Field Research Safety Plan

# Scope

This Field Research Safety Plan should be completed before personnel perform field research activities where **any** of the following apply:

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| * Remote location (i.e., removed from modern care facilities or amenities) * Field site without cellular service (or if unknown) * Field site characterized by outdoor and environmental hazards (e.g., wildlife, weather) | * Camping, caving, climbing, watercrafts, or other outdoor activities * Travel to [countries](https://controller.psu.edu/countries-considered-dangerous) considered “dangerous” * Risk of limited life sustaining provisions (e.g., food, water, shelter) |

This form is also a useful tool to assess hazards during instructional activities and field trips. This form is not required for non-research activities that are part of daily job functions such as grounds-care and landscaping, farm operations and maintenance, and operations not covered by the Laboratory and Research Safety Program. This document does not apply to Penn State Health or the College of Medicine. This form does not serve as an approval mechanism. Any high-risk activities need to be approved through appropriate means (i.e., EHS, Risk Management).

**This assessment tool is specifically useful for domestic field trips. International travel and risk associated with international activities are covered by the Global Safety Office at PSU. Any Penn State activities that require international travel must be evaluated via the** [**Global Safety Network**](https://global.psu.edu/category/travel-safety-network) **process. If completing this assessment for international travel, you may skip to the Hazard Assessment using Appendix A.**

# Purpose and Instructions

Field research involves hazards that are unique and sometimes difficult to predict. The purpose of this plan is to guide your thinking through those potential hazards to facilitate their identification and mitigation. The plan may be completed before each trip, or the plan may be completed once for a particular type of field work and updated as needed.

The Principal Investigator (PI), Professor, Instructor, Supervisor or other knowledgeable member of the research group (part of data collection) appointed by the Supervisor should complete the Field Safety Plan prior to conducting field work. The form should be completed collaboratively with members of the group who will be conducting field work and exposed to hazards, but ultimately, hazard identification and control is the responsibility of the Supervisor. At a minimum, the completed plan should be shared with all the members of the field research team. All members of the research team and a University Emergency Contact should read the document and sign to certify their understanding, support, contribution, and compliance. If members of the field team have an origin of the destination, they should be apprised of the field safety plan as necessary, but their degree of involvement is not detailed in this document.

Multiple trips to the same location (or multiple trips to various locations for the same research project), can be covered by a single plan. If two or more groups are collaborating on the same field trip, a single plan can be used. The plan should be revised whenever a significant change to the location or scope of fieldwork occurs (i.e., work tasks change, new hazards identified, after an incident). EHS is available to assist with the completion or review of the plan.

Completed plans should be submitted by email to a University contact for the group who is not going into the field (emergency contact, part of the University) and the Department Safety Officer.

Completed plans should be retained by the research group(s) such that they can be referenced in the field (e.g., hard copy, saved to tablet or mobile device). Completed plans should be an amendment to the research group’s Unit Specific Plan (i.e., part of lab safety binder) and retained for at least one year.

# Certification of Agreement and Roster

By signing this section, all personnel certify they have read, understand, and will execute the provisions of this Field Safety Plan. The purpose of this section is to document that the hazards, mitigations, and emergency plan identified in this plan are communicated to personnel conducting the field work and affected by the provision of the plan. This section also serves to compile emergency contact information for those working in the field. This document and Certification of Agreement should be complete before the trip(s) occurs to acknowledge the plan will be followed.

**Name of Person Completing Assessment:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Name and Signature of PI(s)/Supervisor(s) to Certify:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Date of Certification:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Name and Signature of University Emergency Contact:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Field Crew Members**

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| --- | --- | --- | --- | --- |
| **Name** | **Cell Phone Number** | **Emergency Contact Name** | **Emergency Contact Phone Number** | **Crew Member Signature** |
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# General Description of Fieldwork

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| **Supervisor Cell Phone Number** | **Supervisor Email** | **Campus & Department(s)** |
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| Briefly describe the fieldwork to be conducted: | | |

# Itinerary

The purpose of this section is for University personnel to know where you are and how you will get there. If something happens, this information will help the University facilitate timely response.

**NOTE**: This section is covered by the ***Global Safety Network*** process for international travel. If field trips involve international travel, see the GSN [website](https://global.psu.edu/category/travel-safety-network). If field trips involve exclusively domestic travel, the TSN process does not apply, and all sections of this document should be completed.

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| Location(s) of fieldwork *(coordinates, country, state/province, geographical site, nearest city, etc.):* | Departure date:  Arrival date (to field site):  Return date:  (or) Describe if multiple visits: |
| Description of overnight accommodations. If remote location, describe GPS location and/or approximate coordinates: | |
| Describe modes of transportation. If using personal vehicle, list make/model and license plate. If renting a vehicle, describe the reservation provider and contact information: | |
| Describe any specific concerns or threats to safety concerning travel and modes of transportation to be used to/from/on site. Describe how risk will be minimized: | |

# Communications

The purpose of this section is to create a contingency plan if field workers become unaccounted for and think through reliable communications methods during field work. A plan should be in place that establishes an expected time frame for when a University emergency contact will expect to hear from you. If the plan is not followed, the University contact should execute an emergency plan to facilitate investigation or help. Some field sites can lack cell phone service. There should be a plan in place that will allow for reliable means to contact someone from the field site in the event of an emergency.

**\*NOTE**: For international travel, refer to the Travel Safety Network process for reporting an emergency or concern.

\*It is **highly recommended**, even for domestic travel, that a group representative attend Global Safety’s “Predeparture Orientation for Leaders Training”. Contact Global Safety for more information ([globalsafety@psu.edu](mailto:globalsafety@psu.edu)) (814-863-8788).

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| --- | --- |
| On Site Team Leader: | University emergency contact not working in the field: |
| Leader phone & email: | University contact phone & email: |
| **Means of Communication** - What means of communication (equipment) will be available during fieldwork and justify its reliability given field site and location:  Note: Lab groups should consider renting/purchasing a satellite phone if cell-service is a concern. [SPOT](https://www.findmespot.com/en-us/about-spot/company-info) phones allow you to track assets, send and receive messages, send your GPS position and status, mark waypoints, track your progress on SPOT Mapping, and notify search and rescue officials in the event of an emergency. | |
| **Communication Plan** - Describe your protocol and frequency for maintaining contact with a University representative *(e.g., phone call each day) Frequency depends on risk, communication limitations, and other factors. When will field team check-in with a University representative?:* | |
| **Action Plan** - Describe your protocol/timeline for alerting authorities to begin search and rescue if the communication plan above is not met: | |

\*In the event of an emergency of failure to hear from the field crew, the University Emergency Contact should follow the action plan above. It is recommended that the first action is to inform Unit leadership (i.e., Department Head) and University Police (814-863-1111) as needed. Refer to the Missing Student [Policy](https://policy.psu.edu/policies/sy42) and Travel Safety Network where applicable.

# Proximate Contacts

The purpose of this section is to identify the closest means of medical care. At some remote sites, direct contact or travel to a hospital might not be feasible. Emergency response might require working through a reliable local contact (e.g., ranger station). You should be aware of the most efficient way to receive emergency response services while conducting field work.

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| Nearest hospital: | Location: |
| Emergency Services (police, fire, rescue): | Phone/radio: |
| Other Local Contact (if applicable) (e.g., park ranger station): | Phone/radio: |

# Sequence and Logistics

The purpose of this section is to identify the sequence of tasks that participants will complete. Include aspects of logistics or travel from one location to another. During each task, think about potential hazards (unsafe acts and conditions) and how risk will be minimized. Consider physical, environmental, and social threats for employees and students. Consider that some field workers may have little to no experience conducting field trips. Hazards and mitigations will be detailed in the next section. The tasks in sequence must include travel to the site(s), fieldwork set up, research tasks, fieldwork “tear-down”, travel returning from the site, and any logistics in between.

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| **Sequence of Tasks** |
| 1. … 2. … 3. … |

**NOTE**: If you require any advice related to safety and security during travel, the Global Safety Office is available for consultation ([globalsafety@psu.edu](mailto:globalsafety@psu.edu)) (814-863-8788).

# Personnel Concerns and Social Interactions

The purpose of this section is to consider hazards related to personal attributes and social interactions. Given the potential sensitivities of these items, it is recommended that a Supervisor have private conversations and make accommodations for individuals as necessary to minimize risk. Appropriately survey personnel and consider the following:

* **Individual physiological concerns including but not limited to medical history, allergies, medications, and physical limitations.** Do job demands fit the physical capabilities of field members? Do field members have necessary provisions to ensure routine, personal treatment? Note: Field members should be instructed to seek medical consultation where necessary.
* **Psychological concerns related to mental health.** If support is needed, students can visit PSU’s Counseling and psychological services ([CAPS](https://studentaffairs.psu.edu/counseling)).
* **Within-group social concerns.** Do field members feel comfortable with others? Will field members have privacy during the trip? Should biological sex and gender identify differences be considered for necessary accommodations? Contact the Offices of Ethics and Compliance and the Title IX Coordinator for assistance.
* **Aspects of diversity, equity, inclusion and belonging (DEIB)**. Do field members have any DEIB concerns that need addressed? Where help is needed, contact the [office](https://www.psu.edu/this-is-penn-state/belonging/) of DEIB.
* **Culture of the destination in relation to culture of the field team.** Are culture differences considered such that field members are not being exposed to unacceptable risk? Where help is needed, contact the Travel Safety Network.

# Hazard Assessment

Indicate which hazards pose a risk to personnel during field work activities and how those hazards will be mitigated (eliminated or risk reduced). **USE APPENDIX A TO INFORM YOUR HAZARD ASSESSMENT** (controls that are required are listed as such). **THIS SECTION MUST BE FILLED OUT WITH CONTRIBUTION FROM PERSONNEL WHO WILL BE IN THE FIELD**. Remember, Supervisors’ perceived risk can be much different than perceived risks of novice field workers. Research protocols and emergency plans should be proactively designed to minimize risk.

Note: All field research personnel are required to take initial and refresher Laboratory and Research Safety Training.

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| **Hazards** | **Mitigations** | **Notes** |
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\***NOTE**: On multi-employer worksites, hazard controls may be dictated by the host employer.

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| If someone is hurt or becomes ill (needs medical intervention) describe the action plan for person to receive timely medical attention: |
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\***NOTES**:

* First aid equipment or appropriate injury treatment supplies are required in remote locations (i.e., field sites that are not in close proximity to an infirmary, care clinic, or hospital). First aid training is available on the LRN (add link).
* ***Wilderness First Aid Training is HIGHLY recommended*** for any field work in remote locations (i.e., where emergency medical services are not a call-away).
* It is **highly recommended**, even for domestic travel, that a group representative attend Global Safety’s “Predeparture Orientation for Leaders Training”. Contact Global Safety for more information ([globalsafety@psu.edu](mailto:globalsafety@psu.edu)) (814-863-8788).

# Post-Trip Review

**Were there any lessons learned or unforeseen events that happened during any field trips?** If so, this document should be revised, and changes shall be communicated to all affected personnel.

## General Notes and Reminders:

* **Consider any NO-GO criteria (e.g., wind speed, temperature, severe weather, political unrest, other specific hazards).** The research group should know and be able to recognize these conditions to cancel the field trip if necessary.
* **Planning to bring chemicals, biologicals, animals, materials, samples, or equipment to or from the field site?**
  + Know requirements for transport of materials, permissions, permits, or import/export rules and regulations before leaving for the field.
* **Transporting hazardous materials or chemicals?** 
  + The transport of hazardous materials and chemicals poses a hazard to personnel and the environment. Contact EHS for review and/or approval unless you already have approval for the transport process. Transport of chemicals or hazardous materials in personal vehicles is prohibited.
* **What if someone becomes injured or ill during your field trip?** 
  + Employees – A Unit representative must complete a [First Report of Injury or Illness form](https://hr.psu.edu/workers-compensation). The report must be submitted to the Office of Absence Management in Human Resources within **forty-eight hours** of the accident.
  + Non-employees (unpaid students) – A Unit representative must complete a [Risk Management Incident Form](https://guru.psu.edu/forms/incident-form.pdf?logged=true).
  + For more guidance on specific events, visit the EHS [website](https://ehs.psu.edu/case-emergency) on emergency response.
* **Vehicle Incident Response and Reporting**
  + Any accident involving a vehicle (university-owned, leased, rented or personally-owned) driven on University business, must be reported by the driver to the Risk Management Office within 24 hours, using the [Vehicle Accident Report Form](https://guru.psu.edu/forms/vehicle-accident-report-form.pdf?logged=true). If a rental or personally owned vehicle is involved in an accident while used on University business, no matter how minor, it must be reported to the Risk Management Office. The Vehicle Accident Report Form may be found in the visor pack of fleet-serviced vehicles. For other vehicles, a copy of the form can be accessed on-line at <http://controller.psu.edu/claims> (see the "Auto Liability" section). The driver is responsible for completing both sides of the form.
  + Driver Responsibilities:
    - In the event of accident resulting in a serious injury, death, non-drivability of the vehicle, or an alleged hit and run, you MUST contact the police.
    - If you are involved in an accident involving serious injuries or death, you should also notify the Risk Management Office at 814-863-5539.
    - If a Fleet vehicle is damaged so extensively that it cannot be driven, you should also notify Fleet Operations at 814-865-7572.
    - Should an accident occur when driving a rental vehicle on University business, the driver must also notify the rental agency as well as the police, no matter how minor the accident.
  + For Penn State-owned fleet vehicles, in the event of an accident, call the number of the Accident Report form in the visor. Fleet Services will arrange for a tow truck if the vehicle is not drivable.
  + For Department-owned vehicles, the Department is responsible for any protocols related to roadside assistance. It’s recommended that field workers travel with a Department credit card to cover unexpected expenses.

# Appendix A – Hazard Assessment Checklist

| **Hazards** | **Controls** | **Training or Certifications** |
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| **Personal Protective Equipment Assessment** | | |
| Eye hazards (from flying debris, liquid chemicals, radiation) | Safety glasses or protective eyewear (required if not otherwise controlled) | PPE specific training required via this form or Unit Specific Plan |
| Eye hazards (from hazardous gases or vapors) | Goggles (required if not otherwise controlled) | PPE specific training required via this form or Unit Specific Plan |
| Face hazards (hazardous chemical splash or sparks to face) | Face shield (required if not otherwise controlled) | PPE specific training required via this form or Unit Specific Plan |
| Head hazards (impact from falling objects, electrical exposure to head) | Hard hat (required if not otherwise controlled) | PPE specific training required via this form or Unit Specific Plan |
| Hand hazards (cuts, abrasions, chemicals - during material handling) | Appropriate gloves (required if not otherwise controlled) | PPE specific training required via this form or Unit Specific Plan |
| Foot hazards (heavy objects likely to fall or roll-on foot) | Protective footwear (required if not otherwise controlled) | PPE specific training required via this form or Unit Specific Plan |
| Excessive noise | Hearing protection (required if above action level, contact EHS for assessment if needed) | PPE specific training required via this form or Unit Specific Plan  Included in Hearing Conservation Program (required only for employees if above action level) |
| Uncontrolled respiratory hazards | Respirators (required if above permissible exposure limit, contact EHS for assessment if needed) | Medical evaluation, fit test, and respirator specific training required for employees only  Required EHS training (online) |
| Low visibility hazards (e.g., hunting, road work) | Fluorescent orange or reflectorized vests (required) | PPE specific training required via this form or Unit Specific Plan |
| Fire hazards from welding, cutting | Flame-resistant or flame-retardant clothing (required if not otherwise controlled) | PPE specific training required via this form or Unit Specific Plan |
| Fall hazards without fall prevention | Personal fall arrest system (required)  Fall rescue plan (required) | Required EHS training online  PPE specific training required via this form or Unit Specific Plan |
| Slip / trip hazards | Appropriate footwear  Flashlight or headlamp for night travel |  |
| Working in/on/over water | Floatation devices (i.e., life jackets available)  Waiters | PPE specific training required via this form or Unit Specific Plan |
| **Physical and Equipment Hazards** | | |
| Animal handling | Approved IACUC review (required)  Animal barriers, enclosures  Animal exposure treatment and first aid supplies available | Specific animal handling information or training  First aid training |
| Work on/near energized electrical >50vac (including voltage testing) | Arc flash and shock protective PPE required  Buddy system (required in remote locations)  Appropriate first aid equipment and AED (required in remote locations) | Required EHS NFPA70E training (online and hands-on)  First Aid and CPR Certification (required in remote locations) |
| Confined space entry  (any space large enough to bodily enter, not intended for continuous occupancy, and has limited means of entry/egress) | Confined space assessment, classification required  Confined space permit and rescue plan required if permit required  Buddy system required for permitted required spaces  Appropriate first aid equipment and AED (required for permit required spaces in remote locations) | Required EHS training for permit required spaces (online and hands-on)  First Aid and CPR Certification required for attendants of permit required spaces |
| Cave diving, spelunking | Cave safety protocols defined  Buddy system |  |
| Exhaustion | Work/rest cycle defined  Adequate hydration supplies |  |
| Manual lifting of heavy objects | Proper lifting equipment  Load securing devices | Ergonomic training available from EHS upon request |
| Underwater, diving, snorkeling | Properly inspected and rated SCUBA gear | Certified SCUBA Diver  Snorkeling training/experience |
| Climbing, rappelling | Buddy system  Rescue plan in place  Appropriate first aid equipment | Climbing, rappelling or belay certification/training  First Aid training |
| Aerial Lifts | Fall arrest (if manufacturer requires)  Operators manual available for equipment | Required EHS Aerial Lift training (online and hands-on) |
| Use of power tools and machinery | Required guarding in place  Operators manual available for equipment | Machine specific training required to be provided by qualified person |
| Ladders | Ladder inspected (before field trip) and safe for intended use (required) | Ladder Safety training required (online) |
| Chain Saws | Chain saw protective equipment and chaps (required)  Appropriate first aid equipment  Buddy system | Chain saw training required to be provided by qualified person  First Aid training |
| Scaffolds | Scaffold inspected (before field trip) and safe for intended use | Required EHS Scaffold User training (online) |
| Excavations and Trenching | Utility locations verified before digging per local requirements  Operators manual available for equipment | Excavation training required for Students (non-PSU employee) in the LRN.  Excavation training required for PSU Employees (in-person Competent Person Training required. Contact EHS.) |
| Forklift | Operators manual available  Pre-use inspection documented (required) | Required EHS Power Industrial Truck training (online and hands-on) |
| Hazardous energy sources | Energy control procedures (required if multiple sources of energy or stored energy)  Lockout tagout equipment (required) | Required EHS Lockout Tagout training (in person) |
| Lasers (3b or 4) | Protective laser eyewear (contact EHS for assessment)  Registered with LSO (required) | EHS Laser Safety training |
| Boating | Floatation devices | Boating license and/or local required training for motorboat |
| Firearms | Eye and hearing protection (required) | Federal firearm certification/training  Local firearm certification/training |
| All-Terrain Vehicles (ATVs) | Operators manual available | ATV training or familiarization from a qualified person (required) |
| Pesticide use, transport, or application | Protective equipment per label requirements | Certified Pesticide Applicator  Check Worker Protection Standard for applicable requirements |
| **Environmental Hazards** | | |
| Serious injury in remote location (not near care/treatment facility) | Buddy system required  Radio system in use to contact emergency assistance  Satellite phone to contact emergency assistance  Alternate means of communication sufficient for location (battery life, transmission distance/reliability)  Appropriate first aid equipment (required) | Basic First Aid training  Wilderness First Aid training |
| Wildlife | Protocols to avoid or respond to wildlife interaction  Wildlife deterrents, repellents  Wildlife exposure treatment capability (i.e., appropriate first aid) | Field-specific procedures communicated to all personnel as needed |
| Hazardous plants | Plant exposure prevention/treatment techniques defined | Field-specific procedures communicated to all personnel as needed |
| Insects, ticks, spiders, vermin | Insect repellant  Insect treatment techniques defined  Appropriate clothing | Field-specific procedures communicated to all personnel as needed |
| Ice hazards | Appropriate gear and equipment to traverse ice and manage hazards related to ice | Field-specific procedures communicated to all personnel as needed |
| Wildfire | Wildfire safety protocols defined to avoid smoke and fire exposure | Field-specific procedures communicated to all personnel as needed |
| High altitude | Protocols defined to prevent altitude sickness | Field-specific procedures communicated to all personnel as needed |
| Unusual terrain, hiking | Hiking boots, muck boots, specific footwear |  |
| Historical/political structures, disaster area, violence/harassment | Field trip planned to avoid areas of high risk | Training and protocols related to these social threats |
| Excessive heat, sunlight | Sun-protective hat  Sunscreen  Adequate water and hydration |  |
| Excessive cold | Thermal clothing, blankets, etc.  Heat producing equipment |  |
| Weather | Awareness of local weather condition, seasons, likely events, and contingency plans | Field-specific procedures communicated to all personnel as needed |
| **Health Hazards** | | |
| Infectious disease | Obtain required vaccines/immunizations (contact Occupational Medicine) |  |
| Personal medical conditions | Medications (taken on a regular basis) | Communicated as necessary to respond to emergency |
| Allergies (food, plant, insect, etc.) | Allergy treatments (as needed) | Communicated as necessary to respond to emergency |
| Inadequate provisions available at site (food, water, shelter) | Adequate food supplies  Water purification tablets or filter devices  Adequate provisions packed | Field-specific procedures communicated to all personnel as needed |
| X-ray exposure (e.g., hand held device) | Contact EHS for assessment |  |
| Bloodborne pathogen exposure | Adequate PPE required  Clean up materials and disinfectants | Required BBP training |
| **Emergency Situations** | | |
| Flat tire, out of gas, roadside | Vehicle emergency kit  Roadside assistance service available  P-card or credit card available for tow truck or payment to other service |  |
| Night work, work in dark, loss of power, etc. | Flashlight with extra batteries  Flares or chemical light sticks  Generator with sufficient fuel |  |
| Lost, trapped, stranded | Flagging tape or entrance marker flag  Shovel, rakes, hand tools  Extra food, water, and clothing  Whistle  Matches  Compass  Maps |  |
| Fire, flood, natural disaster | Portable fire extinguisher  Access to emergency weather alerts/radio | Portable fire extinguisher training (required if expected to use) |