

	Project Risk Assessment Plan Risk & Safety Office, UNBC	For Administration Use Only	
		Protocol No.	Date Received:

Please prepare and submit a Risk Assessment Plan for each major project you are undertaking. Updates to these can be made if there are personnel and/or protocol changes. Copies of this plan should be registered with the Risk & Safety Office and the Research Office at the start of the project. Procedures should be discussed and agreed upon by all personnel on the project, and a copy of the plan should accompany the field crews working on the project.

Please submit the completed application to Risk & Safety Office, University of Northern BC – submission can be an electronic version.

1. GENERAL INFORMATION

Project Title:			
Principal Investigator		UNBC Department/Program	
Position/Rank		Email	
Phone/Fax:			
Submission Date		Proposed End Date for Current Application	

2. PERSONNEL ASSOCIATED WITH PROJECT

Role	Name	First Aid Training	Field Safety Training	WHMIS	Fieldworker Critical Data Form Attached
Field Supervisor:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Crew member: <input type="checkbox"/> Field Supervisor:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
Crew member:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
Crew member:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
Crew member:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
Crew member:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
Crew member:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No
Crew member:		<input type="checkbox"/> Level 1 or equivalent	<input type="checkbox"/> Course <input type="checkbox"/> Self-training	<input type="checkbox"/> Course <input type="checkbox"/> Self-training <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No

Add additional page if there are more personnel on the project. If there is more than one Field Supervisor (e.g. for crews working separately), modify the Role section and identify which Crew members will be associated with which Field Supervisor. This can be done by indicating Field Supervisor 1, and Crew member (1).

3. LOCATIONS IDENTIFIED WITH PROJECT

Define the locations where the research will occur, including the spatial scale of the area. Feel free to attach maps of the broad study region and locations of primary sub-sites within this. For large areas, indicate how the position of field crews will be determined/tracked on a day-to-day period.

This component should be printed up and carried with field crews to be used in the event of an emergency so they can provide information on work location and emergency contact

Site Name:		Map Attached <input type="checkbox"/> Yes <input type="checkbox"/> No
Location (specify units) <input type="checkbox"/> Lat/Long <input type="checkbox"/> UTM Zone:	Lat/Northing:	Emergency Contact Information (site/subsite)
	Long/Easting:	For each location, indicate how to contact: Local RCMP/Police (non-emergency):
Sub-sites Included <input type="checkbox"/> Yes <input type="checkbox"/> No	Sub-sites locations: <input type="checkbox"/> Indicated on attached map <input type="checkbox"/> Lat/Long or UTMS (below)	Ambulance (e.g. 911):
Sub-site 1	Lat/Northing:	Specify if there are regional differences between subsites for emergency contact information. <input type="checkbox"/> Same as above <input type="checkbox"/> Differs: RCMP/Police: Ambulance:
	Long/Easting:	
Sub-site 2	Lat/Northing:	<input type="checkbox"/> Same as above <input type="checkbox"/> Differs: RCMP/Police: Ambulance:
	Long/Easting:	
Sub-site 3	Lat/Northing:	<input type="checkbox"/> Same as above <input type="checkbox"/> Differs: RCMP/Police: Ambulance:
	Long/Easting:	
Sub-site 4	Lat/Northing:	<input type="checkbox"/> Same as above <input type="checkbox"/> Differs: RCMP/Police: Ambulance:
	Long/Easting:	
<i>Insert additional pages if necessary to include more subsites/vehicles</i>		
Vehicle Description:	Make:	
	Year:	
	Colour:	
	License:	
<p>How will you determine location of personnel within the site on a day-to-day basis? For example – include an itinerary for dates at each location. Maps can be included to identify major sites and subsites within this.</p>		
<i>Copy and Paste this page for each major site you wish to identify with this project</i>		

4. HAZARDS ASSOCIATED WITH PROJECT

Prior to entering the field the project supervisor must identify any potential hazards that may exist, and then determine how to provide information to mitigate these risks to personnel. This checklist will help to identify some of the hazards the research team may encounter. Identify any hazards not covered here that are specific to your project at the bottom.

If you are conducting an Urban Survey - Refer to the Community Based Research Manual for information on mitigating some of these associated risks. If you are conducting Wilderness based research - refer to the Field Procedures & Safety Manual.

First Aid Requirements

A Level 1 First Aid Attendant must be provided on each crew up to five people		For Crews over 5 contact Risk & Safety for a first aid assessment
<input type="checkbox"/> first aid kit in the group	Name of First Aid Attendant	

STEP 1)	Check all boxes for hazards that may be encountered,
STEP 2)	Identify how you will prevent (control) the hazard from causing injury
STEP3)	Ensure all crew members receive the necessary information and training

Field Work Hazards	Have you established a method to mitigate the hazard	Have you provided instruction and training to your crew
Field Work Activities		
<input type="checkbox"/> urban survey	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> bushwalking on foot	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> working at height	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> working on or around water	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Personal		
<input type="checkbox"/> sunburn	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> heat / cold stress	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> manual handling, lifting	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> slips and trips	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> personal security	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> allergies (specify details in personnel forms)	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Transport Involving		
<input type="checkbox"/> resource roads	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> boats	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> aircraft	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> navigation maps	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> Driver training	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> Transport dangerous goods	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Licensing/Insurance		
<input type="checkbox"/> Access permits required	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> Insurance	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no

Field Work Hazards Continued	Have you established a method to mitigate the hazard	Have you provided instruction and training to your crew
Personal protection required		
<input type="checkbox"/> gloves	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> high-visibility clothing	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> glasses/goggles	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> hard hat required	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> respirator	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> other. Specify:	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Fauna & Flora		
<input type="checkbox"/> sting plants/animals	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> hazardous wildlife (e.g. bears)	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> potentially disease-bearing or poisonous animals (e.g. ticks, rattlesnakes)	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Chemicals		
<input type="checkbox"/> MSDS available	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> Spill Kit	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> Radiation	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> chemical waste	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> sharps	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Weather		
<input type="checkbox"/> Snow	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> Road conditions	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> Heat	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Clothing recommended		
<input type="checkbox"/> sun hat	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> winter clothing	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> appropriate footwear	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> insect hat/shirt		
Mechanical Hazards		
<input type="checkbox"/> vehicles	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> mobile equipment	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> tools	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> generation of dust	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Fire Risks		
<input type="checkbox"/> extinguisher	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> camp fire	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/> combustibles	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no

Project Specific Hazards not listed (add as required)

Field Work Hazards Continued	Method to mitigate the hazard in place	Have you provided instruction and training to your crew
<input type="checkbox"/>	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/>	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/>	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/>	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/>	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/>	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
<input type="checkbox"/>	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no

For identified hazards, identify what form of training/instruction is in place for personnel on the project:

5. COMMUNICATION/CALL-IN PROCEDURES FOR PROJECT

Communication among Crew members - Members of the field crew should maintain internal contact at least every two hours while working in the field.

<p>How will the crew maintain contact with each other? (select all that apply)</p> <p><input type="checkbox"/> Radios</p> <p><input type="checkbox"/> In-person contact</p> <p><input type="checkbox"/> Cell or satellite phone</p>	<p>Frequency of within-crew contact: (select all that apply)</p> <p><input type="checkbox"/> Continuous (working together or within calling distance)</p> <p><input type="checkbox"/> Hourly</p> <p><input type="checkbox"/> every two hours</p>
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For crew members working out of visual range with each other, how will personnel keep track of each other's general location in case of failure to make scheduled contact?

Crew members carry whistles or other noise-making devices (e.g. air horns)

Pre-arranged meeting points, coupled with knowledge of area crew members will be working while out of visual contact

Cell or satellite phone

Do crew members carry some means of personal location device? Yes No

If yes, provide details:

Communications for Working Alone - For individuals or crews working alone, daily call-in procedures are required. *Indicate which systems apply for this project*

For crews where internal contact can be made between members, at least two sign-ins per day should be performed (upon Departure to/arrival at site and at return from sites).

For crews staying at the working site, sign-ins should occur when leaving base camp to start work, and upon return to base-camp at the end of the day.

For personnel working by themselves in remote locations, call-ins should be conducted at least every two hours.

SIGN-IN Procedures:

Sign-ins will be made to UNBC Security (UNBC Sign-in Form must be completed and attached)

Sign-ins will be made to supervisor or other designated responders as per the protocol below.

	Time Range	How sign in will be made (SPOT, Sat Phone, Cell)	Primary Contact (name and contact information)	Secondary Contact (name and contact information)
Sign in 1				
Sign in 2				
Sign in 3				
Sign in 4				
Sign in 5				
Sign in 6				

If crew-members can maintain internal check ins, only two external check ins (start and end of day) are required. If there is no internal check-ins (e.g. personnel working alone), check ins should be every 2 hrs. The form above allows for a 12 hr work day with a single crew member – use only the total numbers of check-ins required.

Is there a grace period the Primary contact should wait before initiating a response?

For remote crews, how will the Primary/Secondary Contact know if the crew is not going out for the day (e.g. weather day)?

Procedure of the Primary Contact if sign-ins are not received during the specified time ranges above. First response should be to contact Secondary Contact to determine whether they have received sign in (ensure primary and secondary contact have each other's contact details)

1. Initial Response to try and make contact with personnel:

2. Is there a local contact that could go to site to check crew? If so provide details

Secondary Response if first response fails to locate personnel.

1. Describe search plan to initiate.

Emergency search and rescue contact information for the site and contact information for Local RCMP should be provided in Sect 3

Maps of study sites and entry routes, locations where you typically park etc needs to be available, as do personnel critical data forms, so these can be transmitted to search personnel. Ensure that the Primary and Secondary contacts have access to this document, personnel information files and recent photos of the personnel so as to be able to transmit this information if needed.

6. EMERGENCY PLAN

In the event of an emergency – e.g. injury to personnel, need to be removed from site in event of forest fire etc – you will need to develop emergency plans that all members of the crew are familiar with and know their particular roles. It is important to realize that emergencies are highly case specific, and hence these guidelines should be seen as general guidelines, not strict instructions. The protocol for rescuing an injured crewmember is to do whatever is necessary and reasonable to get help, make the situation safe, and comfort the injured individual in a very short amount of time. Having a set of agreed upon protocols ahead of an emergency increases the potential efficiency of the unit, as well as helps personnel know what particular role they should be playing.

If an injury to a crewmember occurs, document the procedures to be followed in the appropriate sections below:

6.1. If the injured crewmember is conscious and able to communicate the nature of their injury

a. How will they communicate their need for help to the other crew members/outside help?
b. Indicate the response that other crew members/responders should take on receiving this message.
c. How will outside help (e.g. paramedic response) be gained if necessary? State also how you would direct these personnel to the exact location of the injured person.

6.2. If the injured crewmember is not conscious or unable to communicate the nature of their injury

a. How will other crew members/outside responders discover that an injury has occurred (e.g. failure for check-ins and subsequent searching).
b. Indicate the response that other crew members should take on discovering that an injury has occurred. <input type="checkbox"/> Same procedure as 6.1.b above. <input type="checkbox"/> Other:
c. How will outside help (e.g. paramedic response) be gained if necessary? State also how you would direct these personnel to the exact location of the injured person. <input type="checkbox"/> Same procedure as 6.1.c above. <input type="checkbox"/> Other:

In the event of circumstances that require evacuation of a site – e.g. forest fire

6.3. How would an outside supervisor inform the field crew of reported dangers (e.g. presence of dangerous animal reported in the region) that would require evacuation or cessation of activities?

6.4. If the detection of dangers that require evacuation occur on site (e.g. detected forest fire or other hazard), how do personnel inform each other of the danger?

6.5. What is the procedure to follow to evacuate the site?

6.6. How will it be determined that all personnel are safely evacuated?

Once this form is completed, amend any additional documents you wish to add, please submit the completed application to Risk & Safety Office, University of Northern BC – submission can be an electronic version.