is a replacement for maintaining current first aid certification. First aid training includes valuable hands-on practice that cannot be replicated in any other way. It is essential to keep certifications current. Refresher training and practice is vital to maintain competency in first aid. In Washington, it is the intent of the Good Samaritan Law to encourage individuals to volunteer to assist others in need during an emergency, but only provide treatment within the scope of your training level and never abandon a patient.

In addition to having access to adequately trained personnel, first aid supplies should be appropriate for the worksite and the response time of emergency medical services to be in compliance with [WAC 296-800-15020](#). [First Aid Plan Guidelines](#) from EH&S contain instructions for creating a First Aid Plan, including acquiring appropriate first aid supplies, for UW personnel on UW campuses, UW-owned sites, UW-leased spaces, temporary field locations, and field trips that are under the control of University operations and staff. Note that additional first aid supplies that would not be applicable for most University first aid kits may be appropriate for a kit deployed to the remote field (e.g., some over-the-counter medications). These should be documented in the necessary First Aid Plan(s).

### 1. Life-Threatening Injuries or Illness

Call 911 or seek medical care immediately. Always know your physical location; everyone in your group should be able to provide Emergency Medical Services (EMS) with accurate directions to the field site. This includes knowing how to use a personal locator beacon or other satellite device to call for emergency medical help.

### 2. Basic First Aid

By administering immediate care during an emergency, you can help an ill or injured person before EMS arrive. A variety of useful references can also be downloaded to your smartphone (and are then accessible without cell or Wi-Fi service) such as the Emergency Medical Response Guide or "EMR Guide" from the National Safety Council and "First Aid" from the American Red Cross. Both apps are available for free.

First Aid Steps

[Adapted from the American Red Cross](#): American Red Cross "First Aid Steps".

More comprehensive information is available in the American [Red Cross manual](#).

### Scene Size Up

Before administering care to an ill or injured person, check the scene and the person. Size up the scene

and form an initial impression. Pause and look at the scene and the person before responding. Answer the following questions:

- Is the scene safe to enter?
- What happened?
- How many people are involved? - What is my initial impression about the nature of the person's illness or injury?
- Does the person have any life-threatening conditions, such as severe, life-threatening bleeding?
- Is anyone else available to help?

### **Awake and Responsive**

If the Person is Awake and Responsive and there is no severe life-threatening bleeding:

- Obtain consent: Tell the person your name, type and level of training, what you think is wrong and what you plan to do and ask permission to provide care.
- Use appropriate PPE: Put on gloves.
- Interview the person: Use **SAMPLE** (Signs/symptoms, Allergies, Medications, Pertinent medical history, Last ins/outs, Events) questions to gather more information about signs and symptoms, allergies, medications, pertinent medical history, last food or drink and events leading up to the incident.
- Conduct a head-to-toe check: Check head and neck, shoulders, chest and abdomen, hips, legs and feet, arms and hands for signs of injury.
- Provide care consistent with knowledge and training according to the conditions you find.

### **If the Person Appears Unresponsive**

Shout to get the person's attention, using the person's name if it is known. If there is no response, tap the person's shoulder (if the person is an adult or child) or the bottom of the person's foot (if the person is an infant) and shout again, while checking for normal breathing. Check for responsiveness and breathing for no more than 5-10 seconds.

### **If the Person is Breathing**

Send someone to call 911 or the designated emergency number and obtain an automated external defibrillator (AED), if available, and first aid kit.

- Proceed with gathering information from bystanders using the SAMPLE<sup>2</sup> questions.
- Conduct a head-to-toe check.
- Roll the person onto their side into a recovery position if there are no obvious signs of injury.

### **If the Person is NOT Breathing**

- Send someone to call 911 or the designated emergency number and obtain an AED (if available) and first aid kit.
- Ensure that the person is face-up on a firm, flat surface such as the floor or ground.
- Begin CPR (starting with compressions) or use an AED if one is immediately available.
- Continue administering CPR until the person exhibits signs of life, such as breathing, an AED



becomes available, or EMS or trained medical responders arrive on scene. If others are present that are trained in CPR, switch off performing it to avoid exhaustion.

Note: End CPR if the scene becomes unsafe or you cannot continue due to exhaustion.

### **CPR/AED Instructions**

The [American Heart Association](#) provides updated guidance and training videos on performing hands-only CPR.

Any University employees likely to use an AED are expected to receive training on the use of defibrillators. Register for a First Aid/CPR training course. For those outside the Seattle area, training may be available from your local fire department, the AED vendor, the [American Red Cross](#), the [American Heart Association](#) and other agencies.

### **3. Common First Aid Practices**

Signs, symptoms and treatment for environmental injuries such as altitude sickness, lightning, stings and bites, and cold-water immersion are described thoroughly in the reference NOLS Wilderness Medicine 6th edition by Tod Schimelpfenig (2016). As these types of injuries occur infrequently, it is important to carry a wilderness medicine reference with you; a condensed field version is typically provided during wilderness first aid training.

A summary of common first aid practices for certain types of injuries is listed in the following table. Tables summarizing first aid and prevention practices for a variety of physical and environmental hazards are found later in this section.

*Additional first aid References:*

- [CPR](#)
- [Resuscitation Guidelines](#)
- [Ready.gov](#)
- [Cal/OSHA Heat Illness Prevention and Response](#)
- [NIOSH Cold Stress First Aid](#)
- [American Academy of Allergy, Asthma, and Immunology](#)

**Table 3 – Common First Aid Practices**

TYPE OF INJURY	FIRST AID PRACTICES
<b>Allergic reaction</b>	<i>Refer to the next section on Anaphylaxis</i>
<b>Bleeding</b>	Put on gloves. Cover the wound with a dressing and press firmly against the wound (direct pressure). Elevate the injured area above the level of the heart if you do not suspect that the victim has a broken bone. Cover the dressing with a bandage. If the bleeding does not stop, apply additional dressings and bandages, and use a pressure point to squeeze the artery against the bone. Provide care for shock.
<b>Burn</b>	Reduce pain by pouring large amounts of water over the burned area to gently cool the burn. Cover the burn with dry, clean dressings or cloth.
<b>Frostbite</b>	Get into a warm room or shelter as soon as possible. Unless absolutely necessary, do not walk on frostbitten feet or toes—this increases the damage. Immerse the affected area in warm (not hot) water. The temperature should be comfortable to the touch for unaffected parts of the body. Warm the affected area using body heat; for example, the heat of an armpit can be used to warm frostbitten fingers. Do not rub or massage the frostbitten area; doing so may cause more damage. Do not use a heating pad, heat lamp, or the heat of a stove, fireplace, or radiator for warming. Affected areas are numb and can be easily burned.
<b>Heat illness</b>	Heat exhaustion is the most common type of heat illness. Move to a cool, shaded place, hydrate with cool water. If there is no improvement, call 911 and seek medical help. Do not return to work in the sun. Heat exhaustion can progress to life-threatening heat stroke.
<b>Hypothermia</b>	Move the victim into a warm room or shelter and remove wet clothing. Warm the center of their body first—chest, neck, head, and groin—under loose, dry layers of blankets, clothing, towels, or sheets. Warm beverages may help increase the body temperature, but do not give alcoholic beverages. Do not try to give beverages to an unconscious person. After their body temperature has increased, keep the victim dry and wrapped in a warm blanket, including the head and neck. If victim has no pulse, begin cardiopulmonary resuscitation (CPR).
<b>Injuries to muscles, bones, or joints</b>	Rest the injured part. Apply ice or a cold pack to control swelling and reduce pain. Avoid any movement or activity that causes pain. If you must move the victim because the scene is becoming unsafe, try to immobilize the injured part to keep it from shifting.
<b>Insect bites and stings (that do not result in an allergic reaction)</b>	Move to a safe area away from the stinging/biting insects. Remove any stingers and gently wash the area with soap and water. Apply to the affected skin a cloth dampened with cold water or filled with ice for 10 to 20 minutes; this helps reduce pain and swelling. If the injury is on an arm or leg, raise it. If possible, apply calamine lotion, baking soda paste, or 0.5% or 1% hydrocortisone cream to the affected skin. Take personal over-the-counter anti-itch and/or pain-relieving medicine as needed. Watch for allergic reaction.





TYPE OF INJURY	FIRST AID PRACTICES
<b>Poisoning</b>	Call the Poison Control Center (1-800-222-1222) and communicate what was swallowed and how much. Follow the directions given exactly.
<b>Shock</b>	Keep the victim from getting chilled or overheated. Elevate the legs about 12 inches (if broken bones are not suspected). Do not give food or drink to the victim.

#### 4. Anaphylaxis

Allergic reactions range from mild (e.g., hay fever) to severe (e.g., anaphylaxis). Anaphylaxis is a serious, life-threatening allergic reaction. The most common anaphylactic reactions are to foods, insect stings, or medications. Symptoms may develop immediately, rapidly progress over minutes, or develop slowly over hours. Anaphylaxis requires immediate medical treatment, including a prompt injection of epinephrine and a trip to a hospital emergency room. If it isn't treated properly, anaphylaxis can be fatal.

Note: Epinephrine requires a medical prescription. Individuals with known allergies may carry their own epinephrine auto-injector, typically in a two-pack. [Washington state law](#) does allow individuals to administer an epinephrine auto-injector to anyone who they believe is experiencing anaphylaxis, regardless of whether the individual has a prescription for an epinephrine auto-injector or has previously been diagnosed with an allergy. The person administering the auto-injector must complete an anaphylaxis training program prior to providing or administering an epinephrine auto-injector made available by an authorized entity. The training must be conducted by a nationally recognized organization experienced in training laypersons in emergency health treatment or an entity or individual approved by the department of health. Field operations that include known potential exposures to anaphylaxis triggers (such as those working with stinging insects) may wish to consult with EH&S to procure a general-use epinephrine autoinjector and incorporate it into their first aid planning by contacting the [UW Employee Health Center](#). In all situations when an epinephrine auto-injector is administered, the patient must immediately be taken to an emergency room for medical evaluation.

Signs and Symptoms of Anaphylaxis may include:

- Red rash, with hives/welts, that is usually itchy\*
- Swollen throat or swollen areas of the body
- Wheezing
- Passing out
- Chest tightness
- Difficulty breathing, cough
- Hoarse voice
- Difficulty swallowing
- Vomiting
- Diarrhea
- Stomach cramping

- Pale or red color to the face and body
- Feeling of impending doom

\*It is possible to have a severe allergic reaction without skin symptoms

### First Aid Response to Treat Anaphylaxis

1. Contact EMS by calling 911
2. If possible, separate the patient from the allergen
3. If the patient can speak and swallow, give oral antihistamines (adult dose = 25mg -50mg of diphenhydramine hydrochloride every 4-6 hours) and continue until EMS takes responsibility for care.
4. Inject epinephrine via auto-injector (adult dose = 0.3mg intramuscular into the upper thigh) for:
  - any airway swelling (lips, tongue, uvula, voice changes)
  - large areas of swelling
  - respiratory compromise or shock
5. If severe allergic reaction continues, administer a second dose of epinephrine via auto-injector.
6. Evacuate to seek emergency medical care for the patient immediately.

### Directions for Use of Auto-injectors

1. Never put thumbs, fingers, or hands over the tip of the auto-injector.
2. Wear gloves.
3. Inform the patient of your actions and obtain consent from the patient before administering epinephrine. If unresponsive, implied consent is acceptable in a life-threatening situation.
4. Form a fist around the auto-injector.
5. With your other hand, remove the safety-caps.
6. Jab the auto-injector firmly into patient's outer thigh so that the auto-injector is perpendicular to the thigh.
7. Hold the auto-injector firmly in the thigh for 10 seconds to allow time for the medication to disperse.
8. Remove the auto-injector, and then massage the injection area for several seconds.
9. Store used auto-injectors in their carrying case, inserting them carefully and needle-first into the labeled side.
10. Continuously monitor the patient and immediately seek emergency medical care.
11. As needed, a second dose of epinephrine may be administered 15 minutes after the initial dose.

### Additional Guidelines for Auto-injectors

- Become familiar with the auto-injector before the need to use it arises; know where it is physically located.
- Epinephrine should be administered at the first sign of anaphylaxis.



- If a participant or coworker is experiencing signs/symptoms of anaphylaxis, and does not have a prescription for epinephrine, only trained staff with an Epinephrine Certificate Card may administer auto-injector(s) as described in their emergency action plan.
- ANY administration of epinephrine, intentional or accidental, initiates an evacuation to emergency medical care.
- Protect auto-injectors from heat/light and do not refrigerate.

Replace and do not use auto-injectors if the solution is discolored, cloudy, or contains particles.

### C. FIRST AID AND PREVENTION MEASURES FOR COMMON PHYSICAL AND ENVIRONMENTAL HAZARDS

All field team members, regardless of the work location, should be familiar with this list of possibilities and information on how to respond to them. Read through the first part of table 4 to learn more about some general and physical and environmental hazards. If your work is in North America, please read the second part of the table. If your work will take you out of North America, please read the last part of the table about international hazards.

**Table 4 – Common Physical and Environmental Hazards**

Location: Worldwide				
Hazard	Cause	Symptoms	First Aid	Prevention
<b>Assault</b>	Criminal activity: robbery may be the motivation.	Physical injury	Remove victim to safe location if possible; seek medical attention if needed. Report assault immediately to local authorities.	Be aware of your surroundings. Keep a low profile. When possible, avoid being alone after dark, especially in high-crime areas. If assaulted, run away if possible, or make noise to attract help. Consult UW Global Travel Health and Safety for guidance on high-crime areas.
<b>Carbon Monoxide</b>	Running a vehicle or burning a fuel stove in an enclosed space, including walled tents	<ul style="list-style-type: none"> <li>➤ Severe headaches</li> <li>➤ Disorientation</li> <li>➤ Agitation</li> <li>➤ Lethargy</li> <li>➤ Stupor</li> <li>➤ Coma</li> </ul>	Remove the victim to fresh air immediately and perform CPR if needed.	Keep areas adequately ventilated when burning fuel. Ensure that vehicle tailpipe is not covered by snow. Ensure CO detectors/alarms are in place or use a portable detector in sleeping areas.

Hazard	Cause	Symptoms	First Aid	Prevention
<b>Dehydration</b>	Not enough water intake	<ul style="list-style-type: none"> <li>➤ Dark urine</li> <li>➤ Lethargy</li> <li>➤ Constipation</li> <li>➤ Light-headedness</li> </ul>	Drink plenty of fluids, take frequent rest breaks, and minimize intake of beverages containing caffeine.	Drink plenty of water (at least 2 quarts of water per day). Drink more if working strenuously or in a warm climate. Incorporate electrolyte drinks to increase hydration.
<b>Drowning</b>	Inhalation of water leading to respiratory impairment	<ul style="list-style-type: none"> <li>➤ Apnea (suspension of breathing)</li> <li>➤ Death</li> </ul>	Take victim out of water. Turn head to side to allow water to drain out. Perform CPR if needed. Seek medical attention, which may include treatment for hypothermia, as soon as possible.	Know how to swim before performing field activities in water or on boats. Be aware of water safety recommendations for swimming in strong currents if necessary. Have personal flotation device and rescue equipment available.
<b>Extreme weather</b>	Snow squalls, blizzards, lightning, tornadoes, hurricanes, monsoon rains, floods	<ul style="list-style-type: none"> <li>➤ Severe weather can result in physical injury and/or death</li> </ul>	Seek shelter immediately.	Be aware of special weather concerns. Bring appropriate equipment to deal with severe weather.
<b>Hazardous terrain</b>	Walking or hiking in steep or rocky areas	<ul style="list-style-type: none"> <li>➤ Physical injury or death</li> </ul>	Perform CPR and/or seek medical attention if needed.	Wear appropriate shoes. Carry needed items in a well-balanced pack. Use appropriate fall-arrest equipment for climbing, including a helmet. Use hiking poles if needed.
<b>Hunting season</b>	Local hunting seasons and regulations vary.	<ul style="list-style-type: none"> <li>➤ A hunting accident may result in serious injury or death</li> </ul>	Seek medical attention for serious injuries or wounds.	Wear appropriately colored safety clothing.



Hazard	Cause	Symptoms	First Aid	Prevention
<b>Impure water</b>	Harmful organisms and pathogens living in “natural” water sources	<ul style="list-style-type: none"> <li>➤ Gastrointestinal illness</li> <li>Flu-like symptoms</li> </ul>	<p>Drink clear liquids.</p> <p>Slowly introduce mild foods, such as rice, toast, crackers, bananas, or applesauce.</p> <p>Visit a doctor if there is no improvement.</p>	<p>Carry your own water.</p> <p>Treat water before use with tablets, purifiers, or by boiling for more than 3 minutes.</p>
<b>Poisonous plants</b>	Common to North America: Exposure to poison ivy, poison oak, or poison sumac plants	<ul style="list-style-type: none"> <li>➤ Itchy rash</li> <li>➤ Red, swollen skin</li> </ul>	<p>Apply a wet compress with baking soda or vinegar or use a topical ointment.</p> <p>Avoid scratching the rash.</p>	<p>Avoid contact with poison plants. Wash clothes and skin with soap and water after exposure.</p> <p>If sensitive, use Tecnu or similar product to help remove rash-causing oil if exposure occurs.</p>
<b>Sexual assault</b>	Inappropriate conduct; any conduct without consent; criminal activity	Any conduct without physical consent. May include physical injuries.	<p>Remove victim to safe location if possible; seek medical attention if needed. Make a <a href="#">Title IX report</a> to access support, options, and consultation to determine how to proceed.</p>	<p>Be aware of your surroundings. When possible, avoid being alone after dark, especially in high-crime areas. Know your rights and what is considered appropriate conduct.</p>
<b>Sunburn</b>	Excessive exposure to the sun	Irritated skin, pink or red in color	<p>Apply cool water, aloe, or other cooling lotion to affected area.</p>	<p>Wear long sleeved UPF (ultraviolet protection factor)-rated clothing and a brimmed hat.</p> <p>Apply sun protection factor (SPF) of 30.</p>

Hazard	Cause	Symptoms	First Aid	Prevention
<b>Travel-related accidents</b>	Injury associated with vehicle, boat, aircraft, or other means of travel	Physical injury and/or death	Perform CPR if needed. Seek medical attention as soon as possible.	Be familiar with safe operation of the vehicle or craft you will operate; use licensed pilots or drivers.
<b>Violence</b>	Caused by political unrest or military conflict	Physical injury, threats	Leave the area as soon as it is safe to do so. Contact the <a href="#">UW Global Emergency line</a> at <b>001-206-632-0153</b> if you need assistance while abroad.	Enroll in STEP to maintain awareness of current Travel Advisories and alerts. Review Pre-Travel Advisory emails provided by International SOS.

Location: Worldwide: hot climates				
Hazard	Cause	Symptoms	First Aid	Prevention
<b>Heat exhaustion</b>	Prolonged physical exertion in a hot environment	<ul style="list-style-type: none"> <li>➤ Fatigue</li> <li>➤ Excessive thirst</li> <li>➤ Heavy sweating</li> <li>➤ Cool and clammy skin</li> </ul>	Cool the victim, treat for shock, and slowly give water or electrolyte replacer.	Acclimate to heat gradually. Drink plenty of liquids. Take frequent rest breaks.
<b>Heat stroke</b>	Prolonged physical exertion in a hot environment	<ul style="list-style-type: none"> <li>➤ Exhaustion</li> <li>➤ Light headedness</li> <li>➤ Bright red skin which is warm to the touch</li> </ul>	Cool the victim at once, replenish fluids, and seek medical attention immediately.	Acclimate to heat gradually. Drink plenty of liquids. Take frequent rest breaks.



Location: Worldwide: cold climates				
Hazard	Cause	Symptoms	First Aid	Prevention
<b>Cold Water Shock</b>	Exposure to cold water temperatures	<ul style="list-style-type: none"> <li>➤ Gasp reflex</li> <li>➤ Hyperventilation</li> <li>➤ Increased heart rate and blood pressure</li> <li>➤ Shivering</li> <li>➤ Difficulty using fingers or hands</li> <li>➤ Reduced core temperature</li> </ul>	Take victim out of water. Remove cold, wet clothes. Put on dry clothes or use a blanket or skin-to-skin contact to warm up. Drink warm liquids and seek medical attention as soon as possible.	Be aware of water temperatures prior to entry and dress accordingly. Don't enter the water alone. Don't push yourself beyond your abilities in cold water.
<b>Frostbite</b>	Exposure to cold temperatures	<ul style="list-style-type: none"> <li>➤ Waxy, whitish numb skin</li> <li>➤ Swelling</li> <li>➤ Itching</li> <li>➤ Burning</li> <li>➤ Deep pain as the skin warms</li> </ul>	Slowly warm the affected areas (do NOT rub area) and seek medical attention as soon as possible.	Dress in layers. Cover your extremities with warm hats, face covering, gloves, socks, and shoes.
<b>Hypo-thermia</b>	Prolonged exposure to cold temperatures	<ul style="list-style-type: none"> <li>➤ Shivering</li> <li>➤ Numbness</li> <li>➤ Slurred speech</li> <li>➤ Excessive fatigue</li> </ul>	Remove cold, wet clothes. Put on dry clothes or use a blanket or skin-to-skin contact to warm up. Drink warm liquids and seek medical attention as soon as possible.	Dress in layers. Wear activity-appropriate clothing. Cover your extremities with warm hats, face covering, gloves, socks, and shoes. Avoid getting damp from perspiration.

Location: Worldwide: high altitudes				
Hazard	Cause	Symptoms	First Aid	Prevention
<b>High altitude illness</b>	Decreased oxygen and increased breathing rate	<ul style="list-style-type: none"> <li>➤ Headache</li> <li>➤ Nausea</li> <li>➤ Weakness</li> <li>➤ Cough</li> <li>➤ Shortness of breath</li> <li>➤ Pulmonary edema (HAPE)</li> <li>➤ Disorientation</li> <li>➤ Cerebral swelling (HACE)</li> </ul>	Use supplemental oxygen and decrease altitude.	Allow your body to acclimatize by gaining elevation slowly. Keep hydrated. Eat high calorie/sugar snacks frequently. Consult a doctor about taking Diamox to help you acclimatize.

Location: Worldwide: temporary structures, areas without building codes				
Hazard	Cause	Symptoms	First Aid	Prevention
<b>Electrical shock</b>	Damaged electrical cords, improper electrical wiring, improper grounding, differences in voltage across countries	<ul style="list-style-type: none"> <li>➤ Cardiac arrest,</li> <li>➤ Muscle contraction</li> <li>➤ Shaking</li> <li>➤ Numbness</li> <li>➤ Paralysis, or other neurological symptoms</li> <li>➤ Burns</li> <li>➤ Other physical injuries</li> </ul>	Provide burn first aid as needed. Go to the nearest emergency room for physical injuries, severe burns, or cardiac arrest.	Inspect cords for damage and replace damaged cords or have them repaired by a qualified person. Read equipment labels and manufacturer's instructions; use voltage convertors when applicable.

Location: Worldwide: working in hot locations or when using thermal equipment				
Hazard	Cause	Symptoms	First Aid	Prevention
<b>Burns</b>	Touching a hot surface of equipment or sun- warmed surface, especially metal; contact with flames.	<ul style="list-style-type: none"> <li>➤ Pain</li> <li>➤ Redness</li> <li>➤ Swelling</li> <li>➤ Tissue damage</li> <li>➤ Blisters (2<sup>nd</sup> degree)</li> <li>➤ Charring (3<sup>rd</sup> degree)</li> </ul>	Cool the burn with cool water (not ice); cover with sterile bandage, take pain- reliever. For large 2 <sup>nd</sup> or 3 <sup>rd</sup> degree burns, seek emergency medical treatment. Don't immerse burned areas in water. When possible, elevate the burned body part. Cover the area with a cool moist sterile bandage or cloth. Get a tetanus shot if your last shot was > 5 years ago.	Use gloves when handling hot objects.





## D. AUTOMATIC EXTERNAL DEFIBRILLATORS (AEDS)

AEDs are considered medical equipment and must meet certain minimum requirements. These requirements vary by state and region, but most include registering with the local public health agency and/or emergency response personnel. This is primarily so that others in the area can be directed to the AED in case of an emergency. While this may be an unlikely scenario during field research operations, it is a legal requirement, nonetheless. However, registering an AED for short term interval poses a hazard if the owner then forgets to let local agencies know when the unit leaves the area. For this reason, we recommend registering with local authorities if the unit will be in their area for a period of 90 days, and providing an estimated time when the unit will be withdrawn.

If an AED is applied to a patient, even if a shock is not delivered, the use must be reported to the local public health agency. In Seattle, call the King County Community AED Program Manager at 206.296.4693. Contact EH&S at 206.685-0341 once the medical emergency is over to make sure all notifications have been made.

[PulsePoint](#) provides an AED finding app and there is an established [map of AED locations in the King County area](#).

Refer to the [Automated External Defibrillators webpage](#) for additional information.

## E. PSYCHOLOGICAL FIRST AID

Psychological First Aid is basic, pragmatic support for victims, survivors, and responders who exhibit acute stress response following trauma, violence, or disasters. The intent is to recreate a sense of safety, ensure basic physical needs are met, and protect the patient from additional harm:

- Help people meet basic needs for food, shelter, and first aid
- Offer accurate information about the situation and rescue efforts
- Give practical suggestions that steer people toward helping themselves
- Help people contact friends and loved ones
- Direct people to support services.

## F. SEEKING MEDICAL CARE OR OTHER SUPPORT

### 1. Campus Services

UW's Seattle campus offers urgent care, emergency services, occupational health and travel clinics, confidential care advocates, counseling, and after-hours advice nurse consultations or referrals. Note these numbers and resources in advance in a written Field Safety Plan carried in the field (reference Appendix III for campus-specific contact numbers).

### 2. During Travel

Directions and contact information for nearby medical services should be identified in advance and included in your Field Safety Plan.

For international travel, the US State Department and embassy websites provide guidance on finding a doctor or hospital while abroad. If travelers are enrolled in UW international emergency medical coverage, the emergency assistance provider can help locate a doctor, hospital and in some cases, arrange a guarantee of payment with the treating provider. Travelers will be promoted to download the [International SOS Assistance app](#) as part of the travel registration process. This app can connect

travelers to international emergency medical assistance.

For further emergency assistance while travelling, contact the [UW Global Emergency line](#) at 001.206.632.0153 for assistance. This line is answered 24 hours a day, seven days a week by the UW Police Department. The operator will collect information about the emergency along with your contact information and forward the information to UW Global Travel Health and Safety, who will assist you. Be prepared to provide the following information if possible:

- Your name
- Return contact information
- Country and program of study
- Name(s) of persons involved
- Description of emergency
- Actions taken
- Assistance needed

## G. INCIDENT REPORTING TO CAMPUS

Work-related incidents are tracked and investigated so that preventative measures can be implemented. The information contained in the reports is essential to maintain successful safety programs. It is important for work-related incidents to be reported so they can be tracked and investigated. Once investigated, preventative measures can be implemented. The information contained in the reports is essential to maintain successful safety programs.

Report any work-related injury or illness to your supervisor as soon as possible. After reporting the incident to your supervisor, submit a report of the incident within 24 hours to EH&S via the [UW's Online Accident Reporting System \(OARS\)](#). Immediately report all work-related fatalities, catastrophes, serious injuries or illnesses to your supervisor and campus department. Supervisors/departments are responsible for promptly reporting incidents to EH&S or Risk Services and completing incident report forms. Ideally, specific emergency contact numbers and incident reporting procedures are clearly outlined in written Field Safety Plans carried in the field. Consider carrying appropriate incident report forms and a copy of your Field Safety Plan in your first aid kit.

[UW Administrative Policy Statement \(APS\) 16.1](#) requires the reporting of all fires, explosions, and hazardous materials leaks. In addition to University policies, the Campus Fire Safety Right to Know Act requires the reporting of certain unintended fires when student housing is involved. Hefty fines are levied to institutions that do not comply with these requirements.

For this purpose, a fire is defined as “any instance of open flame or other burning in a place not intended to contain the burning, and/or any instance of open flame or other burning in an uncontrolled manner.” This would not include instances that only generate smoke but do not exhibit an open flame, such as overcooked food in a microwave. It also does not include campfires within an approved pit or bonfires meeting code requirements. Student “housing” can include tents, yurts, etc. Determining which incidents meet the federal reporting criteria can be complicated. EH&S will work closely with onsite personnel to make that determination.

Report all unintended fires to EH&S by email at [uwfire@uw.edu](mailto:uwfire@uw.edu) or by phone at 206.685.0341.

For incidents that are not work-related but result in an injury, illness, exposure to hazardous materials, property damage, or fire, regardless of the work location, use the [EH&S Report a Concern Form](#). Individuals can use the [EH&S Report a Concern form](#) to report safety concerns anonymously.



If you become aware of possible sexual assault, sexual harassment or other forms of sexual misconduct, you are strongly encouraged to make an [online Title IX report](#) and get connected with a Title IX Case Manager who can provide options, resources, and information. Unless you are a Title IX Official Required to Report, you can make a Title IX report anonymously. Making a Title IX report will not automatically initiate a Title IX investigation.

International travelers who are victims of a crime needing additional support, such as guidance on replacing stolen goods, can report it to Global Travel Security at [travelemergency@uw.edu](mailto:travelemergency@uw.edu).

## H. LESSONS LEARNED

By reporting and reviewing incidents among field teams, departments, and with campus staff, lessons learned can benefit a broader group and help improve our operations. We all recognize that injuries happen when working outdoors in uncontrolled environments but want to strive toward being prepared, making safe decisions in the field, and minimizing the negative consequences when incidents occur.

Your department safety committee/coordinator, EH&S staff, research oversight committees, or other personnel on campus may be involved in accident investigation and review of lessons learned.

## I. NEAR-MISSES AND IMPROVEMENTS

Ideally, all field projects and courses include an opportunity for debriefing, even when no unintended incidents occur. Discussion of project goals, challenges, and logistics can often identify clear improvements and planning needs for subsequent field work.

Any university employee, student, or volunteer has the right and responsibility to inform the RP/leader/instructor and/or EH&S immediately upon learning of an unsafe condition or practice. In accordance with the University's policies, no retaliation may be taken against an employee or student for reporting such unsafe conditions or practices. Depending on the nature of the hazard and applying its technical expertise, EH&S will review the practices and/or work site and make preliminary determinations and recommendations, if necessary, to effectively mitigate the hazard. Such reviews also occur as part of a regularly scheduled safety program.

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**APPENDIX I – BEST PRACTICES FOR TRIP LEADERS**

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B. BUILDING SAFE WORK ENVIRONMENTS .....93

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This appendix has been adapted from guidance compiled by Christopher Lay at the Ken Norris Center for Natural History (UCSC) and the NOLS Leadership Educator Notebook. Trip leaders, including but not limited to the Responsible Party (RP), of all experience levels can benefit from these strategies to set the tone for a safe trip and manage situations that arise. It's impossible to prepare for all scenarios that may unfold when working in uncontrolled environments, but consideration of both objective and subjective factors is critical to manage incidents in the field.

## A. DEVELOPING CONSERVATIVE JUDGEMENT

Judgment is the logical reasoning we use to help us decide what to do in a new situation. It's based on our past experience and personal reflection that leads to an insight or changed behavior that you carry forward with you. A few important points to remember about developing conservative judgment:

- Experience alone does not develop conservative judgment! Plenty of people take the same extreme risks over and over again. Reflection from one's experience that leads to a modified future action is just as important as experience.
- We are going to make mistakes – the key is to learn from them.
- There are better and worse times to make mistakes – you don't want to push your limits when you're leading a group. Do this on your own time.
- It's good for beginners to have simple clear “unbreakable” rules, such as: never climb a peak after noon in the mountains (because of lightning strike potential). Over time, your judgment will help you develop more nuanced rules.
- Often you must follow policies set forth by your organization that may conflict with what your judgment tells you to do. Follow your protocols.
- Sometimes you don't have the experience to use good judgment – it is okay to stop a task and ask for assistance or guidance.
- Supervisors don't typically get upset if you're “too safe”, but people will get upset (and potentially hurt) if you get in over your head.

## B. BUILDING SAFE WORK ENVIRONMENTS

The following is a suggested format you could use for a discussion about creating a safe learning environment. It can easily be modified or shortened for less-involved field experiences or different participants, but it is recommended that it happens as early on in the trip as possible.

- Introduction: Living and studying outside can pose significant challenges for all involved. A big part of this challenge is working together as a group - how do we communicate, cooperate, problem-solve, and support one another.
- Explicitly State Leader Expectations: specify and build consensus around what it takes to maintain a safe positive learning environment. Spend time as a group discussing this and getting everyone's input.

Consider the following potential aspects of the conversation:

You can expect us to

- respect you for who you are
- support you both physically and emotionally
- give and receive constructive feedback

- provide a safe learning environment for you and the group as a whole

We will expect all of you to

- respect one another
  - practice proactive self-care; check in about medical or other concerns you may have
  - follow our lead & follow the rules
  - assist in providing a safe learning environment for everyone
- Get input from your group. Take some time to discuss in smaller groups anything else the student group thinks is important to maintaining a safe learning environment. Then discuss as a whole group, letting as many participants share what they talked about. Acknowledge everyone for listening and sharing.
- Explicitly go over the important rules. Here are some common rules/issues that you might consider specifically addressing:
- Personal physical safety - no hiking alone, no rock climbing, swimming guidelines, etc. You must wear your seatbelt in the van whenever we're driving. You likely don't have time to discuss all of these right at the beginning but introducing them lets your group know that you think they're important. You can say that you will come to these in more detail once out in the field.
  - Sexual harassment: Can include unwelcome sexual advances, requests for sexual favors and other verbal or physical harassment of a sexual nature. Harassment does not have to be of a sexual nature, however, and can include offensive remarks about a person's sex. University policy prohibits harassment and discrimination. Even when unwelcome behaviors do not violate policy, they can be addressed. If you become aware of possible sexual harassment or other forms of sexual misconduct, you are strongly encouraged to make [an online Title IX report](#) and get connected with a Title IX Case Manager who can provide options, resources, and information.
  - Emotional safety
    - Avoid jokes, sarcasm or insulting remarks: about individuals or groups of people, whether or not they are represented on this course.
    - Aggression: Avoid either verbal threats or action to harm others in the present or future.
    - Language: Keep the course relatively free of bad language.
  - Alcohol and other drugs: This can clearly be a difficult "rule" to establish. Consider bringing up four things with the students: safety, legality, learning and group cohesion.
    - Safety: Clearly drugs and alcohol can compromise safety, which is especially concerning in remote field contexts.
    - Legality: Most drugs are illegal and using alcohol or marijuana if you're under 21 is illegal. Getting caught condoning illegal activities in a university-sponsored field class could cost any leader their job as well as jeopardize the future of the course. UW has a policy prohibiting use of marijuana on UW property and during UW-sponsored activities.
    - Learning: Drugs and alcohol can interfere with your ability to learn the material we cover in this course.
    - Group cohesion: The use of drugs and alcohol can often undermine community building within a group. Often, a smaller subset of a group is most comfortable drinking (or perhaps



sneaking off and using drugs) and this leads to cliques and dis-unity.

- After going over these concerns, you might consider two different rules to establish and maintain:
  - No use of drugs or alcohol.
  - Moderate consumption of alcohol only by those of age and only “outside of class time”.
- Consequences: What if they break the rules? Consider saying something like this: “I am ultimately responsible for maintaining a safe learning environment for everyone out here. If your actions aren’t supporting that goal, I will request that you change your behavior. I can also separate you from this course.”
- Final advice: If you set and maintain clear expectations, constantly build rapport and connection with your students, facilitate awesome experiences (without drugs/alcohol), and set a good example yourself, you won’t have trouble with this issue.
- Smoking: Follow the law/rules (UW has a smoke/tobacco-free policy). In a place where smoking is permissible, smoke outside away from others and throw your butts away (they are not biodegradable). Consider quitting now.
- Exclusive relationships (including romantic ones): You might say “Get out of your bubble and be inclusive of everyone.” It takes an explicit, deliberate action to be inclusive of everyone - make it a goal to sit some place different tomorrow and strike up a conversation with someone else. The whole experience will be much more meaningful if we come together as a whole group.
- Cell phones: “Either put your cell phone in airplane mode or turn it off completely during the day. If there are some apps you’re using for class, that’s fine. If you want to make brief phone calls outside of our class time (like after dinner), that’s fine. What we want to avoid is checking out of the present moment and not interacting with the people who are physically present.”
- Music: “No speakers in the field; music in the van is at the driver’s discretion. Beware listening too much to music using earbuds: it can lead to checking out too much from the group.”
- Address the possibility of having to remove someone from the course. You might want to give an example of the rare occurrence where someone might separate from the course. Consider saying:
  - If something inappropriate comes up, we will first and foremost talk with that person or people involved.
  - Our goal would be to build understanding, provide additional support and clarification to everyone involved.
  - However, if the inappropriate behavior continues, we could decide to separate a person from the course.

Finally, explicitly ask for everyone to follow these guidelines to create a safe learning environment: You might say, “Does all this sound good? Can I get a yes or a nod from everyone? If any of this concerns you, please feel free to come to talk with one or all of us after this meeting.”

## C. ACTIVE LISTENING

Active listening requires that you:

- Be present with your speaker.
- Do more listening than speaking.



- Make eye contact and use positive body language.
- Focus on understanding what someone is saying, not on mentally preparing a response.
- Avoid interrupting, debating, and quick, preconceived responses.

The two cornerstone skills of active listening are Paraphrasing and Drawing People Out:

### **Paraphrasing**

When you paraphrase someone, you say back to the speaker what you think the speaker said in your own words. This is the most straightforward way to demonstrate to a speaker that his or her thoughts were heard and understood. Though simple, paraphrasing is powerful! When done well, it is non-judgmental and enables people to feel that their ideas are respected.

### **Drawing People Out**

When drawing someone out, ask open-ended non-directive questions. This helps the speaker clarify and refine their thoughts. Setting a tone that invites good listening reduces the probability of accidents.

A good leader sets a tone in which participants and co-leaders feel they can speak up, question and share observations without fear of reprisal. Do this by frequently checking in with your instructor team and student group. Strive to follow these guidelines:

- Give adequate time for discussions to avoid giving the impression that your group has nothing to contribute.
- Make eye contact.
- Listen to your team member's responses without interrupting or talking over them.
- Ask: "Are you getting enough direction from me about what you need to be doing?"
- Be aware of giving the impression that you're really not looking for input.
- Instead of saying, "Okay - you've all done this before. Ready to go?" ask "Hey is anyone not ready?"
- Be aware that silence can be mistaken for agreement. Take the time and create the space for everyone to express their concerns.

## **D. CONFLICT RESOLUTION**

Some strategies to consider:

- Approach the student, co-instructor, or team member with respect (think connection before correction).
- "I have been noticing ..... and I was hoping to talk to you about it."
- "I wanted to bring 'this' up to make sure you are getting what you need to feel good about this class" or that you, the other students, and the purpose of this course are all supported."
- Clarify your expectations and/or goals for the course. If they are not meeting your expectations or hindering your goals, specify which one(s) they aren't meeting.
- Suggest ways they could meet expectations the next time this situation arises. Don't be afraid to say: "We need everyone to follow these expectations in order to create a safe learning environment for everyone."
- Educate your students about the ramifications of their actions, etc.





- Engage in collaborative problem solving with your student(s).

Make a plan for checking in again.

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**APPENDIX II: ONLINE RESOURCES**

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## A. GENERAL INFORMATION

### First Aid Training

[American Red Cross](https://www.redcross.org/take-a-class/first-aid/performing-first-aid/first-aid-steps) - <https://www.redcross.org/take-a-class/first-aid/performing-first-aid/first-aid-steps>

[American Red Cross Manual](https://safetylibrary.typepad.com/files/First%20Aid%20CPR-AED%20student%20manual.pdf) - <https://safetylibrary.typepad.com/files/First%20Aid%20CPR-AED%20student%20manual.pdf>

[Local Red Cross](https://www.redcross.org/local/washington/take-a-class) - <https://www.redcross.org/local/washington/take-a-class>

[NOLS training courses in coordination with REI](https://www.rei.com/events/a/wilderness-medicine) - <https://www.rei.com/events/a/wilderness-medicine>

[The Mountaineers](https://www.mountaineers.org/courses) - <https://www.mountaineers.org/courses>

### General Medical information

[Mayo Clinic](https://www.mayoclinic.org/) - <https://www.mayoclinic.org/>

[Centers for Disease Control and Prevention](http://www.cdc.gov/travel/diseases.html) - <http://www.cdc.gov/travel/diseases.html>

### Leave No Trace & Outdoor Ethics

[Leave No Trace \(LNT\)](https://lnt.org/) - <https://lnt.org/>

[Master Educator Manual](https://store.nols.edu/products/lnt-master-educator-notebook) - <https://store.nols.edu/products/lnt-master-educator-notebook>

[North American Booklet](https://lnt.org/sites/default/files/LNT.North%20%20Am%20Book.pdf) - <https://lnt.org/sites/default/files/LNT.North%20%20Am%20Book.pdf>

### Travel - domestic and international

[Centers for Disease Control Travel Notices](https://wwwnc.cdc.gov/travel/notices) - <https://wwwnc.cdc.gov/travel/notices>

[Infectious Diseases and Travelers' Health - Search by Destination](https://wwwnc.cdc.gov/travel) (Centers for Disease Control and Prevention) - <https://wwwnc.cdc.gov/travel>

[Smart Traveler Enrollment Program \(STEP\)](https://step.state.gov/) - <https://step.state.gov/>

[Travel Advisories by Location](https://travel.state.gov/content/travel.html) (US Department of State) - <https://travel.state.gov/content/travel.html>

[International SOS \(UW international emergency assistance provider\)](https://www.internationalsos.com/members_home/login/clientAccess.cfm?CustNo=401GDA904950) - [https://www.internationalsos.com/members\\_home/login/clientAccess.cfm?CustNo=401GDA904950](https://www.internationalsos.com/members_home/login/clientAccess.cfm?CustNo=401GDA904950)

### U.S. Forest Service

[U.S. Forest Service and U.S. Department of Agriculture](https://www.fs.usda.gov/) - <https://www.fs.usda.gov/>

<https://www.fs.usda.gov/Weather>

[National Weather Service](https://www.weather.gov/safety/) - <https://www.weather.gov/safety/>

## B. SAFETY RESOURCES FOR SPECIFIC AREAS OF STUDY

### Agriculture/Rural Studies

[Washington State Department of Agriculture](https://agr.wa.gov/washington-agriculture) - <https://agr.wa.gov/washington-agriculture>

[Bureau of Indian Affairs](https://www.bia.gov/) - <https://www.bia.gov/>

[Tribal Leaders Directory](https://www.bia.gov/service/tribal-leaders-directory) - <https://www.bia.gov/service/tribal-leaders-directory>

**Archeology, Paleontology, Anthropology**

[Health and Safety for Museum Professionals \(SPNHC\)](https://www.universityproducts.com/health-and-safety-for-museum-professionals.html) - <https://www.universityproducts.com/health-and-safety-for-museum-professionals.html>

**Boating**

[Washington State Boating Safety Course Online](https://www.boat-ed.com/washington/) - <https://www.boat-ed.com/washington/>

[Scientific Boating Safety Association](http://scientificboating.org/) - <http://scientificboating.org/>

[U.S. Coast Guard marine accident/fatality reporting form](https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/INV/docs/CG_2692.pdf?ver=2019-07-24-113027-740) -

[https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/INV/docs/CG\\_2692.pdf?ver=2019-07-24-113027-740](https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/INV/docs/CG_2692.pdf?ver=2019-07-24-113027-740)

[University-National Oceanographic Laboratory System Research Vessel Safety Standards](https://www.unols.org/sites/default/files/RVSS_Edition_10_July2015.pdf) -

[https://www.unols.org/sites/default/files/RVSS\\_Edition\\_10\\_July2015.pdf](https://www.unols.org/sites/default/files/RVSS_Edition_10_July2015.pdf)

**Geology/Earth Sciences**

[Field Safety in Uncontrolled Environments](https://pubs.geoscienceworld.org/aapg/books/book/1275/Field-Safety-in-Uncontrolled-EnvironmentsA-Process) (AAPG) -

<https://pubs.geoscienceworld.org/aapg/books/book/1275/Field-Safety-in-Uncontrolled-EnvironmentsA-Process>

[Safety & Health for Field Operations](https://www.usgs.gov/survey-manual/445-3-h-safety-and-health-field-operations) (USGS) - <https://www.usgs.gov/survey-manual/445-3-h-safety-and-health-field-operations>

**Guidelines for Social Worker Safety**

[National Association of Social Workers](https://www.socialworkers.org/Practice/Social-Work-Safety) (NASW) - <https://www.socialworkers.org/Practice/Social-Work-Safety>

**Machinery / Tools**

[UC Berkeley Job Safety Analysis Library](https://ehs.berkeley.edu/job-safety-analysis-jsas-listed-topic) - <https://ehs.berkeley.edu/job-safety-analysis-jsas-listed-topic>

**Polar Sciences**

[US Antarctica Program, Arctic Sciences](https://www.nsf.gov/div/index.jsp?div=OPP) (NSF) - <https://www.nsf.gov/div/index.jsp?div=OPP>

**Safety of Journalists**

[UNESCO](https://en.unesco.org/themes/safety-journalists) - <https://en.unesco.org/themes/safety-journalists>

[BBC](https://www.bbc.co.uk/safety/guides/journalism/) - <https://www.bbc.co.uk/safety/guides/journalism/>

**Scientific Diving**

[American Academy of Underwater Sciences](https://www.aaus.org/) - <https://www.aaus.org/>

**Shipping Materials**

[Cryoport](https://www.cryoport.com/) - <https://www.cryoport.com/>

[DHL](https://www.dhl.com/us-en/home/our-divisions/global-forwarding/customer-service/hazardous-goods.html) - <https://www.dhl.com/us-en/home/our-divisions/global-forwarding/customer-service/hazardous-goods.html>

[FedEX](https://www.fedex.com/global/choose-location.html) - <https://www.fedex.com/global/choose-location.html>

[World Courier](https://www.worldcourier.com/) - <https://www.worldcourier.com/>



**Unmanned Aircraft Systems**

[Federal Aviation Administration](https://www.faa.gov/uas/) - <https://www.faa.gov/uas/>

**Wetlands**

[UW Bothell North Creek Wetlands](https://www.uwb.edu/wetland/visit/access-regulations) - <https://www.uwb.edu/wetland/visit/access-regulations>

[Wetlands Safety Video](https://youtu.be/gMC1hAdgEPA) - <https://youtu.be/gMC1hAdgEPA>

**Wildlife Studies**

[Guidelines for use of wild animals in research and teaching](https://www.mammalsociety.org/uploads/committee_files/CurrentGuidelines.pdf) (American Society of Mammologists) - [https://www.mammalsociety.org/uploads/committee\\_files/CurrentGuidelines.pdf](https://www.mammalsociety.org/uploads/committee_files/CurrentGuidelines.pdf)

[Guidelines to the Use of Wild Birds in Research](https://birdnet.org/) (Ornithological Council) - <https://birdnet.org/>

[Science Guidelines](https://fisheries.org/policy-media/science-guidelines/) (American Fisheries Society) - <https://fisheries.org/policy-media/science-guidelines/>

[Resources, Collection & Curation Practices](http://asih.org/) (American Society of Ichthyologists & Herpetologists) - <http://asih.org/>

[Precautions for Zoonotic Disease Prevention in Veterinary Personnel](http://nasphv.org/Documents/VeterinaryStandardPrecautions.pdf) (National Association of State Public Health Veterinarians) - <http://nasphv.org/Documents/VeterinaryStandardPrecautions.pdf>

[Fish & wildlife training modules](https://www.ccac.ca/en/training/modules/) (Canadian Council on Animal Care) - <https://www.ccac.ca/en/training/modules/>

[Health Risks for Marine Mammal Works \(UW Davis Vet Medicine, 2008\)](https://www.int-res.com/articles/dao_oa/d081p081.pdf) - [https://www.int-res.com/articles/dao\\_oa/d081p081.pdf](https://www.int-res.com/articles/dao_oa/d081p081.pdf)

[Disease Precautions for Hunters \(AVMA\)](https://www.avma.org/public/Health/Pages/Disease-Precautions-for-Hunters.aspx) - <https://www.avma.org/public/Health/Pages/Disease-Precautions-for-Hunters.aspx>

**Wilderness Skills**

[National Outdoor Leadership School \(NOLS\)](https://www.nols.edu/en/) - <https://www.nols.edu/en/>

**Working Alone Off-Site**

[Canadian Centre for Occupational Health & Safety](https://www.ccohs.ca/oshanswers/hsprograms/workingalone_offsite.html) - [https://www.ccohs.ca/oshanswers/hsprograms/workingalone\\_offsite.html](https://www.ccohs.ca/oshanswers/hsprograms/workingalone_offsite.html)

**C. COMMON FIELD HAZARDS****Environmental Hazards**

[Cold Water Hazards and Safety](https://www.weather.gov/safety/coldwater) - <https://www.weather.gov/safety/coldwater>

[Department of Natural Resources – Wildfire Prevention](https://www.dnr.wa.gov/programs-and-services/wildfire-resources) - <https://www.dnr.wa.gov/programs-and-services/wildfire-resources>

[Washington State Burn Permits](https://www.dnr.wa.gov/programs-and-services/wildfire/outdoor-burning/burn-permits) - <https://www.dnr.wa.gov/programs-and-services/wildfire/outdoor-burning/burn-permits>

[Washington State Burn Risk Map](https://burnportal.dnr.wa.gov/) - <https://burnportal.dnr.wa.gov/>

[Washington State Burn Restrictions](https://www.dnr.wa.gov/burn-restrictions) - <https://www.dnr.wa.gov/burn-restrictions>

[Wildland fires incident map](https://inciweb.wildfire.gov/) - <https://inciweb.wildfire.gov/>

[National Fire Danger Ratings](https://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32) - <https://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32>

[Poisonous Plants](https://www.cdc.gov/niosh/outdoor-workers/about/poisonous-plants.html?CDC_AAref_Val=https://www.cdc.gov/niosh/topics/plants/) - The National Institute for Occupational Safety and Health (NIOSH) - [https://www.cdc.gov/niosh/outdoor-workers/about/poisonous-plants.html?CDC\\_AAref\\_Val=https://www.cdc.gov/niosh/topics/plants/](https://www.cdc.gov/niosh/outdoor-workers/about/poisonous-plants.html?CDC_AAref_Val=https://www.cdc.gov/niosh/topics/plants/)

[Poison Ivy, Oak, & Sumac Information Center](http://poisonivy.aesir.com/) - <http://poisonivy.aesir.com/>

[Guide to Drinking Water Treatment in the Backcountry \(CDC\)](https://www.cdc.gov/healthywater/pdf/drinking/Backcountry_Water_Treatment-508.pdf) - [https://www.cdc.gov/healthywater/pdf/drinking/Backcountry\\_Water\\_Treatment-508.pdf](https://www.cdc.gov/healthywater/pdf/drinking/Backcountry_Water_Treatment-508.pdf)

[Hygiene in the Field](https://norriscenter.ucsc.edu/resources/Field%20Safety%20Resources/images/Managing_Personal_Hygiene_in_the_Field.pdf) (UCSC) - [https://norriscenter.ucsc.edu/resources/Field%20Safety%20Resources/images/Managing\\_Personal\\_Hygiene\\_in\\_the\\_Field.pdf](https://norriscenter.ucsc.edu/resources/Field%20Safety%20Resources/images/Managing_Personal_Hygiene_in_the_Field.pdf)

[US Federal Hunting Season](https://www.fws.gov/initiative/hunting-us-fish-and-wildlife-service-lands-and-waters) - <https://www.fws.gov/initiative/hunting-us-fish-and-wildlife-service-lands-and-waters>

### **Extreme Conditions & Weather**

[Weather Forecasts](https://www.noaa.gov/weather) (NOAA) - <https://www.noaa.gov/weather>

[Cold Stress – Preventing Hypothermia and Frostbite](https://www.cdc.gov/niosh/cold-stress/about/?CDC_AAref_Val=https://www.cdc.gov/niosh/topics/coldstress/) (NIOSH) - [https://www.cdc.gov/niosh/cold-stress/about/?CDC\\_AAref\\_Val=https://www.cdc.gov/niosh/topics/coldstress/](https://www.cdc.gov/niosh/cold-stress/about/?CDC_AAref_Val=https://www.cdc.gov/niosh/topics/coldstress/)

[Extreme Cold Weather Clothing](https://www.usap.gov/travelAndDeployment/contentHandler.cfm?id=1860) (US Antarctic Program) - <https://www.usap.gov/travelAndDeployment/contentHandler.cfm?id=1860>

[Backcountry Avalanche Safety](https://www.nsp.org/) (National Ski Patrol) - <https://www.nsp.org/>

[Lightning Safety](http://www.elcosh.org/document/2250/d000149/Lightning%2BSafety.html?show_text=1) (eLCOSH) - [http://www.elcosh.org/document/2250/d000149/Lightning%2BSafety.html?show\\_text=1](http://www.elcosh.org/document/2250/d000149/Lightning%2BSafety.html?show_text=1)

[Winter Storm and Other Emergency Preparedness](http://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/winter-storm) (American Red Cross) - <http://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/winter-storm>

[Acute High Altitude Illnesses](https://www.nejm.org/doi/full/10.1056/NEJMcp1214870?viewType=Print&viewClass=Print) (New England Journal of Medicine, 2013) - <https://www.nejm.org/doi/full/10.1056/NEJMcp1214870?viewType=Print&viewClass=Print>

### **Heat Illness Training Resources**

[DEOHS](https://deohs.washington.edu/pnash/heat_illness) - [https://deohs.washington.edu/pnash/heat\\_illness](https://deohs.washington.edu/pnash/heat_illness)

[OSHA](https://www.osha.gov/SLTC/heatillness/osha_heattraining_guide_0411.pdf) - [https://www.osha.gov/SLTC/heatillness/osha\\_heattraining\\_guide\\_0411.pdf](https://www.osha.gov/SLTC/heatillness/osha_heattraining_guide_0411.pdf)

### **Infectious organisms/diseases**

[CDC Traveler's Health](http://www.cdc.gov/travel/diseases.htm) - <http://www.cdc.gov/travel/diseases.htm>

[Valley fever](https://www.cdc.gov/valley-fever/?CDC_AAref_Val=https://www.cdc.gov/fungal/diseases/coccidioidomycosis/) (CDC) - [https://www.cdc.gov/valley-fever/?CDC\\_AAref\\_Val=https://www.cdc.gov/fungal/diseases/coccidioidomycosis/](https://www.cdc.gov/valley-fever/?CDC_AAref_Val=https://www.cdc.gov/fungal/diseases/coccidioidomycosis/)

[Hantavirus Pulmonary Syndrome](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/HantavirusPulmonarySyndrome.aspx) (California Department of Public Health) - <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/HantavirusPulmonarySyndrome.aspx>

[Hantavirus](https://www.cdc.gov/hantavirus/index.html) (CDC) - <https://www.cdc.gov/hantavirus/index.html>

[Giardiasis](https://www.cdc.gov/giardia/about/?CDC_AAref_Val=https://www.cdc.gov/parasites/giardia/index.html) (CDC) - [https://www.cdc.gov/giardia/about/?CDC\\_AAref\\_Val=https://www.cdc.gov/parasites/giardia/index.html](https://www.cdc.gov/giardia/about/?CDC_AAref_Val=https://www.cdc.gov/parasites/giardia/index.html)



[Tick Removal](https://www.cdc.gov/ticks/after-a-tick-bite/?CDC_AAref_Val=https://www.cdc.gov/ticks/removing_a_tick.html) (CDC) - [https://www.cdc.gov/ticks/after-a-tick-bite/?CDC\\_AAref\\_Val=https://www.cdc.gov/ticks/removing\\_a\\_tick.html](https://www.cdc.gov/ticks/after-a-tick-bite/?CDC_AAref_Val=https://www.cdc.gov/ticks/removing_a_tick.html)

[Lyme disease](https://www.cdc.gov/lyme/index.html) (CDC) - <https://www.cdc.gov/lyme/index.html>

[American Lyme Disease Foundation](http://www.aldf.com/) - <http://www.aldf.com/>

[Zika Virus Updates](https://www.cdc.gov/zika/) (CDC) - <https://www.cdc.gov/zika/>

[West Nile Virus Fact Sheet](https://www.cdc.gov/westnile/index.html) (CDC) - <https://www.cdc.gov/westnile/index.html>

[Other Vector-borne Diseases](https://www.cdc.gov/climate-health/php/effects/vectors.html?CDC_AAref_Val=https://www.cdc.gov/climateandhealth/effects/vectors.htm) (CDC) - [https://www.cdc.gov/climate-health/php/effects/vectors.html?CDC\\_AAref\\_Val=https://www.cdc.gov/climateandhealth/effects/vectors.htm](https://www.cdc.gov/climate-health/php/effects/vectors.html?CDC_AAref_Val=https://www.cdc.gov/climateandhealth/effects/vectors.htm)

## **Wildlife**

[Common snakes](https://sites.pitt.edu/~mcs2/herp/SoNA.html) - <https://sites.pitt.edu/~mcs2/herp/SoNA.html>

[Common spiders](https://www.insectidentification.org/spiders.php) - <https://www.insectidentification.org/spiders.php>

[Pests that injure](http://ipm.ucanr.edu/PMG/menu.house.html#STING) - <http://ipm.ucanr.edu/PMG/menu.house.html#STING>

[Bear safety](https://www.fs.usda.gov/detail/sierra/home/?cid=stelprdb5324172) - USDA-Forest Service - <https://www.fs.usda.gov/detail/sierra/home/?cid=stelprdb5324172>

[Mountain Lions in WA](https://wdfw.wa.gov/publications/00609) (WDFW) - <https://wdfw.wa.gov/publications/00609>

[Snakes in Washington](https://wdfw.wa.gov/species-habitats/living/snakes) (WDFW) - <https://wdfw.wa.gov/species-habitats/living/snakes>

[Rattlesnakes in California](https://www.wildlife.ca.gov/News/Snake) (CDFW) - <https://www.wildlife.ca.gov/News/Snake>

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**APPENDIX III – CAMPUS SUPPORT RESOURCES AND POLICIES**

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## A. UW POLICIES

[Executive Order No. 55](https://policy.uw.edu/directory/po/executive-orders/eo-55-university-health-and-safety-programs-policy-and-responsibilities/) - <https://policy.uw.edu/directory/po/executive-orders/eo-55-university-health-and-safety-programs-policy-and-responsibilities/>

[Administrative Policy Statements](https://policy.uw.edu/directory/aps/) - <https://policy.uw.edu/directory/aps/>

[Office of the Title IX Coordinator](https://www.washington.edu/titleix/) - <https://www.washington.edu/titleix/>

[UW international travel policies](https://www.washington.edu/globalaffairs/) - <https://www.washington.edu/globalaffairs/>

[UW Fleet Services insurance policies](https://facilities.uw.edu/catalog/vehicle-rental/policies#insurance) - <https://facilities.uw.edu/catalog/vehicle-rental/policies#insurance>

[UW Official International Student Travel Policy](http://www.washington.edu/admin/rules/policies/SGP/SPCH211.html) – <http://www.washington.edu/admin/rules/policies/SGP/SPCH211.html>

[UW Tacoma Unmanned Airborne Systems Policy](https://www.tacoma.uw.edu/sites/default/files/2021-01/admin_svcs_policy-use-of-unmanned-airbone-systems-on-campus.pdf) - [https://www.tacoma.uw.edu/sites/default/files/2021-01/admin\\_svcs\\_policy-use-of-unmanned-airbone-systems-on-campus.pdf](https://www.tacoma.uw.edu/sites/default/files/2021-01/admin_svcs_policy-use-of-unmanned-airbone-systems-on-campus.pdf)

## B. EH&S RESOURCES

[Contact EH&S](https://www.ehs.washington.edu/) - <https://www.ehs.washington.edu/>

[Accident Prevention Plan \(APP\)](https://www.ehs.washington.edu/workplace/accident-prevention-plan) - <https://www.ehs.washington.edu/workplace/accident-prevention-plan>

[Supplemental Accident Prevention Plan \(SAPP aka Health and Safety Plan\)](https://www.ehs.washington.edu/resource/supplemental-accident-prevention-plan-template-1131)

<https://www.ehs.washington.edu/resource/supplemental-accident-prevention-plan-template-1131>

[Automated External Defibrillators](https://www.ehs.washington.edu/fire-life/automated-external-defibrillators) - <https://www.ehs.washington.edu/fire-life/automated-external-defibrillators>

[Biohazardous Waste and Sharps Waste](https://www.ehs.washington.edu/biological/biohazardous-waste) - <https://www.ehs.washington.edu/biological/biohazardous-waste>

[Bloodborne Exposure Control Plan](https://www.ehs.washington.edu/resource/site-specific-bloodborne-pathogen-bbp-exposure-control-plan-template-70) - <https://www.ehs.washington.edu/resource/site-specific-bloodborne-pathogen-bbp-exposure-control-plan-template-70>

[Boating Safety Program](https://www.ehs.washington.edu/research-lab/boating-safety) - <https://www.ehs.washington.edu/research-lab/boating-safety>

[Caution and Warning Signs](https://www.ehs.washington.edu/research-lab/caution-and-warning-signs) - <https://www.ehs.washington.edu/research-lab/caution-and-warning-signs>

[Chemical Waste](https://www.ehs.washington.edu/chemical/hazardous-chemical-waste-disposal) – <https://www.ehs.washington.edu/chemical/hazardous-chemical-waste-disposal>

[Confined Space Entry Program](https://www.ehs.washington.edu/workplace/confined-space-entry-program) - <https://www.ehs.washington.edu/workplace/confined-space-entry-program>

[Dive Safety Program](https://www.ehs.washington.edu/research-lab/diving-safety-program) - <https://www.ehs.washington.edu/research-lab/diving-safety-program>

[Dive Plan](https://www.ehs.washington.edu/system/files/resources/diveplan.pdf) - <https://www.ehs.washington.edu/system/files/resources/diveplan.pdf>

[EH&S Building & Fire Safety team](https://www.ehs.washington.edu/fire-life/fire-safety-and-prevention) - <https://www.ehs.washington.edu/fire-life/fire-safety-and-prevention>

[EH&S Employee Health Center](https://www.ehs.washington.edu/workplace/employee-health-center) - <https://www.ehs.washington.edu/workplace/employee-health-center>

[Electrical Safety](https://www.ehs.washington.edu/fire-life/basic-electrical-safety) - <https://www.ehs.washington.edu/fire-life/basic-electrical-safety>

[Exposure Control Plan](https://www.ehs.washington.edu/resource/site-specific-bloodborne-pathogen-bbp-exposure-control-plan-template-70) - <https://www.ehs.washington.edu/resource/site-specific-bloodborne-pathogen-bbp-exposure-control-plan-template-70>

[Field RAT](https://ehs.washington.edu/resource/field-work-risk-assessment-tool-field-rat-1107) - <https://ehs.washington.edu/resource/field-work-risk-assessment-tool-field-rat-1107>

[Field RAT guidelines](https://ehs.washington.edu/resource/field-work-risk-assessment-tool-field-rat-guidelines-1106) - <https://ehs.washington.edu/resource/field-work-risk-assessment-tool-field-rat-guidelines-1106>

[Fire hazards](https://www.ehs.washington.edu/fire-life/fire-safety-and-prevention) - <https://www.ehs.washington.edu/fire-life/fire-safety-and-prevention>

[EH&S First Aid Plan Guidelines](https://www.ehs.washington.edu/resource/first-aid-plan-guidelines-247) - <https://www.ehs.washington.edu/resource/first-aid-plan-guidelines-247>

[Incident reporting](https://ehs.washington.edu/workplace/incident-reporting) - <https://ehs.washington.edu/workplace/incident-reporting>

[Job Hazard Analysis](https://www.ehs.washington.edu/workplace/job-hazard-analysis) - <https://www.ehs.washington.edu/workplace/job-hazard-analysis>

[Laser Safety](https://www.ehs.washington.edu/radiation/laser-safety) - <https://www.ehs.washington.edu/radiation/laser-safety>

[Lithium Battery Safety](https://www.ehs.washington.edu/resource/lithium-battery-safety-732) - <https://www.ehs.washington.edu/resource/lithium-battery-safety-732>

[MyChem](https://mychem.ehs.washington.edu/) - <https://mychem.ehs.washington.edu/>

[Noise](https://www.ehs.washington.edu/workplace/hearing-loss-prevention-program) - <https://www.ehs.washington.edu/workplace/hearing-loss-prevention-program>

[Online Accident Reporting System \(OARS\)](https://oars.ehs.washington.edu/) - <https://oars.ehs.washington.edu/>

[Outdoor Heat Exposure](https://www.ehs.washington.edu/environmental/outdoor-heat-exposure) - <https://www.ehs.washington.edu/environmental/outdoor-heat-exposure>

[Radioactive Waste](https://www.ehs.washington.edu/radiation/radioactive-waste-management) - <https://www.ehs.washington.edu/radiation/radioactive-waste-management>

[Scientific Diver Certification Requirements](https://www.ehs.washington.edu/system/files/resources/uw-diver-qualifications.pdf) - <https://www.ehs.washington.edu/system/files/resources/uw-diver-qualifications.pdf>

[Sewer Disposal](https://www.ehs.washington.edu/environmental/wastewater) - <https://www.ehs.washington.edu/environmental/wastewater>

[Shop equipment](https://www.ehs.washington.edu/workplace/shop-and-maker-space-safety) - <https://www.ehs.washington.edu/workplace/shop-and-maker-space-safety>

[Track Training Progress](https://www.ehs.washington.edu/track-training-progress) - <https://www.ehs.washington.edu/track-training-progress>

[Waste Evaluation Request](https://ehs.washington.edu/system/files/resources/1957.pdf) - <https://ehs.washington.edu/system/files/resources/1957.pdf>

[Wildfire Smoke](https://ehs.washington.edu/environmental/wildfire-smoke) - <https://ehs.washington.edu/environmental/wildfire-smoke>

[Working at heights](https://www.ehs.washington.edu/workplace/fall-protection) - <https://www.ehs.washington.edu/workplace/fall-protection>

[Youth in STEAM Environments](https://www.ehs.washington.edu/resource/safety-considerations-youth-steam-environments-771) - <https://www.ehs.washington.edu/resource/safety-considerations-youth-steam-environments-771>

### C. UW SAFETY MANUALS

[Boating Safety Manual](https://www.ehs.washington.edu/system/files/resources/boating-safety-manual.pdf) - <https://www.ehs.washington.edu/system/files/resources/boating-safety-manual.pdf>

[Biosafety Manual](https://www.ehs.washington.edu/system/files/resources/uw-biosafety-manual.pdf) - <https://www.ehs.washington.edu/system/files/resources/uw-biosafety-manual.pdf>

[Diving Safety Manual](https://www.ehs.washington.edu/system/files/resources/divingsafetymanualuw.pdf) - <https://www.ehs.washington.edu/system/files/resources/divingsafetymanualuw.pdf>

[Fall Protection Program Manual](https://www.ehs.washington.edu/resource/uw-fall-protection-program-manual-782) - <https://www.ehs.washington.edu/resource/uw-fall-protection-program-manual-782>

[Laboratory Safety Manual](https://www.ehs.washington.edu/resource/laboratory-safety-manual-510) - <https://www.ehs.washington.edu/resource/laboratory-safety-manual-510>

[Laser Safety Manual](https://www.ehs.washington.edu/radiation/laser-safety) - <https://www.ehs.washington.edu/radiation/laser-safety>

[Radiation Safety Manual](https://www.ehs.washington.edu/system/files/resources/RManualBinder.pdf) - <https://www.ehs.washington.edu/system/files/resources/RManualBinder.pdf>



## D. UW RESOURCES

[Acknowledgement of Risk Forms](https://risk.uw.edu/advice/consulting/forms) - <https://risk.uw.edu/advice/consulting/forms>

[Animal Use Protocol from the Institutional Animal Care and Use Committee](https://www.washington.edu/research/myresearch-lifecycle/setup/compliance-requirements-non-financial/animal-use/) - <https://www.washington.edu/research/myresearch-lifecycle/setup/compliance-requirements-non-financial/animal-use/>

[Auto Insurance Coverage](https://finance.uw.edu/travel/netid-GroundTransportation#AutoInsurance) - <https://finance.uw.edu/travel/netid-GroundTransportation#AutoInsurance>

[Civil Rights Investigation Office](https://www.washington.edu/cr-investigations/) - <https://www.washington.edu/cr-investigations/>

[ICAPS Committee](https://ehs.washington.edu/research-lab/laboratory-safety/institutional-chemical-and-physical-safety-committee) - <https://ehs.washington.edu/research-lab/laboratory-safety/institutional-chemical-and-physical-safety-committee>

[Insurance for Global Travelers](https://www.washington.edu/globalaffairs/global-travelers/global-insurance/) - <https://www.washington.edu/globalaffairs/global-travelers/global-insurance/>

[International SOS](https://www.washington.edu/globalaffairs/global-travelers/global-insurance/international-sos/) - <https://www.washington.edu/globalaffairs/global-travelers/global-insurance/international-sos/>

[Material Transfer Agreement](https://www.washington.edu/research/myresearch-lifecycle/setup/collaborations/agreement-types/) - <https://www.washington.edu/research/myresearch-lifecycle/setup/collaborations/agreement-types/>

[MyChem](https://mychem.ehs.washington.edu/) - <https://mychem.ehs.washington.edu/>

[Office of the Youth Protection Coordinator](https://www.washington.edu/youth/) - <https://www.washington.edu/youth/>

[Risk Services](https://risk.uw.edu/) - <https://risk.uw.edu/>

[SafeCampus](https://www.washington.edu/safecampus/) - <https://www.washington.edu/safecampus/>

[Title IX Know Your Rights and Resources Guide](https://www.washington.edu/titleix/resources/) - <https://www.washington.edu/titleix/resources/>

[Title IX Reporting](https://www.washington.edu/titleix/report/) - <https://www.washington.edu/titleix/report/>

[Title Reporting Expectations](https://www.washington.edu/titleix/employee-reporting-expectations/) - <https://www.washington.edu/titleix/employee-reporting-expectations/>

[Travel Medicine](https://wellbeing.uw.edu/medical/travel-medicine/) - <https://wellbeing.uw.edu/medical/travel-medicine/>

[UW 24/7 Global Emergency Line](https://www.washington.edu/globalaffairs/global-travelers/emergency/) - <https://www.washington.edu/globalaffairs/global-travelers/emergency/>

[UW ADA Office Service Animals Guidance](https://www.washington.edu/ada/guidance-resources/service-animals/) - <https://www.washington.edu/ada/guidance-resources/service-animals/>

[UW Fleet Services](https://facilities.uw.edu/catalog/vehicle-rental) - <https://facilities.uw.edu/catalog/vehicle-rental>

[UW Fleet Services Insurance Policies](https://facilities.uw.edu/catalog/vehicle-rental/policies#insurance) - <https://facilities.uw.edu/catalog/vehicle-rental/policies#insurance>

[UW Global Emergency Assistance](https://www.washington.edu/globalaffairs/global-travelers/emergency/) - <https://www.washington.edu/globalaffairs/global-travelers/emergency/>

[UW Global Operations Support](https://finance.uw.edu/globalsupport/) - <https://finance.uw.edu/globalsupport/>

[UW Human Subjects Division](https://www.washington.edu/research/hsd/) - <https://www.washington.edu/research/hsd/>

[UW International Travel Policies](https://www.washington.edu/globalaffairs) - <https://www.washington.edu/globalaffairs>

[UW Office of Animal Welfare](https://sites.uw.edu/oawrss/) - <https://sites.uw.edu/oawrss/>

[UW Office of Global Affairs](https://www.washington.edu/globalaffairs/global-travelers/) - <https://www.washington.edu/globalaffairs/global-travelers/>

[UW Office of Research](https://www.washington.edu/research/) - <https://www.washington.edu/research/>

[UW Office of the Title IX Coordinator](https://www.washington.edu/titleix/) - <https://www.washington.edu/titleix/>

[UW Procurement Guidance on Transportation](https://finance.uw.edu/ps/how-to-buy/transportation) - <https://finance.uw.edu/ps/how-to-buy/transportation>

[UW Sexual Assault Resources](https://www.washington.edu/sexualassault/) - <https://www.washington.edu/sexualassault/>

[UW Student International Travel Policies](https://www.washington.edu/globalaffairs/global-travelers/student-international-travel-policy/) - <https://www.washington.edu/globalaffairs/global-travelers/student-international-travel-policy/>

[UW Transportation Services](https://transportation.uw.edu/) - <https://transportation.uw.edu/>

[Volunteer Travel Registry](https://www.washington.edu/globalaffairs/global-travelers/travelregistry/facstaff/) - <https://www.washington.edu/globalaffairs/global-travelers/travelregistry/facstaff/>

## E. STATE AND FEDERAL POLICIES

[Federal Aviation Administration Remote Pilot Certificate](https://www.faa.gov/uas/commercial_operators/become_a_drone_pilot) - [https://www.faa.gov/uas/commercial\\_operators/become\\_a\\_drone\\_pilot](https://www.faa.gov/uas/commercial_operators/become_a_drone_pilot)

[Federal Aviation Administration Remote ID Rule](https://www.faa.gov/uas/getting_started/remote_id) - [https://www.faa.gov/uas/getting\\_started/remote\\_id](https://www.faa.gov/uas/getting_started/remote_id)

[Federal Aviation Administration's Small UAS Rule \(14 CFR part 107\)](https://www.faa.gov/uas/commercial_operators/) - [https://www.faa.gov/uas/commercial\\_operators/](https://www.faa.gov/uas/commercial_operators/)

[First Aid Kits](http://wisha-training.lni.wa.gov/training/presentations/FirstAidKitContentsGuide.pdf) - <http://wisha-training.lni.wa.gov/training/presentations/FirstAidKitContentsGuide.pdf>

[Good Samaritan Law](https://app.leg.wa.gov/rcw/default.aspx?cite=4.24.300) - <https://app.leg.wa.gov/rcw/default.aspx?cite=4.24.300>

[OSHA's Scientific Diving Exemption](https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910SubpartTAppB) - <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910SubpartTAppB>

[RCW 70.54.440 "Epinephrine Autoinjectors"](https://app.leg.wa.gov/RCW/default.aspx?cite=70.54.440) - <https://app.leg.wa.gov/RCW/default.aspx?cite=70.54.440>

[Washington Industrial Safety and Health Act \(WISHA\)](https://app.leg.wa.gov/RCW/default.aspx?cite=49.17) - <https://app.leg.wa.gov/RCW/default.aspx?cite=49.17>

[WAC 296-800-100 "Safety and health core rules"](https://app.leg.wa.gov/wac/default.aspx?cite=296-800-100) - <https://app.leg.wa.gov/wac/default.aspx?cite=296-800-100>

[WAC 296-800-110 "Safe workplace"](https://apps.leg.wa.gov/WAC/default.aspx?cite=296-800-110) - <https://apps.leg.wa.gov/WAC/default.aspx?cite=296-800-110>

[WAC 296-800-150, "First Aid,"](https://app.leg.wa.gov/wac/default.aspx?cite=296-800-150) - <https://app.leg.wa.gov/wac/default.aspx?cite=296-800-150>

[WAC 296-800-15005 "First Aid Training"](https://app.leg.wa.gov/wac/default.aspx?cite=296-800-15005) - <https://app.leg.wa.gov/wac/default.aspx?cite=296-800-15005>

[WAC 296-800-15020 "First Aid Supplies"](https://app.leg.wa.gov/wac/default.aspx?cite=296-800-15020) - <https://app.leg.wa.gov/wac/default.aspx?cite=296-800-15020>

[WAC 478-121 "Student Conduct Code for UW"](https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121) - <https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121>

[WAC 478-121-143 "Possession or use of firearms, explosives, dangerous chemicals, or other dangerous weapons"](https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121-143) - <https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121-143>

[WAC 478-128 Animal Control at the University of Washington](https://apps.leg.wa.gov/wac/default.aspx?cite=478-128) - <https://apps.leg.wa.gov/wac/default.aspx?cite=478-128>

## F. ADDITIONAL TRAINING AND INFORMATION RESOURCES

[UC's Field Research Safety Center of Excellence](https://www.ucop.edu/safety-and-loss-prevention/environmental/program-resources/field-research-safety/index.html) - <https://www.ucop.edu/safety-and-loss-prevention/environmental/program-resources/field-research-safety/index.html>



[University of Alaska Fairbanks Field Safety 101](https://www.uaf.edu/research/researcher-support/field-safety-training.php) - <https://www.uaf.edu/research/researcher-support/field-safety-training.php>

[US National Science Foundation's Arctic Field Training](https://www.nsf.gov/geo/opp/arctic/res_log_sup.jsp) - [https://www.nsf.gov/geo/opp/arctic/res\\_log\\_sup.jsp](https://www.nsf.gov/geo/opp/arctic/res_log_sup.jsp)

## G. CONTACT LIST

Program / Department	E-mail Address	Phone Number
Boating Safety	<a href="mailto:divesafe@uw.edu">divesafe@uw.edu</a>	206-543-7262
Diving Safety	<a href="mailto:divesafe@uw.edu">divesafe@uw.edu</a>	206-543-7262
Environmental Health & Safety Department	<a href="mailto:ehsdept@uw.edu">ehsdept@uw.edu</a>	206-543-7262
Laboratory Safety Program / Chemical Hygiene Officer	<a href="mailto:labcheck@uw.edu">labcheck@uw.edu</a>	206-685-3993
Occupational health nurse	<a href="mailto:ohnurse@uw.edu">ohnurse@uw.edu</a>	206-221-7770
Office of Animal Welfare	<a href="mailto:oawrss@uw.edu">oawrss@uw.edu</a>	206-685-7363
Office of Global Affairs	<a href="mailto:travelemergency@uw.edu">travelemergency@uw.edu</a>	Emergency: 206-632-0153 / Non-emergency: 206-616-7927
Office of Research	<a href="mailto:research@uw.edu">research@uw.edu</a>	206-616-0804
Office of the Title IX Coordinator	<a href="mailto:titleix@uw.edu">titleix@uw.edu</a>	206-221-7932
Risk Services	<a href="mailto:riskconsult@uw.edu">riskconsult@uw.edu</a>	206-543-3419
SafeCampus	<a href="mailto:safecampus@uw.edu">safecampus@uw.edu</a> (monitored M-F 8am-5pm)	206-685-7233
Washington State Department of Natural Resources	<a href="http://www.dnr.wa.gov">www.dnr.wa.gov</a>	360-902-1000
National Suicide Prevention Lifeline	<a href="https://suicidepreventionlifeline.org/">https://suicidepreventionlifeline.org/</a>	1.800-273-TALK (8255) 988

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## APPENDIX IV – CHECKLISTS AND TEMPLATES

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## IMPORTANT SAFETY EQUIPMENT TO BRING IN THE FIELD

List required PPE, equipment and recommended clothing/gear in your Field Safety Plan. For remote, outdoor work don't forget "outdoor essentials":

- ☐ 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

**IMPORTANT SAFETY EQUIPMENT TO BRING IN YOUR VEHICLE**

- ☐ Jumper cables
- ☐ Tire gauge
- ☐ Spare tire
- ☐ Tire chains
- ☐ Patch kit
- ☐ Jack
- ☐ Pump
- ☐ Tow rope
- ☐ Tools: pliers, screw driver, hex wrenches, lug wrench
- ☐ Shovel
- ☐ Printed map, directions
- ☐ Charged cell phone, charger
- ☐ Flashlight or headlamp, candle and matches
- ☐ Useful supplies: duct tape, super glue, bungee cords, large plastic bag
- ☐ PPE: nitrile gloves, grip gloves, safety glasses, reflective vests
- ☐ Fire extinguisher or bucket of sand (for work in dry vegetation with any type of ignition source/spark)
- ☐ Space blanket, sleeping bag, and/or extra dry clothing (for cold or wet field sites)
- ☐ Hand warmers and body warmers
- ☐ Extra first aid kit
- ☐ Water and snacks





## IMPORTANT FORMS/DOCUMENTATION TO BRING ALONG

- ☐ Relevant permits (such as scientific collecting permits, animal use protocols)
- ☐ Participant medical forms, if applicable (consult with your campus medical director for guidance)
- ☐ Liability waivers, if applicable (consult with Risk Services)
- ☐ Copies of drivers' licenses, driver authorization forms (if applicable)
- ☐ Copies of passports and, if applicable, visas 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

## WEEKLY VEHICLE MAINTENANCE CHECKLIST

### Check and add as needed:

- Oil
- Coolant
- Tire pressure
- Washer fluid
- Wiper blades

### Confirm presence and condition:

- Fire extinguisher
- Chains / Spare tire / Patch kit
- Tool kit
- Emergency water and food
- First aid kit

## TEMPLATE PLAN FOR SAFE AND INCLUSIVE FIELD/VESSEL/AIRCRAFT RESEARCH

**Project Name:** *[Project Name]*

**Field Work Project Dates:** *[Dates of Field/Vessel/Aircraft Research]*

**Principal Investigator (PI) / Responsible Party (RP):** *[UW PI/RP Name]*

### Region- and Activity-Specific Risk Assessment

*[Brief analysis of whether proposed project locations and/or activities are safe and welcoming for all participants, regardless of their personal characteristics (e.g., race, ethnicity, gender, sexual orientation, disability, etc.) or level of experience so that project team can quickly and effectively respond to any incidents. Risk factors can include remoteness/isolation, requirements for expensive personal effects, local laws, and cultural norms that may impact the well-being of individuals and/or local responses to emergency situations. This is an opportunity to identify steps that will be taken to mitigate these risks and an opportunity to ensure all participants have enough awareness of site-specific safety issues to make informed decisions about their own ability/desire to participate in specific activities given their personal acceptance of risk. Resource: [An inclusive risk assessment tool for travel and fieldwork](#) (researchgate.net)]*

*[If appropriate, attach a copy of completed Field Work Risk Assessment Tool (Field RAT)]*

### Creating a Community of Respect

The University of Washington is committed to fostering a culture that is professional, ethical, inclusive, and consistent with all applicable University of Washington regulations and standards of conduct, including the UW Student Conduct Code. All members of the project are responsible for ensuring everyone involved in the project feels valued, respected, listened to, and heard — with compassion, kindness, and a collaborative spirit regardless of function, level, or aspects of identity.

All members of the UW field team will be expected to abide by the attached Code of Conduct, which will be shared with all project partners. Project partners will be requested to either document their own institutional guidelines or agree to follow the ones described in this plan.

*[PI should attach a fieldwork Code of Conduct to this plan and then delete this text. The Code of Conduct should be appropriate to the specific situation involved for this project. This may be a Code of Conduct provided by a project partner or project facility. Examples to start from can be found at:*

*[Fieldwork Code of Conduct – Anthropology \(tamu.edu\)](#)*

*[Field Code of Conduct | The Department of Earth & Planetary Sciences \(yale.edu\)](#)*

*[COF Network Groups Code of Conduct.pdf \(agu.org\)](#)*

*[UW School of Oceanography Code of Conduct \(washington.edu\)](#)*

*Resources for creating your own can be found at [Codes of Conduct \(carleton.edu\)](#)*

*The Code of Conduct should include a signature line to document receipt and concurrence of all members of the field team in advance of departure.]*

During a pre-trip organizational meeting the PI will review the attached Code of Conduct in depth, making sure all participants are familiar with its contents.

### Additional Measures Being Taken by Project Team to Create an Inclusive Culture



*[Describe any trainings; processes to establish shared team definitions of roles, responsibilities, and culture; field support, such as mentor/mentee support mechanisms and regular check-ins that are specific to this project.]*

### **Feedback**

We hope that all members of the project team feel comfortable coming forward directly with suggestions or concerns. However, it is understood that in some circumstances individuals may wish to remain anonymous. All participants will be given the opportunity to provide anonymous feedback, both during and upon the conclusion of the field work, on their experiences and suggest improvements or report any inappropriate behavior. Please remember, when anonymous comments are received there is no way of knowing who submitted the information and therefore there is no way to follow up to let the complainant know how comments will be addressed.

Anonymous feedback can be submitted by *[Describe the mechanisms that will be used to collect anonymous feedback during and after field work. Examples include suggestion boxes and Google forms.]*

### **Responding and Reporting**

If you have been a victim of a violation of local laws, it may be appropriate to contact local law enforcement. To discuss whether the Code of Conduct is being met, or to report a violation thereof, the Designated On-Site Field Safety Officer is likely the person able to take the quickest action to respond to or resolve your concerns. Although this path is encouraged, it is not required, and project team members may pursue any of the options outlined here.

Incidents of inappropriate behavior will be taken seriously and addressed immediately. Complaints will be referred to the appropriate University officials for investigation and, where warranted, corrective or disciplinary actions.

**Designated On-Site Field Safety Officer (FSO): [XXX]**

**FSO On-Site Contact Information: [XXX]**

**Principal Investigator / Responsible Party (PI/RP): [XXX]**

**PI/RP On-Site Contact Information: [XXX]**

**Designated Campus Point of Contact(s) (CPOC): [XXX]**

**CPOC Contact Information: [XXX]**

### **Methods of Access for Communication**

*[Describe how all participants will have free, confidential access to communications devices, minimizing singular points within the communications pathway (e.g., avoid a single person overseeing access to a single satellite phone)]*

## Emergency Situations

If a situation arises that is an immediate or potential risk to health, safety or security, any member of the field team is authorized to take the following steps:

- Take whatever actions are necessary to assure the immediate safety of all team members.
- Call the local emergency number: [XXX]
- Ensure the Designated On-Site Field Safety Officer and/or PI is aware of the situation and able to take the remainder of the steps below.
- Call the UW's emergency travel assistance provider, International SOS, via the ISOS Assistance App or at +1.215.942.8226.
- Contact Designated Campus Point of Contact or other UW Office (reference below) to be connected to additional University resources.
- If departmental emergency contact is non-responsive, contact the UW Global Emergency line at 001-206-632-0153 for further assistance, regardless of location. This number is answered 24 hours a day, 7 days a week by the UW Police Department. The operator will collect information about the emergency along with local contact information and forward the information to the UW Global Travel Health & Safety, who will assist you.

## Additional Resources

[UW SafeCampus](#): 206-685-7233; SafeCampus is the UW's violence-prevention and response program for anonymously discussing safety and well-being concerns for yourself or others. SafeCampus is available during business hours (Pacific Time) and is not available on weekends or evenings. For immediate support or help outside of campus business hours, contact a 24-hour hotline such as RAINN (1-800-656-4673, [RAINN](#)) and the National Domestic Violence Hotline (1-800-799-7233, [National Domestic Violence Hotline](#)).

[Employee Assistance Program](#): 866-598-3978 (toll-free, 24 hours a day, 7 days a week); An employee assistance program for PEBB-eligible employees that provides confidential access to guidance consultants who provide counseling, consultation for managers, and critical and traumatic incident response services.

[LiveWell Advocate](#): 206-685-4357 | [lwadvoc@uw.edu](mailto:lwadvoc@uw.edu); Livewell Confidential Advocates provides a safe and confidential space to help students, faculty, and staff identify what they want or need after an incident of sexual assault, relationship violence, stalking or sexual harassment has occurred. This is not the same as making a report to the University for the purpose of starting an investigation. Advocates work business hours (Pacific Time) and are not available on weekends or evenings. If you have an urgent need for support after hours you can receive support on campus 24/7 at the UW Emergency Department or from MySSP (24/7 mental health crisis support available via phone, text, or chat).



## UW Offices Authorized to Investigate Complaints

The [Civil Rights Investigation Office](#) investigates complaints made about University employees and students that raise concerns relating to civil rights such as protection from discrimination, harassment, retaliation, and sexual misconduct. The Investigation Office investigates both employees and students who are alleged to have engaged in conduct that may have violated Title IX. Contact 206-616-2028 [cr-investigations@uw.edu](mailto:cr-investigations@uw.edu).

[Office of Academic Personnel](#) AHR is responsible for working with academic units to investigate complaints involving faculty, librarians, and academic staff (e.g., Postdoctoral Scholars). This includes conflicts that may be caused by personality differences or miscommunication and behaviors that violate University policy such as discrimination or harassment.



**FIELDWORK SAFETY PLAN – TEMPLATE #1**

This form may be used by the principal investigator (PI), responsible party (RP), field instructor, or safety officer to develop a Safety Plan. **The completed Safety Plan must be shared with all the members of the fieldwork team and kept with your safety document records.** Multiple trips to the same location can be covered by a single Safety Plan. The Safety Plan must be revised whenever a significant change to the location or scope of fieldwork occurs.  
Contact EH&S for recommendations or review of the Safety Plan.

**PI / RP / Safety Officer Contact Information:**Name:Department:Phone Number:Email Address:**Dates of Travel:** *List multiple dates if more than one trip is planned.***Location of Fieldwork:**Country:Geographical Site:Nearest City:*Name, distance from site*Nearest Hospital:*Name, distance from site, phone number***Type of fieldwork:** Please include a brief description of the type of work to be performed.**UW Contact:**Name and Phone Number:**Local (Field) Contact:**Name and Phone Number:

<b>Communication Plan:</b> Describe planned communication, including frequency of contact with UW and local contacts.	
<b>Emergency Procedures:</b> Please include detailed plans for field location, including evacuation plans and emergency communication. Emergency contact information must be included for each participant in the participant list of this document.	
<b>First Aid Training:</b> Please list the names of participants who are trained in first aid and the type of training received.	
<b>Physical Demands:</b> Please list any physical demands required for this field operation, e.g., diving, climbing, high altitude.	
<b>Chemicals and Hazardous Materials:</b> Please list any chemicals and/or hazardous materials required for this field operation, e.g., preservatives, reagents, etc. Ensure proper containers and labeling are used, SDSs and spill kit(s) are available, and any applicable legal transportation requirements are met.	
Chemical / Material	Hazards (i.e., flammable, toxic)



**Risk Mitigation:** Please ensure a Risk Assessment has been completed prior to writing your Field Safety Plan, including noting all hazards expected to be encountered (refer to UW Field Operations Safety Manual for guidance). List appropriate measures put in place to mitigate risks involved in this operation.

Identified Risks	Controls

**Travel Immunizations:** Please list required immunizations/prophylaxis. *Contact UW Employee Health Center for additional information (206)685-1026*

**Field Team Membership:** Please list the names, title (e.g., undergraduate, staff), and emergency contact information for all members of the field team and identify the Field Team Leader.

<u>Participant name</u>	<u>Title</u>	<u>Emergency Contact Name</u>	<u>Emergency Contact Phone number</u>
<b>Responsible Party:</b>			
<b>Team Members:</b>			





<b>Training Certification:</b> By signing below the Principal Investigator (PI), responsible party (RP), field instructor, or safety officer verifies that he or she has shared the contents of this safety plan with all team members and that they are familiar with the risks, prevention measures, and emergency plans.			
<b>Signature</b>	<b>Printed Name</b>	<b>Date</b>	



<b>FIELDWORK SAFETY PLAN – TEMPLATE #2</b>			
<b>Field Site Location:</b>	<i>Descriptive name of research location (e.g. Carrizo Plain, CA; Tortuguero, Costa Rica)</i>		
<b>Activity Description:</b>	<i>Type, length, and purpose of activity (e.g. hiking 3-4 miles, collecting specimens)</i>		
<b>Plan Created for:</b>	<i>Name of Research Group / Course / Trip Leader</i>	<b>Date of revision:</b>	<i>Mo-Day-Yr</i>
<b>Date(s) of Travel:</b>	<i>Start date, duration, expected return to campus</i>		
<b>Site Information</b>			
<b>Location</b>	Latitude: <b>XX.XX (from GPS/Map)</b>	Longitude: <b>XX.XX (from GPS/Map)</b>	
<b>Site Information</b>	<i>Elevation, terrain, environment.</i>		
<b>Travel to Site</b>	<i>How will participants get to the field site? Note any dangerous roads, conditions.</i>		
<b>Site Access</b>	<i>Are there any restrictions or challenges to accessing site? Note any alternate routes or suggested parking areas, gate access codes, etc. Make special note if isolated or remote.</i>		
<b>Environmental Hazards</b>	<i>Describe any dangerous wildlife, insects, endemic diseases, poisonous plants, etc. that participants may encounter. Note intended mitigation measures; discuss prior to trip.</i>		
<b>Security</b>	<i>High risk for harassment, violence, or political unrest? Note intended mitigation measures; discuss prior to trip. For international travel, check the <a href="#">U.S. State Department travel site</a> for current travel alerts</i>		
<b>No Go Criteria</b>	<i>What are the conditions under which approach to - or activities at - the site should be stopped or canceled? e.g., heavy rains, electrical storms, snow, temperatures &gt; 100 degrees, within 2 hours of high tide, wave heights over 1 meter, etc.</i>		
<b>Expected Weather</b>	<i>Note extreme conditions that could impact the trip or require additional planning, (e.g., high heat, wind, rain, snow, approaching storm).</i>		
<b>Drinking Water Availability</b>	<input type="checkbox"/> Plumbed water available <input type="checkbox"/> Water cooler with ice provided <input type="checkbox"/> Bottled water provided <input type="checkbox"/> Natural source and treatment methods (e.g., filtration, boiling, chemical disinfection):		



<b>Access to Shade/Shelter</b>	If forecast exceeds 80°, shade must be provided by natural or artificial means for rest breaks. <input type="checkbox"/> Building structures <input type="checkbox"/> Trees <input type="checkbox"/> Temporary Canopy/Tarp <input type="checkbox"/> Vehicle with A/C <input type="checkbox"/> Other:		
<b>High Heat Procedures</b>	Required when temperatures are expected to exceed 95° F: If possible, limit strenuous tasks to morning or late afternoon hours. Rest breaks in shade must be provided at least 10 minutes every 2 hours (or more if needed). Effective means of communication, observation, and monitoring for signs of heat illness are required at all times. Pre-work safety discussion required. <input type="checkbox"/> Direct supervision <input type="checkbox"/> Buddy system <input type="checkbox"/> Reliable cell or radio contact <input type="checkbox"/> Other:		
<b>Emergency Services and Contact Information</b>			
<b>Local Contact</b>	<i>Name, address &amp; phone #, may be a local colleague/institution, reserve manager, etc.</i>  <b>Lodging location:</b> name, address, phone #	<b>University Contact</b>	<i>Name, number, email; may be a Professor/PI, department contact, supervisor back on campus, etc.</i>  <b>Frequency of check ins:</b> daily, at end of work day, etc.
<b>Emergency Medical Services (EMS)</b>	Procedures for contacting emergency medical services.		
<b>Nearest Emergency Department (ED)</b>	Evacuation plan and transportation options to the nearest Emergency Department; include estimated transport time, contact information and driving directions from the site to the nearest provider of emergency medical care. Attach map with specific directions.		
<b>Cell Phone Coverage</b>	<b>Primary Number:</b>  <b>Coverage:</b> good, spotty, none  <b>Nearest location with coverage:</b>	<b>Satellite phone/device</b>	<b>Device carried?</b> <input type="checkbox"/> yes <input type="checkbox"/> no  <b>Type/number:</b>
<b>Nearby Facilities</b>	What facilities are available at or near the site: restrooms, water, gas, public phone, store? If not, where are the nearest services along the route?		
<b>Side Trips</b>	Are side trips planned or allowed during free time? Before or after the planned activities? Are there restrictions, specific rules, or expected code of conduct?		
<b>Participant Information</b>			
<b>Field Team/Participants</b>	Is anyone working alone? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, develop a communications plan with strict check-in procedures; if cell coverage is unreliable, carry a satellite communication device or personal locator beacon. Primary Field Team Leader: <i>Name, phone number</i> Secondary Field Team Leader: <i>Name, phone number</i> <input type="checkbox"/> Field Team/Participant list is attached as training documentation <input type="checkbox"/> Other attachment: e.g. course roster		

<b>Physical Demands</b>	List any physical demands required for this trip and training/certification provided. e.g. diving, swimming, hiking, climbing, high altitudes, respirators, heights, confined or restricted spaces, etc. (consult with EH&S regarding appropriate training & documentation).
<b>Mental Demands</b>	List any unique mental demands required for this trip, e.g. long travel days, high stress environments, different cultural norms, etc.
<b>First Aid Training &amp; Supplies</b>	Requires at least one trained person (with current certification) for work at remote sites. CPR also recommended. List team members trained in first aid and the type of training received. Location and description of group medical/first aid kit: Who is carrying it, where it is stored. Brief description of contents.
<b>Immunizations or Medical Evaluation</b>	List required immunizations/prophylaxis or required medical evaluation, if applicable.
<b>Equipment and Activities – Consult with EH&amp;S for specific training and requirements.</b>	
<b>Research Activities</b>	Briefly describe the goal of your field operations, e.g. collection of samples, observation of animals/environment, interviews with human subjects, etc....
<b>Field Transportation</b>	What vehicles will be used during field operations? e.g. chartered boat, paddle craft, car, ATV, truck with trailer, snowmobile, chartered plane or helicopter, etc.
<b>Research Tools</b>	Briefly describe tools or equipment that will be used to access the research site or during research activities. Indicate specific training required before use, e.g. sharps (knives, razors, needles), hand tools, chainsaws, power tools, heavy machinery, tractors, specialty equipment, firearms; lasers, radiation devices, portable welding/soldering devices; other hazardous equipment or tools.
<b>Chemicals and Hazardous Materials</b>	Identify and describe use of chemicals and hazardous materials that will be used during research activities. Indicate specific training required before use and hazards, e.g. flammables, corrosives, procedures, etc. Ensure proper containers and labeling are used, and spill kit(s) are available. Attach any required documentation for transport, all associated SOPs and SDSs.
<b>Other Research Hazards</b>	Describe other potential research-associated hazards e.g. handling or shipping hazardous materials (chemical, biological, radiation, and explosives), handling animals, climbing or working at heights, rigging; shoring/trenching, digging/entering excavations, caves, other confined spaces; drone use.
<b>Personal Protective Equipment</b>	Required—e.g. boots, safety glasses, PFDs, hardhats, etc. Recommended – e.g. walking sticks, gloves, long pants, hats, insect repellent, sunscreen
<b>Additional Considerations</b>	



Insurance	All students are required to enroll in UW Student Abroad Insurance, regardless of their dual status as student employees. Faculty, staff and other academic personnel are automatically enrolled in emergency travel assistance. Note this does not include international emergency medical coverage. Faculty, staff and other academic personnel may enroll in additional optional emergency medical coverage during the travel registration process. Reach out to Global Travel Security (travelemergency@uw.edu) for more information.	
International Activities	Check with the <a href="#">UW Office of Global Affairs</a> regarding required approvals. Visas, permits, finances, import/export controls, transportation of specialized equipment, and data security must be considered. Contact <a href="#">Global Operations Support</a> for guidance.	
Personal Safety & Security	Personal safety risks during free time should be considered and discussed in advance, e.g., alcohol or drug use, leaving the group, situational awareness, sexual harassment, or local crime/security concerns. Review expectations and set the tone for a safe, successful trip. <b>High Risk Travel:</b> Check the <a href="#">U.S. State Department</a> travel site for current travel alerts. Reach out to <a href="#">UW Global Travel Health &amp; Safety</a> (travelemergency@uw.edu) for country-specific guidance.	
Campus Contacts		
UWPD		
Campus Health Services		
EH&S		
UW Travel Emergency Assistance	<a href="#">Risk Services, Office of Global Affairs – UW Global Emergency Line, International SOS</a>	
Report Injuries	<a href="#">Online Accident Reporting System (OARS)</a>	
First Aid Reference – Signs & Symptoms of Illness (examples for heat illnesses included)		
Signs & Symptoms	Treatment	Response Action:
<b>HEAT EXHAUSTION</b> <ul style="list-style-type: none"><li>• Dizziness, headache</li><li>• Rapid heart rate</li><li>• Pale, cool, clammy or flushed skin</li><li>• Nausea and/or vomiting</li><li>• Fatigue, thirst, muscle cramps</li></ul>	<ol style="list-style-type: none"><li>1. Stop all exertion.</li><li>2. Move to a cool shaded place.</li><li>3. Hydrate with cool water.</li></ol>	Heat exhaustion is the most common type of heat illness. Initiate treatment. If no improvement, call 911 and seek medical help. Do not return to work in the sun. Heat exhaustion can lead to heat stroke.

<b>HEAT STROKE</b> <ul style="list-style-type: none"> <li>Disoriented, irritable, combative, unconscious</li> <li>Hallucinations, seizures, poor balance</li> <li>Rapid heart rate</li> <li>Hot, dry and red skin</li> <li>Fever, body temperature above 104 °F</li> </ul>	<ol style="list-style-type: none"> <li>Move (gently) to a cooler spot in shade.</li> <li>Loosen clothing and spray clothes and exposed skin with water and fan.</li> <li>Cool by placing ice or cold packs along neck, chest, armpits and groin (Do not place ice directly on skin)</li> </ol>	<p><b>Call 911 or seek medical help immediately.</b></p> <p><b>Heat stroke is a life-threatening medical emergency. A victim can die within minutes if not properly treated. Efforts to reduce body temperature must begin immediately!</b></p>

Include any additional resources: route/location maps, photos of general terrain and areas requiring extra caution, etc.

**Signature of PI/Supervisor:**

**I acknowledge this safety plan has been prepared for field work under my supervision.**

Name	Signature	Date	Phone Number



**Field Team/Participant Roster - Training Documentation**

I verify that I have read this Field Safety Plan, understand its contents, and agree to comply with its requirements.

Name/Phone Number	Signature	Date	Emergency Contact/Phone Number

Example Safety Training Log for Field Operation Groups



FIELD SAFETY TRAINING LOG			
PI/Supervisor:			
Department:			
Documentation includes formal and informal safety discussions, including meetings when the agenda includes any safety discussions. Attach training outline and other reference materials useful for training new personnel.			
Date	Trainer	Trainees	Description of Safety Training
Ex. 1/21/2020	Roberta Rosen	Tim Hansen, John Peil	Protective glove selection, use, disposal when handling solvents
Ex. 2/12/2020	Dr. Albert Jones	Jerry Marshall, Roberta Rosen, April Shen	Power drill usage, including PPE and handling requirements





## ACKNOWLEDGMENTS

Information in this manual was adapted from materials published by the University of California Field Research Safety Center of Excellence, the University of Vermont Department of Risk Management and Safety, and Duke University Occupational and Environmental Safety Office.

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