

**RACKLA
METALS INC**

Wildlife, Archaeology and Environmental Awareness Plan

Grad Project, NWT

**Rackla Metals Inc.
Suite 1000, 1111 Melville Street
Vancouver, BC, V6E 3V6**

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1. Introduction & Project Details

Rackla Metals Inc. (Rackla) is exploring the Grad project. The Grad project is located 280 km southwest of Tulita in the Tulita District of the Sahtu Settlement Area. The Grad Project consist of 7 mineral claims totaling 7,525 hectares. There are no permanent roads in the claim area and access is exclusively by helicopter from Camp XY in the Yukon (45 km southwest of the Grad Project), under rental agreement between Selwyn Chihong and Rackla.

Rackla is applying for a Type A Land Use Permit for the purpose of conducting an initial small-scale mineral exploration program starting in the 2025 exploration season. Exploration activities will include soil sampling, prospecting, geological mapping, diamond drilling and surface trenching on a portion of the Grad mineral claims. The purpose is to identify potential gold, bismuth and tellurium mineralization in sufficient quantities to justify further evaluation.

Rackla Metals has established this Wildlife, Archeological and Environmental Awareness Plan to guide its activities while exploring the Grad Project area. All personnel must familiarize themselves with this plan and adhere to its' policies.

Useful documents and additional information that has been used in the preparation of this document that will aid in minimizing disturbances to the natural environment and help with mitigating the effects of mineral exploration are:

- *Sahtu Land Use Plan*
- *Flying Low? Think Again! – Government Northwest Territories ECC*
- *Nááts'jch'oh National Park Reserve Management Plan*
- *Yukon Mineral and Coal Exploration Best Management Practices and Regulatory Guide (Yukon Chamber of Mines)*
- *Prospectors and Developers Association of Canada Excellence in Environmental Stewardship e-toolkit*
- *Yukon Mineral Exploration Best Management Practices for Heritage Resources*
- *Guidelines Respecting the Discovery of Human Remains and First Nation Burial Sites in the Yukon*
- *Flying in Sheep Country: How to minimize disturbance from aircraft (Yukon Environment)*
- *Flying in Caribou Country: How to minimize disturbance from aircraft (Yukon Environment)*
- *Guidelines for Industrial Activity in Bear Country (Yukon Environment)*
- *Preferred practices for works affecting Yukon waters*

2. General Awareness

Rackla Metals requires all employees and contractors to read and adhere to the following:

1. Comply with the terms and conditions of the relevant licenses and permits issued by government agencies that allow our work to be completed, and all applicable environmental legislation and regulations.
2. The Project Manager is responsible for reviewing all relevant terms and conditions and ensuring ongoing compliance.
3. Everyone on site will be inducted on the relevant terms and conditions.
4. A copy of this document will be on display in the common areas of the camp, and copies made available to anyone in camp upon request.
5. Training and educational material will be provided where necessary.
6. Environmental risks will be identified, and strategies adopted to manage them using industry best practices.
7. Where possible, environmentally friendly options, agents, actions or products should be utilized.
8. Absolutely no garbage is to be left in the field at any time. All garbage (including cigarette butts!) should be collected in the field and disposed of properly in camp. *“Take only pictures - leave only footprints”*.
9. Wildlife deterrent devices (bear spray and air horns) must always be on-site and available in at least two locations within each camp. All field crews will carry wildlife deterrent devices (bear spray and/or banger or air horns).
10. Everyone on site will be inducted on the Waste Management Plan.
11. Everyone on site will be inducted on the Spill Contingency Plan.
12. For additional information please see the Project Manager

3. Wildlife

1. Approaching and/or feeding wildlife is strictly prohibited.
2. Harassing wildlife is strictly prohibited. Harassment includes flying low for photos.
3. Wildlife observations are to be logged on the Wildlife Log sheet provided in the camp.

4. Possession of firearms in camp must be approved by the project manager and may only be used for safety reasons.
5. All firearms in camp must be:
 - Appropriately licensed.
 - Accompanied by applicable license documents.
 - Reported to the Project Manager if there is a discharge for any reason.
6. Hunting is strictly forbidden by ALL employees, contractors, clients and other visitors while conducting business on behalf of Rackla Metals with no exceptions.
7. If wildlife is killed, either in defence of life and property or accidental, an officer in the appropriate jurisdiction (YT or NWT) will be contacted. Similarly, if disease is encountered in wildlife, this will be reported.
8. Any crucial nesting, denning, migratory or river-crossing habitat must be avoided by low-flying aircraft. If a den or nesting colony is encountered, the location should be reported to the relevant authorities. The area must subsequently be avoided, not disturbed or damaged. This includes but is not limited to beaver lodges, muskrat push-ups, and hibernacula.
9. In Special Management Zone 41, the South Nahanni Watershed Zone there are two Important Wildlife Areas for Northern mountain woodland Caribou have been identified. From late spring through late fall, the South Nahanni herd of Northern Mountain Woodland Caribou calve, over-summer and rut primarily in the Little Nahanni River and Lened Creek areas to and across the Yukon border. The Redstone herd of northern mountain woodland caribou utilize the full north and eastern portion of the South Nahanni watershed as its their Annual Range. Staff are to familiarize themselves with minimum altitudes during these sensitive periods which is 600m.
10. The Little Nahanni River area from Howard's Pass south to the Sahtu-Dehcho border:
 - provides critical calving/rearing range for the migratory South Nahanni caribou herd (Howard's Pass, and Little Nahanni River valley);
 - provides important breeding range for the South Nahanni caribou (Little Nahanni River valley);
 - sustains one of the few very high-density areas of grizzly bears in upper South Nahanni basin (Little Nahanni River valley and surrounding valleys);
 - includes the only area in the Greater Nahanni Ecosystem that has both woodland caribou and a very high density of grizzly bears (Little Nahanni River valley and surrounding valleys);

There will be no visual impact to these sensitive habitats as all work will be conducted on the alpine. By carefully selecting remote drilling locations that do not intrude on key visual corridors

or critical habitat zones.

11. Dall's Sheep, Mountain Goat and large concentrations of birds in the area are at the greatest risk of being adversely affected by helicopter flights. To minimize disturbance, a minimum vertical separation of 1.0 kilometer should be maintained, or as close to this altitude as operational safety permits. Additionally, a minimum horizontal separation of 1.5 kilometres shall be maintained from large concentrations of birds and 2.0 kilometres shall be maintained from mountain goats.
12. Eggs and nests are not to be disturbed by field activities. Nest locations are to be recorded and reported to the relevant authorities.
13. Helicopters must not land in any area where wildlife is present except in emergency situations.
14. All food and waste should be properly handled and stored in camp and while in the field to prevent wildlife attraction. Poor food storage and waste disposal are the leading cause of human-wildlife interaction.
15. Waste containers and the kitchen area are to be kept clean and sanitary. Kitchen waste will be stored in animal-proof, sealed containers for back haul.
16. Grey water will be drained into a hand-excavated sump more than 100 metres from the Ordinary High-Water Mark of any waterbody unless approved by the appropriate regulatory authority.
17. Nuisance wildlife is to be reported to the wildlife biologist for the appropriate jurisdiction of NWT or Yukon – see contact information below.
18. If working between September 30th and October 30th a pre-activity survey will be conducted within 800 metres of the activity footprint to identify active bear dens. If an active bear den is detected, or suspected, an 800 metre exclusion will be set up until the bear emerges. If this results in the halt of part or all the program, ENR will be contacted. The location of the bear den will be kept confidential between Rackla Metals and ENR.
19. All employees will be instructed in identifying the Species of Risk in the area and how to avoid contact with or disturbance to each species, its habitat and/or its residence.

Species at risk in NWT are listed in the 2022 Edition of Species at Risk in the Northwest Territories guide (<http://www.nwt-species-at-risk.ca/content/documents>).

Wildlife Emergency Contact Information:

NWT: Wildlife Emergency 24 Hour Sahtu Region (Norman Wells) 1-867-587-2422.

Species	Risk Category (Canada Western Pop)	Risk Category (NWT)	Typical Habitat	Critical Timing & Setbacks
Grizzly Bear	Special Concern	Special Concern	Open or semi-forested areas, most commonly in alpine and subalpine terrain, on the tundra and less commonly in the boreal forest.	Dens are 15 October – 15 May 300m. Setbacks during these periods include 800m horizontal distance and 300m minimum altitude.
Northern Mountain Caribou	Special Concern	Special Concern	Throughout the Mackenzie Mountains in open alpine and sub-alpine areas in summer, and montane spruce-lichen forest areas and river valley with shallow snow cover in winter.	The River valley and surrounding area provide essential habitat for the Northern Mountain Caribou. This area includes a portion of the South Nahanni Herd's calving, summer, and rut ranges, making it crucial for the herd's reproductive success and overall survival. Sensitive periods include 21 May – 15 October for South Nahanni Herd Summer and Rut Range and 21 May – 15 October for Northern Mountain Woodland Caribou Calving and Early to Midsummer Ranges. Minimum altitude for these sensitive periods is 600m.
Wolverine	Special Concern	Not at Risk	Found in a wide variety of habitats, from the boreal forest to alpine tundra and barren- lands.	Dens are 15 Oct - 15 May. Setbacks during these periods include 800m horizontal distance and 300m minimum altitude.
Horned Grebe	Special Concern	Not applicable	Small ponds, marshes and wetlands, either natural or man- made.	Horned Grebes arrive in the NWT in May. They lay five to seven eggs that hatch in mid-June and July. Adults leave the NWT by mid-August and young leave by early September.
Collared Pika	Special Concern	Not assessed	Collared Pikas mostly live in cool and dry mountain boulder fields, or talus, with nearby meadows. The boulders help shelter the pikas from weather and predators.	
Olive-sided Flycatcher	Threatened	Not applicable	In the boreal forest, typically young forests, including those created by forest fires or clear- cuts, and mature conifer stands near open areas containing tall trees or snags for perching.	The Olive-sided Flycatcher arrives in the NWT in late May and early June. Females incubate three to four eggs for about 15 days. The Olive-sided Flycatcher leaves the NWT in late July to early August and winters in South and Central America.
Short-eared Owl	Special Concern	Not assessed	In summer, nests on the ground in grasslands, tundra, bogs, marshes and other open (non- forested) areas	Short-eared Owls likely arrive in the NWT in April or May. They lay an average of seven eggs by mid-June and the owlets hatch in early July. Short-eared Owls probably leave the NWT by late October.
Bull Trout	Special Concern	Not applicable	Widely distributed, but in low abundance, throughout much of southern (Dehcho) and central (Sahtu) NWT in drainages west of the Mackenzie River.	

Common Nighthawk	Threatened	Not applicable	Nests in a variety of habitats such as sand dunes and beaches, open forests, forest clearings (including recently logged or burned areas), rocky outcrops, peat bogs, marshes, lakeshores, river banks, gravel areas (roads, quarries and flat gravel-covered roofs), and airports.	Common Nighthawks arrive in the NWT to breed in mid-May to early June. They lay two eggs directly on the soil, sand, gravel or bare rock. Chicks stay in the nest area for about three weeks and are primarily fed by the male
Peregrine Falcon	Not at Risk	Not assessed	Nest on sheltered ledges or crevices in cliffs near water, in areas with access to prey (mainly birds).	
Species	Risk Category (Canada Western Pop)	Risk Category (NWT)	Typical Habitat	Critical Timing
Rusty Blackbird	Special Concern	Not assessed	Throughout the boreal forest, in wetland areas during spring, summer and fall. Breed near open water in treed wetlands (bogs, fens and swamps), often in loose colonies. Primarily nest in small spruce trees.	Rusty Blackbirds live in the boreal forest of the NWT from early May to mid-October
Gypsy Cuckoo Bumble Bee	Endangered	Not assessed	Require host bumble bee nests, which are typically underground in abandoned rodent burrows. Females probably overwinter in soil, mulch or rotting logs.	
Traverse Lady Beetle	Special Concern	Not assessed	Use a wide range of habitats. Found on a variety of plants. Move around to take advantage of available prey (aphids and other insects).	
Little Brown Myotis	Endangered	Special Concern	Little Brown Myotis hunt flying insects in a variety of habitats, often over water. Summer roosts can include man-made structures (like attics), tree cavities, under the bark of trees, rock crevices and caves. Winter hibernation sites (also called hibernacula) are usually in caves or mines.	
Bank Swallow	Threatened	Not applicable	Nests on artificial and natural sites with vertical sand-silt banks such as riverbanks, lake and ocean bluffs, sand/gravel mounds, aggregate quarries and road cuts. A burrow is dug into the side of these sites, which leads to a nest chamber. Breeds near open habitats along rivers, streams, lakes and gravel pits where they search for flying insects.	
Barn Swallow	Threatened	Not applicable	Nests in man-made features such as buildings, garages, barns, bridges and road culverts as well as natural habitats such as caves and crevices in cliff faces. Breeds near open habitats, including meadows near wetlands, where they search for flying insects and can use mud to build their nests	

Red-Necked Phalarope	Special Concern	Not applicable	Breeds in low and sub-arctic tundra, or tundra-forest transition habitats. Nest-site typically found in grass-sedge vegetation near freshwater wetlands, lakes, ponds, rivers or streams.	The breeding season in the NWT runs from late-May to early-June
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There are no listed endangered plants or amphibians for the region.

4. Environmental

Rackla Metals acknowledges the proximity of its proposed activities to a protected region and is committed to conducting operations in an environmentally responsible manner. All activities will adhere to the following guidelines

1. Work in and around water bodies is to be conducted in a manner that minimizes the impact on aquatic life and habitat.
2. No waste is to enter any water body at any time.
3. All fuel caches must be located at minimum 100 metres from the Ordinary High- Water Mark of any water body unless approved by the appropriate regulatory authority.
4. The Howards Pass Access Road is zoned by Parks Canada as an area capable of accommodating a broad range of opportunities for understanding, appreciating and enjoyment of the parks heritage values and related essential services and facilities.
5. Hot springs discovered in the area will be given a designated buffer zone around the hot springs to prevent disturbance to sensitive habitats, and water quality will be regularly monitored to ensure no impacts from exploration activities.
6. Water intakes should be designed, equipped and operated in such a manner that prevents substrate disturbance or entrainment and fish mortality. Fish screens will be applied to the intakes of all pumps.
7. Equipment operating near water should be free of external fluid leaks, grease, oil and mud. All activities, especially maintenance and refueling, should be controlled in such a manner as to prevent entry into any water body of petroleum products, slash, debris or other deleterious substances.
8. Diamond drill cuttings will be stored in a sump, consisting of a natural depression, more than 100 metres from the Ordinary High-Water Mark of any waterbody unless approved by the appropriate regulatory authority. If no such natural depression is located in areas of mountainous terrain, a hand-excavated sump will be prepared to collect drill cuttings.
9. Drill sites will be completely reclaimed as soon as practicable after drilling. Casing will be removed (or cut at ground level if not removable), all materials including timbers, empty drums and garbage will be removed and the site will be marked with a picket. Reclamation will entail back-filling and re-contouring the drill site to its original contours. The re-contoured drill site will be re-seeded with an area-appropriate seed mix or allowed to revegetate naturally if no such mix is commercially available.

5. Archaeology

Archaeological sites are an important resource that is protected for their historical, cultural, scientific and educational value to the general public, local communities and First Nations. They are

non-renewable, very susceptible to disturbance and are finite in number. Impacts to archaeological sites must be avoided or managed by development proponents. The objectives of this document are to promote preservation of archaeological data while minimizing disruption of construction scheduling.

Rackla Metals understands that only a small fraction of the archaeological sites in the Yukon and NWT have been located and recorded and chance discoveries are possible.

1. Absolutely no work is to occur in areas of known archaeological sites. Great care will be taken to inform and educate drill crews in the area of archeological awareness.
2. If anyone discovers a possible archaeological site, they are to stop all activity in the area, record the site location and report the finding to the Project Manager immediately. The guidelines below should be followed by the Project Manager and information provided to the Prince of Wales Northern Heritage Centre in Yellowknife or the Heritage Resources Unit in Yukon.
3. The handling and/or removal of artifacts from any archaeological sites is strictly prohibited.

6. Discovery Guidelines

What to do if an archaeological site is found or suspected during the course of your work:

1. DO NOT disturb or collect any of the artifacts. They are to be left in place as they were found.
2. DO take two or more representative photos of the site with an appropriate scale marker.
3. DO describe the nature and extent of the site and any artifacts noted.
4. DO take a GPS reading of the site's location and record the datum used.
5. DO mark the location of the site on a 1:50,000 scale topographic base map.
6. DO record the date of discovery.
7. DO NOT share this information with unauthorized personnel.
8. The standard buffer zone from any find is 150 metres.

This information is to be sent to:

Territorial Archaeologist: Glen MacKay
Prince of Wales Northern Heritage Centre
Department of Education, Culture and Employment
Government of the Northwest Territories
4750 48th Street | P.O. Box 1320
Yellowknife, NT X1A 2L9 Canada
Ph: 867-767-9347 Ext: 71251
Email: glen_mackay@gov.nt.ca

<http://www.pwhc.ca>

6.2 Examples of Archaeological Evidence:

REDACTED

REDACTED

REDACTED

REDACTED

REDACTED

REDACTED

Human Remains:

Look for: articulated or isolated bones or bone fragments.

7. Monitoring

The proposed monitoring includes the following:

1. Wildlife Sightings Monitoring
2. Site Surveillance Monitoring
3. Wildlife Incident reporting

Details of the monitoring are described below. Work instructions and data sheets are provided in the appendices indicated below.

7.1 Wildlife Sightings Monitoring

Wildlife sighting logs provide a simple means for all staff to contribute to tracking wildlife activity at the project. The value of the data is limited as it is not systematically collected and contains repeated observations, but it can provide an indication of the potential for wildlife incidents or problem wildlife and areas of concern at the project.

7.1.1. Methods

Wildlife sighting logs will be posted at the project accommodations for staff to record observations of wildlife. All staff will be encouraged to add observations to the log, including the species, number, location and date of the observation. The Rackla Metals Project Manager will check the logs weekly for evidence of problem wildlife or problem areas that may pose a risk to wildlife.

7.1.2 Supporting Documents

Wildlife sighting/ Encounter Report (Appendix A).

7.2 Site Surveillance Monitoring

Site surveillance monitoring is intended to provide systematic and current information of wildlife activity at the project and will provide direct feedback regarding the effectiveness of wildlife effects mitigation. Examples of wildlife activities that will be documented through the surveillance

monitoring include presence of wildlife in areas where food may be available and use of buildings for shelter or nesting. Through systematically recording the presence of all wildlife within and around the project footprint, environment staff will remain apprised of current and emerging issues and will be able to manage issues as they arise.

7.2.1 Methods

Systematic tours of the project site will be carried out to record all wildlife observations or recent wildlife sign (e.g., tracks, scat). The monitoring will record the area surveyed, and the nature and location of all observations. The surveillance monitoring survey will include areas of the project where there is a risk of wildlife attractants (such as waste management areas) and/or a risk of wildlife finding shelter, denning or nesting. The survey will include a sweep for nests on project infrastructure during spring.

Surveillance monitoring will occur systematically at least once per week throughout any program, more frequently if necessary.

7.2.2 Supporting Documents

Rackla Metals Wildlife Surveillance Monitoring Procedures (Appendix B).

7.3 Wildlife Incident Reporting

Wildlife incidents refer to a range of possible occurrences at the project, including:

- human-wildlife interactions that present a risk to either people or animals;
- wildlife-caused damage to property or delay in operations;
- wildlife deterrent actions; and
- wildlife injury or mortality.

Rackla Metals will document all such incidents to prevent future incidents or escalation of problems, and report to ENR (Appendix C).

7.3.1 Methods

Documentation of wildlife incidents will include photographs, names of people involved, the nature of the incident, and supporting information such as the time, date, location, and follow-up actions that occurred.

7.3.2 Supporting Documents

Rackla Metals Inc. Wildlife Incident Procedure Forms (Appendix C).

Rackla Metals Inc. Wildlife Interaction Guidelines (Appendix D)

Appendix A

Wildlife Sighting/ Encounter Report



Wildlife Sighting/ Encounter Report Form

Species:

Number Seen (Exact or Estimate):

Date and Time of Day (AM/PM):

Location (GPS Coordinate or description relevant to features):

What was animal doing when sighted encountered (Healthy? Limping? Behavior? All specifics are helpful):

Other comments/ Interesting Markings (Feeding on something/ Injured):

Name of Observer and Contact Information:

Appendix B

Site Surveillance Monitoring Procedures



Wildlife Surveillance Monitoring Procedures

Objective

To prevent wildlife incidents through systematically documenting wildlife activity at the property.

Procedures

Surveys of the project for wildlife and wildlife signs will be completed at least once per week. Observers will travel to defined locations, and record the following at each:

- Time upon arrival at location / monitoring site
- Location or monitoring site
- Presence of wildlife or wildlife sign (Yes or No)
- Species or sign observed
- Number of individuals
- Activity
- Photo number (if photo taken)

Any relevant comments about the observation, or relevant information from people working at the location. Any reports of signs or observations of species from staff working in the area shall be recorded on the data sheets in the additional comments section on the reverse side of the data sheet. Photos of signs and wildlife should be taken where possible to help in identification of species after completion of the survey. Record the photo number on the data sheet and download and file the photos by date.

If no wildlife is observed, no signs seen and no reports of wildlife from staff, then an “N” should be recorded on the data sheet and in the database for that monitoring site / location.

Locations for Systematic Monitoring

The following areas / sites will be visited every day and logged once per week:

- All camp building (entire perimeter)
- Waste storage area (entire perimeter)
- Waste Burning Area (entire perimeter)

Follow Up

Any wildlife concerns that come to light during the survey should immediately be brought to the attention of the camp manager so that appropriate action can be taken. Any wildlife incidents observed or reported during this survey should be reported in the Wildlife Incident Report Form (see separate form). Reporting forms and a summary of findings are to be included in the Wildlife Monitoring Program Annual report to inform the need for adaptive management at site.

Rackla Metals Wildlife Surveillance Monitoring Form

Time	Location	Wildlife Present	Species or Sign	Number	Activity	Photo	Observations from people working at the location / Other Comments

Appendix C

Wildlife Incident Reporting



Rackla Metals Inc. Wildlife Incident Procedures

Wildlife incidents refer to a range of possible events, including:

- human-wildlife interactions that present a risk to either people or animals;
- wildlife-caused damage to property or delay in operations;
- wildlife deterrent actions; and
- wildlife injury or mortality.

The objective of wildlife incident reporting is to document and mitigate impacts to wildlife, reduce risks to people, and identify new mitigation.

Natural processes should be left alone, unless intervention is required to reduce risk to either wildlife or staff. Each incident requires unique responses, but each incident should be assessed to reduce or eliminate the chance that it will recur.

ENR should be contacted in case of problem wildlife, and prior to disturbing nests. Detailed wildlife incident reporting is critical for implementing adaptive management.

As part of the Wildlife Management Plan, all wildlife incidents are reported and reviewed to determine patterns in incident occurrences and to develop management procedures.

All wildlife incidents should be documented using the attached form. The report should include photographs and conversations with the individuals involved.



Rackla Metals Inc. Wildlife Incident Form

Date:

Time:

Individuals involved:

Species:

Number, gender, age:

Location (description):

Location (UTM):

Digital photo numbers:

Describe the incident or accident that occurred. Was there a threat to wildlife or human safety? What was the situation that caused it?

Describe any use of wildlife deterrents:

Describe any wildlife mortality:

Describe any communication with ENR:

What immediate measures were taken to reduce risk or harm?

What measures are recommended to prevent future occurrences?

Report prepared by:

Reviewed by Camp Manager:

Appendix D

Wildlife Interaction Guidelines

The main threats posed to field workers by wildlife are by:

- Black and grizzly bears
- Cougars
- Moose (mostly in rutting season)
- Animals with young.

In most instances animal attacks are provoked because the animal feels that its safety (or that of its young) is threatened, is surprised or is protecting food or territory. In rare cases, attacks may be provoked by animals with rabies. Working safely where these animals are present can be achieved by trying to avoid these circumstances.

Bears:

Bears present the highest threat to workers in the bush, however, most attacks can be prevented. The chances of surviving an attack and minimizing injury are good provided you keep calm. Because of their size, grizzly bears seem the most formidable; but remember, black bears can be as unpredictable and dangerous. In British Columbia, black bears are ten times more numerous than grizzlies.

Identification:

Black Bear

- Color: black, brown
- Weight: up to 300 kg (90-140 kg typical)



- Nose mask
- Straight profile
- Short claws

Grizzly Bear

- Color: combination brown, yellow
- Weight: up to 500 kg (180-270 kg typical)



- Dishd face
- Humped back
- Long claws

Habitat:

- Alpine – treeless, high-elevation settings are extremely important to grizzly bears, but little frequented by black bears.
- Subalpine – offers a variety of bear foods, including ungulates. Preferred travel routes are also found here.
- Forest – year-round home for black bears, but also frequented by grizzlies. Recent burns, clearings, highway edges, survey lines, etc. offer succulent new growth for food.
- Rivers and floodplains – generally have high bear activity in spring when bears descend from snowbound dens in search of food. During spawning season, fish are an important food source.



Range Chart (stippled area) for grizzly bears in Northwest Territories. Black bears frequent entire region. Polar bears may be found in the north coastal area of Yukon and Northwest Territories.

Control Measures:

- Avoid setting up camp near wildlife trails, spawning streams, or berry thatches.
- Find out about the area from local sources before entering. Local trappers, hunters, loggers, pilots, other explorers, and conservation officers will know the general location of recently spotted grizzlies and black bears.
- If flying in, do a reconnaissance flyover to identify any visible wildlife (especially in open terrain).
- Food storage should conceal odours, and if possible, be in bear-proof containers, some distant from quarters and general activity area.
- Bears are attracted to the odours arising from scented cosmetics, hair spray, deodorant, etc. There is no evidence of increased risk of attack to women having their menstrual period; however, use of tampons and extra caution are advised.
- Almost all dogs except well-trained bear dogs are detrimental in the bush, as they may encounter bears and lead them back to their owners.
- Under no circumstances should bears be fed.
- Keep wildlife officials informed; they may wish to deter or relocate curious bears that enter the camp area before they become conditioned to garbage availability or start to terrorize the camp.
- When possible set up camp in open areas where bears cannot use cover to give them security while approaching a camp.
- When possible, work camps should be enclosed in an electric fence or with a trip wire approach warning system.

Safety on Trails and Traverses - How to Avoid Bear Encounters

- Predict areas that you would expect to have high bear activity (e.g. burns, old camps and dumps, fish spawning areas, berry patches).
- Carry a spray can of bear repellent containing capsaicin - a red-pepper derivative which has been proven effective in deterring bears in a non-toxic, non-lethal manner. Keep the spray can in an

accessible place and be prepared to use it as required. Practise using the spray and be aware of wind direction so that you are not inundated by the spray.

- Make noise to alert a bear to your presence. Air horns are recommended in areas where bears are numerous. The sound from bells does not usually carry far enough to be useful.
- Yell several times before entering heavy brush.
- Keep a running track of climbable trees.
- Be alert to wind direction – expect to see bears upwind.
- Fly your traverse if possible, to check ahead for bears before you hike.
- Be alert to strange smells – bears do smell quite strongly, particularly when excited.
- Be alert for unusual behaviours of other animals, especially scavengers such as ravens and coyotes that may indicate the presence of carcasses.
- Be alert to signs such as droppings, footprints, uprooted logs, dug holes, carrion, and scratch or bite marks on trees.
- Never approach a bear cub even if it appears to be alone. If you come across a cub, retreat in the same direction from which you came.

What to Do if a Bear is Encountered:

In a non-defensive state, the bear will show little stress and may look your way with its ears perked. In this situation, speak to the bear in calm yet assertive tone and slowly back away. The bear may simply want to continue its path. However, should the bear be fixated on you and continues to approach, it may be ready to attack. Prepare your deterrent. It is important to make yourself as big as possible by standing on a rock or log and by waving your arms and shouting or speaking in an assertive tone.

A bear which is in a defensive state is one that feels threatened. Its intentions are not usually to attack, but to show dominance in order to remove the perceived threat. As in any bear encounter, stay calm. In this situation, do not provoke the bear by displaying a loud or aggressive behaviour. Instead, talk softly and back away slowly. If the bear approaches, use bear spray or a firearm. If the bear does charge and attacks, play dead by falling to the ground face down, protecting your neck and head. Stay quiet. When the attack has stopped, wait for the bear to leave before moving.

Like other mammals, bears have evolved postures and other signals to communicate aggression and reduce the need for violent confrontation.

Knowledge of these signals can help you interpret what the bear's next move will be and what action you should take. Stressed or aggressive signals include:

- chomping jaw actions.
- paw stamping and swatting.
- a variety of explosive vocalizations.

While making threats, the bear's ears will point forward, and it will watch closely for your response. Never run from or scream at a defensive bear – it may provoke or excite the animal and heighten the possibility of attack. Make every attempt to leave an avenue of escape open to a bear – it will feel threatened if cornered.

Always expect a variety of responses from a bear, including:

- a retreat.
- circling downwind of you.
- a slow approach or a charge.

As a precaution against wildlife, and in particular bear interactions, each Rackla Metals employee or contractor or partner representative will:

- Work in two-person teams
- Carry a charged handheld radio (per two-man team)
- Carry bear spray with the safety device easily and readily removed
- Carry a flare pen with bear bangers and signal flares.

In addition, an appropriate long-gun (rifle or shotgun) will be kept in camp for deterrent or defence in the event a persistent bear is encountered around the camp site. The firearm will be operated by an appropriately-licensed and practised member of the field crew.

Using Bear Spray:

If a bear is approaching and a threat is felt, fire two or three short bursts of spray between you and the bear while backing away. The spray will create a cloud of deterrent, which will probably stop the bear. If possible, ensure that enough spray remains in the can to spray the bear in the face at short distance if it continues to advance.

Using a Firearm:

If carrying a firearm, do not use it until it is certain that there is no other alternative. A wounded, adrenaline-charged bear is so dangerous that shooting should be the absolute last resort. Shotguns with rifled slugs are recommended.

Wait until the attacking bear is within 20 metres or closer if using a shot gun and preferably within 15 metres before squeezing the trigger because the bear may be bluffing. If it is not, the close range will increase the chance that your first shot will be disabling.

The first shot must be the best. Be certain that no one is in the line of fire. Bears attack on all fours, walking or running in a low crouch. They do not charge on just their hind legs. The figure below shows where to shoot a bear if you are forced to destroy it. One must have practiced a lot with shooting at moving targets to be able to hit and disable a charging bear. Remember, bear spray is easier to deploy effectively. The front and top of the head are not suitable targets, as the brain is only the size of an orange.

If it is necessary to shoot a bear, afterwards the Fish and Wildlife Branch or Conservation Officer Service in the area is contacted, identifying the sex, species (grizzly or black bear), and location of the kill, together with the circumstances concerning the shooting of the bear. Follow their instructions when disposing the carcass.

If a bear has been wounded, one has the responsibility to try and kill it, but under no circumstances should this be attempted alone. Be extremely careful, particularly if the bear must be followed into brush where it can squat and be very hard to see. Wounded or frightened bears almost invariably head for dense brush where they feel most at home, where their superior senses of hearing and smell are more useful than our superior

eyesight, and where it will be difficult to walk and handle a firearm. No one without a suitable firearm should help track down a wounded bear.

Areas of killing or disabling bears

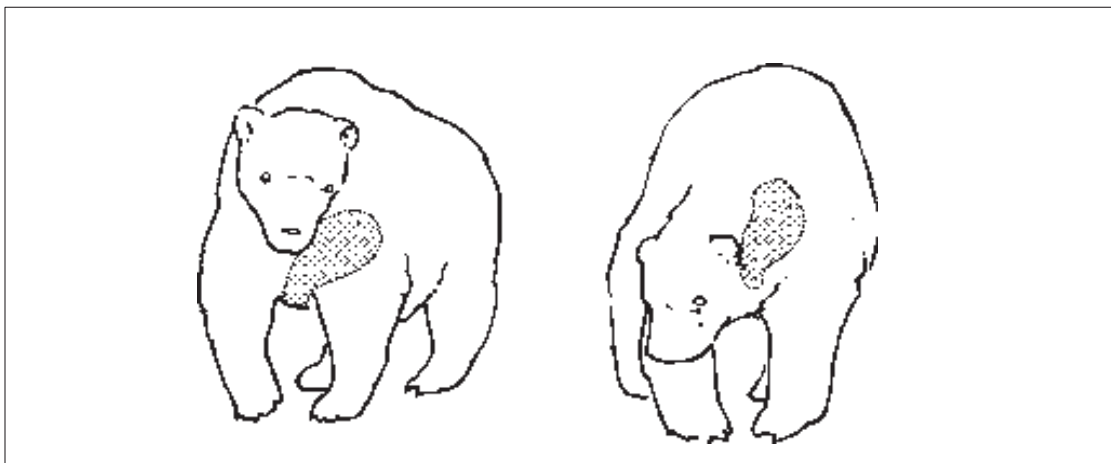
If Mauled:

In the unlikely event of a mauling, stay still, listen and try to assess the injuries received. While most bears move off, they may not travel far or quickly. After about five minutes, cautiously look around. Rationally decide the best course of action based on the nearest radio, the nearest help, first aid available, and amount of blood lost. The priority is to stop the bleeding. Apply pressure to the wound and look for something to wrap it with. Wrap firmly but loosen it if you get a pins-and-needles feeling.

Sit and think. Don't move until the blood has clotted. Drink the liquid in your daypack to help the body restore blood lost. If there is a lot of blood loss, one may be too dizzy to walk for help. If so, move a short distance, light a fire and sit down. After resting, gather more firewood, spread out the chopper flag, and prepare to spend the night.

At this time, the following precautions before leaving camp will be critical:

- the personal first aid kit is adequate.
- There are flares and a fluorescent-range chopper flag to alert aircraft.
- There is "buddy" with you or working close by.
- There are frequent radio-check times and so that the rest of the field crew will start a search.
- Someone knows your exact travel route and schedule.
- There are matches, emergency food, and a space blanket in the field kit.
- The rest of the crew is well-trained and care for your welfare.





Moose:

Moose frequent large areas of northern Canada. Commonly sighted, they are seldom perceived as a threat to humans, but be aware - charges from moose do occur, particularly from a cow moose protecting a calf (in spring), from an ornery bull, or a bull in rutting season (September). Although moose appear large and ungainly, they can move extremely quickly. If you encounter a moose, it is best to increase the distance between you and the moose, keeping a nearby tree in mind to either climb or keep between you and the moose.

In relatively densely timbered areas, you may avoid injury from an attacking bull moose by using closely spaced trees as a barrier. Stand behind trees spaced about one foot apart (i.e. too narrow a space to permit access by the moose because of the spread of its antlers).

Extra caution is required when driving as motor vehicle accidents involving moose are often fatal.

Cougars:

The cougar is the largest cat native to Western Canada and weighs on average between 45 to 55 kilograms. They are elusive and possess remarkable hunting skills. Cougars normally avoid humans; however, the frequency of attacks is increasing. These attacks are usually attributed to starving cougars. If you work where you know cougars are common, it is wise to carry a heavy walking stick to use if defensive action is required. If you come across a kill, leave it alone and do not bend over to examine the carcass. Leave the area calmly and as quickly as possible.

Two different scenarios may arise should you encounter a cougar:

1. You are being watched.

If you notice a cougar watching you, face the cougar, stand as tall as you can, and try to appear as large as possible – open your jacket. Back away slowly, still facing it. Do not crouch down or turn your back on it and **DO NOT RUN**. Climbing a tree will not help as they are excellent climbers and can easily drag you from the tree. Some say that staring down a mountain lion is folklore that actually works. So as long as you make eye contact, the cat is unlikely to charge. You may be able to diffuse the situation even further by yawning and showing the cat that you are bored with it!

2. The cougar is running at you.

If unarmed, there is probably little you can do but put your pack out in front of you to protect yourself, or protect yourself with an axe, club, or hammer. Try to inflict pain on the animal with your weapon or with a large stick or rock. A cougar's pain threshold is very low. Aim for the face and eyes. You must never run away as this behaviour triggers their instinct to chase. Throw rocks or branches at it. If you ward off an attack, treat any injury, assess the situation, and rationally plan your next move. Keep cool.