Department of Botany

Field Safety Policy and Procedures

**(Date of Last Revision: June 1, 2021)**

**Scope**

The Department of Botany Field Safety Policy applies to all faculty, staff and students who are involved in off-campus field activities related to research or teaching. Members of the Department of Botany collect field samples and data in many ways. These range from, but are not limited to, the following:

* working at field stations and marine labs
* making observations or collecting samples in parks or at other established local sites
* conducting research observation/studies at established field sites
* conducting organized research trips to remote locations
* experiential learning projects
* collecting demonstration material for laboratory classes

The requirements for ensuring proper safety will vary in their details for each instance, but general guidelines and expectations are explained below. The Departmental Field Safety Policy is in addition to the UBC Travel and Field Safety Policies and Procedures (<https://travelfieldsafety.ubc.ca/about/>) with which all individuals engaged in field studies must familiarize themselves. Researchers must comply with local regulations in addition to UBC guidelines. In the case of visits to laboratories and field stations with their own existing policies, Field Safety Plans may focus on travel between Vancouver and the lab/station and reference the existing policies as governing work done on site – provided that these policies meet or exceed UBC expectations for safe work, as determined during departmental review.

**Glossary of roles**

* **Project Leader** = the person accountable for the project. For research trips, this is the faculty member who is the principal investigator (PI). For course trips, this is the lead instructor.
* **Trip Leader** = the person who is in charge in the field. This can be a PI, instructor, graduate student, postdoc, technician, or teaching assistant (TA), whether or not the Project Leader accompanies on the trip.
* **Field Safety Officer** = the person responsible for safety in the field (e.g., leading on-site safety training, administering first aid). By default this role is filled by the Trip Leader, but can be assigned by the Project Leader to another participant with more extensive safety training or experience.
* **Participant** = anyone attending a field trip, whether course- or research-related.
* **External Contact** = the person who remains at UBC and is responsible for receiving check-in messages from the field team (and activating additional assistance if the field team fails to check in according to plan).

**Procedures**

A Department of Botany Field Safety committee will be comprised of 3-4 faculty members and a graduate student or postdoctoral representative, all of whom have relevant field experience. This committee is responsible for drafting, reviewing, amending, and updating policies, procedures, and forms on an annual basis.

The Department must hold complete records of each off-campus field trip on file before departure. Complete records include an *approved* Field Safety Plan (Table 1) and fully filled out Participant Forms (Table 2) for each Participant. The Department Head (or their delegate) must review and approve field safety plans prior to departure for field work. Typically, initial review will be delegated to two members of a field safety review team on a rotating basis. Final approval rests with the Department Head or their delegate. Plans should be submitted by email to botany.admin@ubc.ca for initial review no later than two weeks prior to planned departure to allow sufficient time for review and possible revisions.

Field trips on campus (e.g., to UBC Farm or UBC Botanical Garden) are exempted from these requirements, unless the field trips involve potentially hazardous activities (e.g., use of power tools).

Field trips to frequented local sites such as Pacific Spirit Regional Park or Stanley Park are not exempted from these requirements. To streamline the process, the department will provide a database of approved examples that can be referenced by accessing the Botany internal website.

If a group makes regular trips with the same people to the same area, the process may be streamlined with a standing approval for ongoing work. Standing approvals must be renewed annually by submitting an updated Field Safety Plan, but they will not require re-review unless activities have changed substantially. If activities or participants change prior to renewal, the Field Safety Plan and Participant Forms must be amended (and, in the case of courses, re-approved). When submitting an amended plan for re-review or renewal, users should highlight areas that have been edited from the previously approved version to facilitate comparison. Project Leaders may consult with the chair of the field safety committee to determine whether changes to activities will warrant re-review.

International field trips may entail special considerations, including the use and sharing of personal data outside of Canada (see section 2 of the Participant Form). All members of field trips going abroad should familiarize themselves with [UBC Travel Advice and Advisories](http://www.hr.ubc.ca/wellbeing-benefits/benefits/details/travel/travel-advisories/). Additional resources include

* [International SOS](https://www.internationalsos.com/), a medical and security support service. UBC's membership number is 27AYCA486500 [download membership card [here](https://finance.ubc.ca/sites/finserv.ubc.ca/files/travel/International_SOS_Electronic_Membership_Card.pdf)]. If you run into any problems while traveling internationally, you can contact them at (215) 942-8478 for support. Their [Assistance App](https://www.internationalsos.com/assistance-app) can provide security and medical alerts and assistance while traveling.
* [UBC Travel Planning Tool](http://travelplan.ubc.ca/)
* Student Safety Abroad Policy

**Field Safety Plan Documentation**

The Project Leader will submit a Field Safety Plan for each field trip. Project Leaders are encouraged to consult with the entire field team to develop the Field Safety Plan collaboratively, taking advantage of diverse viewpoints, experiences, and expertise, and recognizing that what is perceived as trivial by one person might be viewed as significant by another. In particular, persons from racialized, LGBTQ+ or other groups might experience greater personal safety risks from encounters with police, property owners, and other locals when in the field; Project and Trip Leaders should become aware of these challenges and discuss mitigation plans accordingly.

The Field Safety Plan includes four key elements: (1) **planning record**, (2) **communication plan**, (3) **assessment of risk**, and (4) **emergency response plan** (Table 1).

Each Participant will submit a Participant Form for each field trip. The Participant Form includes three key elements: (1) **critical data**, (2) **consent for use of personal data**, and (3) **acknowledgement of risk** (Table 2).

Fillable templates of these forms are available on the Department of Botany internal website. It is required that all fields on all of the documentation are filled out accurately. If something is not applicable to the fieldtrip, then this must be made clear on the respective document.

**Table 1. Field Safety Plan Components.**

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| --- | --- |
| Part 1. Planning Record | Basic information listing who, where, when, etc. |
| Part 2. Communication Plan | The plan should also outline avenues (modes and frequencies) of communication between members of the group if necessary. It should also list procedures for contacting local authorities as well as the Department in case of emergency.  |
| Part 3. Assessment of Risk | An assessment of known and potential risks and appropriate safety measures. The form contains a fairly comprehensive check-list of potential hazards/risks to serve as a guide. |
| Part 4. Emergency Response Plan | A plan for dealing with any emergency that might arise (e.g., location, address, phone number, and means of access to the hospital nearest to each field site). If road transportation is not available, another method of transport must be identified and phone numbers for local air and water transportation companies must be provided. |

**Table 2. Participant Form Components.**

|  |  |
| --- | --- |
| Part 1. Critical Data | Details of a field trip participant such as their emergency contact person, health insurance, and any medical information that affects participation in field activities or could be important to a doctor administering emergency treatment (e.g. drug sensitivities, allergies, regular medication). |
| Part 2. Use of Personal Data | Informs participants and obtains their consent for how personal data will be stored and used both during the trip and in the case of emergency. |
| Part 3. Acknowledgment of Risk | Each participant is informed of the potential risks and of the physical requirements of the fieldwork. Each participant must acknowledge receipt of the information and agree to participate in the activity by signing this document. |

**Responsibilities**

Ultimately, safe practice is a personal responsibility borne by all individuals engaging in the field activity. It is the responsibility of the Department Head to ensure that all members of the department involved in field research comply with this policy. All necessary documentation must be submitted to the Department Head (or their delegate) prior to undertaking off-campus field activity. This documentation will be maintained in a secure location. The Department Head may delegate this responsibility.

**Responsibilities of the Project Leader**

It is the responsibility of the Project Leader to identify and, when possible, mitigate all hazards that Participants could reasonably be exposed to during the field activity. Project Leader responsibilities include the following:

* Designating a Trip Leader, Field Safety Officer, and External Contact, and drafting the Field Safety Plan with their input.
* Submitting a complete Field Safety Plan to the Department Head (or their delegate) two weeks prior to the departure of any trip. (Though Project Leaders are encouraged to develop the Field Safety Plan collaboratively, ultimate responsibility for its completion and submission lies with the Project Leader.)
* Designating any required safety equipment and training[[1]](#footnote-2) (e.g., Wilderness First Aid, Industrial First Aid, Bear Awareness Training, Firearms Safety), and ensuring that all Participants have completed proper field safety training before any field activities. The appropriate field safety training should cater to each specific trip and the content of the safety training is at the discretion of the Project Leader.
* Ensuring that each participant has submitted a completed Participant Form prior to departure.
* If going on the trip, completing their own required safety training and Participant Form.
* Being familiar with the UBC policy on Accident/Incident Reporting, Investigation and Recording Procedures, and in the event of an incident, submitting a completed online CAIRS incident report form as soon as possible. Refer to the [UBC Incident Site Investigation Guide](https://www.cairs.ubc.ca/UBC-Incident-Site-Investigation-Guide.pdf) for details.

**Responsibilities of the Trip Leader**

A Trip Leader should be designated for every team or course going into the field. This creates clear roles in the event that an emergency does occur. Trip Leaders are responsible for doing the following:

* Taking attendance of all participants upon departure and at regular intervals during the trip (using the Participants list in the Planning Record &/or the course registry)
* Completing their own required safety training and Participant Form prior to departure
* In the event of an incident, no matter how minor, undertaking an investigation of the incident on site and assisting the Project Leader with the completion of the CAIRS incident report form.

**Responsibilities of the Field Safety Officer**

* Ensuring that all safety procedures are adhered to while in the field. This includes following the communication plan, and ensuring all participants on the trip follow the safety procedures.
* Maintaining pertinent medical information (e.g., activity restrictions, allergies) about participants in a way that balances confidentiality and safety
* Giving safety lectures to all participants. Prior to trip departure, this includes an orientation lecture that makes all participants aware of the Department of Botany Field Safety Policy, gives an overview of planned activities and the trip Safety Plan, and reviews forms to be completed by participants. Prior to commencing activities in the field, this includes reviewing any safety themes and providing task-specific training on safety protocols for tasks about to be undertaken.
* Ensuring all necessary safety equipment and an adequate first aid kit are available for the duration of the trip. A list of recommended first aid supplies can be found at <https://travelfieldsafety.ubc.ca/firstaid/>.

**Responsibilities of External Contacts**

Each field team should designate someone at UBC who is not travelling to the field who will do the following:

* Receive check-in messages and respond with acknowledgement that message was received (two-way communication).
* Set alarm/calendar alert for agreed-upon check-in times.
* Be up-to-date on all field plans prior to and during the trip.
* Follow “Failure to Check-in Procedure” if check-in not received.

**Responsibilities of Teaching Assistants**

It is the responsibility of the teaching assistants to adhere strictly to the safety procedures and to set an example for course participants. Teaching assistants therefore must know and understand these procedures prior to going on the trip at a level above and beyond those of a Participant. Teaching assistants are required to fill out their own Participant forms. Teaching assistants may be designated as Trip Leaders, with the additional responsibilities commensurate with that role (as outlined above).

**Responsibilities of Participants**

All participants in course- or research-related field trip are responsible for doing the following:

* Ensuring they are properly trained on the safety policies and procedures before commencing any field activities. This includes reviewing the Department of Botany Field Safety Policy, completing any safety trainings required by the Project Leader, and understanding any safety lectures delivered by the Field Safety Officer.
* Submitting a complete Participant form prior to departure.
* Notifying the Trip Leader in advance if medical or other conditions prevent safe participation in a field activity, or of any medical conditions such as severe allergic reactions may result in increased risk during participation in activities for the participant.

**General Precautions**

1) **Never work alone under hazardous conditions.** This is Departmental Policy. Your field partner is your best insurance policy. If a field partner is not a UBC student or employee, they must still fill out a Participant form and must receive training for the role they will play in the field. They must also sign the **Release of liability, waiver of claims,** **acknowledgment of risk** **form** as a volunteer.

Project Leaders may approve of individuals going into the field alone under conditions deemed to be non-hazardous. However, if individuals are working alone, the communication plan must include ways to ensure that someone is aware of where they are working and that at the end of the task, they contact them to check in.

2)In the case of fieldwork in remote areas where there is limited access to medical support, one person should have up-to-date certification in first aid and CPR, and an appropriate first-aid kit needs to be available. All teams should also carry suitable first-aid kits with them in the field each day. Detailed guidance about required levels of first aid supplies and training are provided in Schedule 3A of the WorkSafeBC Occupational Health and Safety Regulations: <https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-03-rights-and-responsibilities>.

3) In the case of fieldwork in remote areas where there is the possibility of getting lost, provision should be made for providing a communication link to a central station. In some field areas a cell phone is sufficient; elsewhere use of a satellite phone or personal beacon (e.g., SPOT messenger or Delorme InReach) may be the best alternative. Also consider issuing short-wavelength radios for local communication between groups in the field, if more than one. Also consider issuing flares for aid in location if lost and carrying them each day in the field.

4) In the case of fieldwork in remote areas where there is the potential for interactions with dangerous wildlife, consider supplying appropriate wildlife deterrents (e.g., bear spray, bear bangers etc.) and firearms, if necessary, and the relevant training and certification.

**Specific Precautions**

Each field trip will have its own suite of specific hazards, and it is the responsibility of the Project Leader to identify these hazards in the Field Safety Plan and for the Field Safety Officer to discuss them during field safety trainings. The range of potential hazards that may be encountered in the field could include:

1. Local diseases (especially in the tropics).
2. Severe weather hazards (e.g., heatstroke, hypothermia, lightning strike, etc.).
3. Risk of attack by wild animals (e.g., bears, snakes, etc.).
4. Legal risks such as photographing restricted installations such as airports, military bases, power plants, etc. in certain countries. This also includes restrictions on medications that are legal in Canada but not in other countries.
5. Crime risks (e.g., theft, kidnapping, car hijacking, hate crimes driven by racism or bigotry, etc.); civil insurrection.
6. Health risks such as unavailability of necessary prescription medications in certain countries.
7. Poor communications and infrastructure (e.g., bad roads, scarce fuel, no telephone service, etc.).

**Acknowledgements**

These materials were modified from the UBC Department of Zoology Field Safety Policy and associated webforms dated June 2019, with additional inspiration drawn from safety policies and forms shared by UBC EOAS, UBC Forestry, and Memorial University.

1. WorkSafeBC has established rules on appropriate levels of first aid equipment and training that depend on group size, level of risk during activities, and distance to hospital. See Schedule 3A here: <https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation/part-03-rights-and-responsibilities#Schedule3A> [↑](#footnote-ref-2)