Environmental Management Plan

Angilak Property

ATHA Energy Corp. and its wholly owned subsidiaries

December 2025

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1. Introduction

This Environmental Management Plan (EMP) applies specifically to the Angilak Property (the Property or the Project) operated by ATHA Energy Corp. (ATHA) through its wholly owned subsidiaries. The EMP is in effect as of January 1st, 2026. This Plan shall be in effect from the date of issue of applicable land use licenses until the expiry of such licenses.

All employees and contractors working on the Property are to be aware of and follow this Plan. A copy of this EMP will be posted in an office on the Project. In addition, this Plan is available digitally on ATHA's internal network. The Project Manager can be contacted for a copy of this EMP. The purpose of the EMP is to outline ATHA's environmental policy and will be implemented to ensure that exploration activities at the Angilak Property are operating in an environmentally responsible manner.

The Angilak Property hosts a remote, early-stage uranium exploration project covering both Crown land and Inuit Owned Land in the Kivalliq Region of Nunavut. The Property is located at an approximate latitude 62° 31' North and longitude 98° 49' West or Universal Transverse Mercator (UTM) coordinates 508596mE and 6933106mN, North American Datum (NAD 83, Zone 14). Additionally, the Property is approximately 225 kilometres south-southwest of Qamani'tuaq (Baker Lake) and 350 kilometres west of Kangiqtiniq (Rankin Inlet). Authorizations for the use of land and water for the purpose of exploration have been granted by the Kivalliq Inuit Association (KIA), Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and the Nunavut Water Board (NWB). ATHA's proposed exploration programs are of limited scope and will be operated seasonally due to weather limitations. Further information on potential exploration activities undertaken at the Angilak Property can be found in the Non-Technical Summary.

1.1. Environmental Policy

As further articulated in ATHA's Health, Safety & Environment Policy Statement, ATHA endeavours to take every reasonable precaution toward ensuring the protection and conservation of the natural environment and the safety and health of all employees and contractors from any potential harmful effects of stored materials and operations.

ATHA is committed to:

- Ensuring all personnel and contractors adhere to ATHA's environmental policies, programs and procedures.
- Minimizing the risks to the health and safety of all employees.
- Complying with all applicable legislation and regulations.
- Assessing and mitigating potentially adverse environmental impacts.
- Advancing the Project in an environmentally and socially responsible manner which includes community consultation.
- Cooperating with relevant regulatory bodies and governments on all aspects of environmental protection and policy.

- Reviewing relevant plans, licenses and permits with employees and contractors when onboarded, and ensuring copies of the relevant documents are available at the Project site office for reference.

1.2. Training

Every person arriving at the Property is to attend an orientation, which includes information on health, safety, and environmental responsibilities and stewardship. This orientation is to be done upon first arrival on the Property, and annually thereafter. This orientation is to include training on relevant internal policies, management plans, and standard operating procedures and made familiar with the terms and conditions of the Project's licenses and permits.

In addition, employees and contractors working at the Project are to receive wildlife interaction training which will include bear safety. Bear safety information and material is to be available in a binder on site, including the Government of Nunavut published manual called Bear Safety-Reducing Bear-People Conflicts in Nunavut

2. Environmental Baseline Monitoring

ATHA has implemented an early-stage baseline monitoring program that is designed to build an understanding of the local and regional environmental attributes in areas being worked that are of legislative, cultural, economic and/or scientific importance. The attributes selected for study are also those that will benefit from the longest record of data collection. The program is designed to correspond to the current level of exploration and allows for rapid expansion or downsizing of monitoring studies as the exploration program changes in scope and scale from year to year.

The monitoring program will investigate up to seven biophysical components:

- Water Quality
- Meteorology
- Non-invasive, Observational Based Wildlife Monitoring
- Hydrology
- Fisheries
- Air Quality
- Terrain and Soil Quality

Additional biophysical components may be added as the program size increases over the years.

2.1. Water Quality

Representative sample sites have been established on water bodies focused around the Lac 50 exploration area, camp location and priority drill targets. Water is analyzed for hardness, metals, pH, total suspended solids, ammonia, nitrate, cyanide and alkalinity. Water quality sampling is conducted during drill programs. As ATHA's ongoing exploration program advance targets elsewhere on the Property, additional water quality sites may be added to the existing program to monitor any possible influence.

2.2. Meteorology

A fully automated Onset Hobo Weather Station with an OTT Pluvial Rain Gauge was installed on the Angilak Property in June 2010. Parameters recorded include: air temperature, relative humidity, total precipitation, barometric pressure, wind speed and direction. Meteorological data was collected regularly until 2014. Since then, data has been intermittently recorded manually and/or electronically, depending on the duration and scope of camp activity. Periodic interruptions are the result of damage to the station caused by extreme weather and wildlife interaction.

2.3. Fish and Wildlife Monitoring and Reporting

The objective of the fish and wildlife monitoring is to describe the fisheries and wildlife use of the study area and produce coarse-scale population estimates for valued ecosystem components (VECs) occurring in the study area. The current wildlife monitoring program consists of logging incidental observations of all wildlife encountered by field staff and noting any listed species or high priority VEC known to occur in the study area. The wildlife incidental observations will be included in the Annual Report to KIA, CIRNAC and NIRB. Fisheries Monitoring will include observational data collection using non-invasive techniques including eDNA and under approval from KIA and DFO licenses (ie. License to fish for scientific purposes) invasive techniques such as: gill nets, trap nets and electrofishing may be used to catalogue species abundance, quantity, health of fish and fish habitat use by life history. Predicted impacts to wildlife and wildlife mitigation measures can be found in section 5.

3. Environmental Impacts and Mitigation

ATHA acknowledges that the activities associated with early exploration have the potential to impact various aspects of the environment. The potential impacts to various abiotic components of the environment and their mitigation efforts are listed below.

3.1. Air and Noise Quality

Potential impacts on air quality resulting from activities on the Angilak Property include discharge of exhaust from airplanes and helicopters as well as generator and incinerator emissions. Exploration programs are generally small in nature and operated seasonally in the northern regions due to weather limitations. Due to the short duration of the program, the low-impact activities involved and the remote location of the property, measurable impacts to the air quality are not anticipated. As exploration program scope expands over the years, a dustfall collection program may be initiated to generate baseline air quality data.

Noise quality on the Angilak Property may be affected by airplanes, helicopters and generators which can disturb wildlife. Wildlife mitigation measures are outlined above in Section 4.2. If caribou and/or muskox are seen in the survey area, while a geophysical survey is being flown, different flightlines will be selected until they have moved away a safe distance (at least one kilometre). Helicopters are to maintain a minimum altitude of 610 metres in areas where wildlife is observed and are instructed to avoid caribou calving grounds on their way to or from the project area.

3.2. Vegetation, Soil and Permafrost Disturbance Mitigation

Vegetation on the Angilak Property mainly consists of moss, lichen, grass and saxifrage. Activities planned for the Property are considered to have relatively low impact and are predicted to have very little effect on vegetation, soil and permafrost.

Potential impacts to vegetation and soil on the Angilak Property include disturbance due to camp and exploration activities. The Angilak Property is located north of the tree line; therefore, line cutting is not required for exploration activities.

Mitigation measures to reduce the impact include limiting the amount of vegetation disruption to ensure proper shade coverage and reduction in the potential for ground thaw and subsidence. Footpaths can be marked using stakes and flagging tape to ensure that impacts to vegetation are confined to a small area or boardwalks can be built between camp buildings to reduce damage to vegetation on high-traffic footpaths. Areas that have patterned ground, clay-rich soil and or wetlands will be avoided. Heat radiating from camp buildings may thaw permafrost, so all heated camp structures will be slightly elevated above the ground to allow air circulation. Earth may be required to be moved in order to construct sumps in camp and at drill sites; however natural depressions and areas free of vegetation will be used whenever possible. Any topsoil moved will be collected to use in re-vegetation efforts. Any sumps required to be excavated will be backfilled and restored to the pre-existing natural contours of the land after no-longer in use or during final abandonment and restoration.

Soil quality can be impacted from hazardous materials spills and waste discharge. Refer to the *Spill Contingency Management Plan* for mitigation measures regarding the use, storage, transportation and disposal of hazardous materials and their waste products.

3.3. Groundwater Impacts

Drilling has the potential to impact the quantity and quality of groundwater. Disruption of flow, contamination from spills and an increased concentration of solids and metals are potential impacts associated with drilling activities.

ATHA is firmly committed to the protection and conservation of the natural environment including waterbodies and groundwater, and as such will implement a number of environmental policies and procedures to mitigate the impacts of drilling activities on groundwater quantity and quality.

- Drilling fluids will be directed into an appropriate natural depression, at least 31 m from the ordinary high-water mark of any waterbody to ensure direct flow into a water body is not possible and no additional impacts are created.
- If any artesian water flow is detected, the hole will be plugged immediately and cemented in bedrock to prevent continued flow.
- ATHA will ensure that the capacity of the watercourse or waterbody will be sufficient enough to allow for drilling water usage and will have no impact on lake level or flow.
- Drilling will utilize recirculation and filtration systems to minimize loss of water and drill additives.
- Non-toxic and bio-degradable drilling fluids will be used whenever possible.

- To minimize the risk of contamination from spills, ATHA will follow the procedures and policies regarding the use, storage, transportation and disposal of hazardous materials and their waste product outlined in the *Spill Contingency Management Plan*.

4. Non-Hazardous Waste

Proper disposal of non-hazardous waste is essential to reduce the environmental footprint of exploration activities and camp operations on the natural ecosystems. ATHA has identified and outlined the disposal methods for three major types of non-hazardous waste expected during operations:

- Inert Combustible Solids
- Inert Non-Combustible Solids
- Wastewater

In addition to proper disposal, ATHA engages in re-using and recycling materials whenever possible, to reduce the amount of waste generated. As a result, metal and wood are repurposed to their full extents.

Information on the storage and disposal of hazardous waste can be found in the *Spill Contingency Management Plan*.

4.1. Inert Combustible Solids

Inert, combustible solid waste will be incinerated in a dual chamber, fuel fired, forced-air incinerator in accordance with the Nunavut Environmental Guidelines for the Burning and Incineration of Solid Waste and Canada-Wide Standards for Dioxins and Furans. Ash generated from the on-going incineration will be stored in sealed 205 L drums. Ash drums will be removed from site regularly and backhauled for disposal at an authorized facility.

Table 1. Inert Combustible Solid Waste Sources and Disposal Methods

Waste Source	Disposal	Additional Comments
Food waste and packaging	Daily Incineration – ash will be stored in 205 L drums until backhauled for disposal	Regular incineration of food waste will ensure deterrence of wildlife
Paper and cardboard	Incineration – ash will be stored in 205 L drums until backhauled for disposal	Electronic communication encouraged to reduce paper waste
Unusable Lumber	Incineration – ash will be stored in 205 L drums until backhauled for disposal	n/a

4.2. Inert Non-combustible Solids

Inert non-combustible solid wastes are repaired and repurposed as much as possible. Once re-use is no longer possible, inert non-combustible solids are sorted and stored until they can be removed from sited and backhauled to an authorized facility for disposal. Examples of inert non-combustible solid waste include tires and other rubber materials, scrap metal, glass, electronics and other mechanical equipment.

4.3. Wastewater and Drill Cuttings

Wastewater from camp will be discharged into greywater sumps. A grease trap and screens will be installed on the kitchen drain to ensure grease and food solids do not enter the sump. The discharge pipe into the sump will be made inaccessible to wildlife. These grey water sumps will be located at least 31 metres away from a water body.

Naturally occurring depressions will be used as sumps for disposal of non-mineralized drill cuttings, located close to each drill pad, or at a centralized location when it is not feasible to use a sump at the drill pad (e.g., in winter months). When using a central sump, non-mineralized drill cuttings will be inspected for contamination of mineralized cuttings and any megabags used to transport the cuttings will be removed.

Information regarding the disposal of mineralized drill cuttings (uranium concentrations >0.05% or eU equivalent) and can be found in the *Radiation Hazard Control Plan*.

Table 2. Wastewater Sources and Disposal Methods

Waste Source	Disposal	Additional Comments
Camp greywater	Grey water sumps located at least 31 m away from a water body	Discharge pipe will be inaccessible to wildlife; grease trap and screen will be installed on the kitchen drain
Drilling greywater and non-mineralized drill cuttings	Centralized or in naturally occurring depressions close to drill pads	Uranium concentrations must be less than 0.05% or eU equivalent
Sewage	Incineration – ash will be stored in 205 L drums until backhauled for disposal	Pacto toilets are used to collect blackwater waste

5. Wildlife Impacts Mitigation

5.1. General Impacts and Mitigation

In developing mitigation measures toward the protection of wildlife, ATHA has identified three areas of potential impact to wildlife due to the presence of this Project:

- attracting wildlife
- habitat disturbance
- unintentional interactions and disturbances

Mitigation measures specific to the areas of potential impact listed above are outlined below.

5.1.1. Attracting Wildlife

Every effort will be made to ensure that wildlife is not attracted or encouraged to linger at the Project. This includes:

- Material handling practices – Petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) can attract wildlife. These materials, whenever possible, are to be stored in such a way that makes them inaccessible to wildlife.
- Waste handling practices – All garbage must be sorted, with food waste stored such that it is not accessible to wildlife. Food waste is to be incinerated daily to limit odors which could attract wildlife.
- Feeding wildlife is prohibited – All personnel, contractors or consultants are forbidden to feed wildlife.
- Keep lunches out of reach – Field crews and drill crews are to store lunches so that they are not accessible to wildlife. All food waste, wrappers and drink containers are to be brought back to camp for disposal, recycling and/or cleaning.
- Keep work areas clean and tidy – Field crews and drill crews are to keep the work areas free of litter and garbage. No food or beverage is to be dumped out or left behind, this includes contents of thermoses.

5.1.2. Habitat Disturbance

Activities planned for the Project are considered to be low impact and are predicted to have no, to very little effect on vegetation, soil and permafrost. Potential impacts to these ecosystem components on the Property include disturbance due to camp, trail construction and exploration activities, which are temporary in nature.

Progressive reclamation is to be practiced at the site, meaning that before an exploration program is considered complete, every effort is to be made to reclaim and restore the area to its original state. Refer to the ATHA *Abandonment and Restoration Plan* for more details.

Soil quality can be impacted by material spills and waste discharge. Refer to the *Spill Contingency Management Plan* for mitigation measures regarding spills.

Where possible, known wildlife dens and nests are to be avoided. The following buffers will be maintained between a den and all exploration activities during the period of May 1 and July 15.

- Wolves 800 m buffer
- Grizzly Bear 300 m buffer
- Wolverine 300 m buffer
- Fox 150 m buffer

For any potential new dens or nests discovered, a report should be made to the Project Supervisor including a picture of the suspected dwelling and GPS coordinates of its location. The Project supervisor is responsible for taking the appropriate actions to confirm the presence of and prevent disturbance to any new dens and nests. The coordinates of new dwellings will be recorded and preserved in order to assist with future Project planning. Potential new dens or nests will also be reported to NIRB, CIRNAC, KIA and the NWB as part of the Annual Reports.

5.1.3. Unintentional Interactions and Disturbances

The potential exists for unintentional wildlife interactions and disturbances despite best avoidance efforts. All employees and contractors will be trained in the appropriate actions to take when encountering wildlife and their dwelling sites in the field. Should a field crew happen upon nests or dens, the coordinates will be recorded and the crew will immediately vacate the area. These areas will be avoided until they are no longer inhabited and the interaction documented in the Annual Report submitted to CIRNAC (NWB), KIA and NIRB.

General exploration activities at the Property such as geochemical sampling, geological mapping, prospecting and airborne/ground geophysical surveys are generally very low impact. Geochemical sampling and geological mapping require no mechanized equipment and ground geophysical surveys do not require the use of any sizable or noisy machinery. As drilling activities may cause noise disturbances to passing animals, care will be taken to locate drill pads away from wildlife nests or dwellings.

Aircraft support is required to carry out daily operations at the Property. Helicopter support will be required for daily operations including pick up/drop off of field personnel and drill rig and fuel moves. Possible impacts that may arise from the use of aircraft include fuel spills and noise disturbance. Aircraft will maintain a flying altitude of 300 m above ground level (agl) or greater whenever possible. In areas where wildlife is observed, helicopters are to maintain a minimum altitude of 610 m agl. When low altitude flights are necessary, such as transporting personnel and equipment, pilots will be instructed not to land where wildlife is present unless it is an emergency situation. If a landing in the presence of wildlife occurs for any reason, it will be documented in the Annual Report submitted to the NPC, CIRNAC, KIA and NIRB.

To reduce the potential for fish entrapment, appropriate screens will be placed over all water intakes at camp and at the drill.

Project planning will involve engaging with Baker Lake and other relevant communities, frequent communication with the respective Hunters & Trappers Organizations (HTO), incorporation of Inuit Qaujimaningit into the Project planning and hiring local community members (approved by HTO's) as wildlife monitors to assist the company in greater wildlife disturbance mitigation.

5.2. Species Specific Disturbance Mitigation

5.2.1. Barren-Ground Caribou

The Angilak Property is within the range of the Qamanirjuaq and Beverly Caribou Herds, but is outside of critical caribou calving grounds, DIAND Caribou Protection Areas and does not contain any designated Freshwater Crossings. ATHA recognizes both the importance and sensitivity of caribou in the region and

is committed to preventing and minimizing potential impacts. Minimizing disturbance of caribou is to be done by following this Plan and adhering to all terms and conditions of licenses and permits, including, as applicable, following the Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) Caribou Protection Measures and the KIA's Mobile Caribou Monitoring Measures (both provided in Appendix III).

Surveillance and monitoring procedures used to detect and alert the presence of caribou at the Property include but are not limited to the use of the helicopter for surveillance while in transit and communication with the local HTO's and communities regarding caribou sightings in the area. All sightings of caribou will be reported to the Project Field Supervisor. Following consultation with local hunters, the KIA and authorization from the GN, to support long term monitoring and site wilde wildlfe observations, ATHA may use passive wildlife cameras. Reports of sightings will include the approximate number of caribou present, their location and direction of movement and general behaviour. These reports will be included in the Annual Report submitted to the NPC, CIRNAC, KIA and NIRB.

Other measures to mitigate potential impacts on any caribou that are present on the Property include, but are not limited to:

- Caribou avoidance as a priority mitigation measure.
- Aircraft will always maintain a minimum altitude of 610 m (2,100 ft) above ground level except during landing, take-off or if there is a specific requirement for low-level flying (e.g. airborne surveys).
- All flights lower than 610 m above ground level (e.g. airborne surveys) will be suspended, when safe to do so, in the presence of migrating and calving caribou.
- No construction or operation of any camp, fuel cache, or blasting will occur within ten (10) kilometres of any paths or crossings known to be frequented by caribou (e.g., designated caribou crossings).
- No drilling operations will occur within five (5) kilometres of any paths or crossings known to be frequented by caribou (e.g., designated caribou crossings).
- Activities will be suspended if concentrations of caribou (50 or more) approach within 2 km of drilling operations. Activities will not resume until all of the caribou have moved out of the area.
- A 1 km buffer zone will be used as a measure of a safe distance for working in areas where groups of caribou (less than 50) are present. If caribou groups come within 1 km of any work site, work activities will immediately cease until the caribou have moved safely beyond the buffer zone.
- No exploration activities conducted will interfere with caribou cows and calves. If caribou cows and calves become present in a work area, all activities that may interfere will cease.
- No exploration activities will cause a diversion to the migration patterns of any caribou.

ATHA will communicate with the Hamlets of Baker Lake and any other relevant communities, the respective HTOs and any other interested parties regarding caribou sightings and appraised movements in the area in addition to the Annual Report submissions provided to the NPC, CIRNAC, KIA and NIRB.

5.2.2. Muskox

Muskox may be observed on the Angilak Property area during exploration activities. Muskox may be in a weakened condition by late winter and vulnerable, especially breeding adults and young animals. Staff are not to approach or interact with muskox herds to avoid herd dispersion and displacement from calving

areas, which could have negative effects on muskox breeding. Critical time to avoid male muskox is during breeding season (August to September).

The GN recommends that field workers not approach muskox closer than 200 metres during the calving season (April to June). Similar to the Caribou Protection Measures, ATHA's work programs are to also cease the use of ground equipment/vehicles (drills, snowmobiles and ATVs) and aircraft overflights at altitudes less than 610 meters when muskox, especially when cows and calves approach operations.

5.2.3. Breeding, Nesting and Migratory Birds

Moving or disturbing the nest of a migratory bird is in contravention of the Migratory Birds Convention Act. The following mitigation measures are provided to prevent potential impacts on migratory birds. All ATHA employees, contractors and visitors will be instructed and must strictly adhere to the following:

- Approaching any birds or nests is prohibited.
- The nests or eggs of any birds are never to be moved or destroyed.
- Avoid disturbing nests and concentrations of birds by maintaining a 1.5 km buffer when in transit by aircraft.
- Measures will be taken to discourage birds from nesting on man-made structures.
- Flights will be minimized during periods of migration, nesting and moulting.
- A buffer zone of 3 km around areas used by flocks of migrating waterfowl will be established during migratory periods.
- Excessive hovering or circling over areas likely to have birds will be avoided.
- Migratory bird observations will be included in the Wildlife Observation logs and submitted with the annual reports to NIRB, CIRNAC, KIA and NWB.
- Any inadvertent disruption of migratory birds, nests or eggs will be reported to the appropriate authorities as soon as possible.
- Special care and concern will take place during migratory bird nesting periods in the area (mid-May – mid-August).
- If any nest is found, the location will be recorded, photographed and reported to the Project supervisor for further action.

5.2.4. Aquatic Life

The following practices are in place to ensure aquatic life will be protected on the Angilak Property.

- Working in and around waterbodies must be done in such a way that prevents disturbance to aquatic life and habitat.
- Waterlines are to be properly placed and screened in accordance with the *Freshwater Intake End-of-Pipe Screen Guideline* (DFO).
- No waste is to enter any waterbodies. This includes any discharge from any exploration camp.
- All sumps, fuel caches and camps are to be located at least 31 metres from the high-water mark of any waterbody unless otherwise approved by the appropriate regulatory authority.
- Fishing while conducting business on behalf of ATHA is strictly prohibited.

The Angilak Property does not occur in or near any aquatic species at risk or their critical habitat according to the *Aquatic Species at Risk Maps* provided by the Department of Fisheries and Oceans.

5.3. Species at Risk Mitigation

5.3.1. Grizzly Bear, Wolverine and Transverse Lady Beetle

All ATHA staff, contractors and Project visitors on site will be properly trained to identify species of concern, where they are most likely to be encountered, their sensitive timing windows, and the appropriate course of action in the case of an encounter.

Proper measures will be taken within camp, at drill sites and in the field to reduce the attraction of wildlife including proper storage and handling of food and waste.

All grizzly bears and wolverines, as well as their dens, will be avoided at all times by field crews.

If bears are present in the area, work is to cease until the bears have moved out of the area on their own accord. All human-bear or human-carnivore interactions and incidents are to be reported to the Government of Nunavut local conservation office as soon as possible.

Due to the lack of information regarding the presence of the transverse lady beetle in Nunavut, special care will be taken to report observations to relevant parties in addition to the Annual Report submission.

5.3.2. Red-necked Phalarope, Harris's Sparrow, Rusty Blackbird and Short-eared Owl

In addition to the mitigation measures in place for all migratory and nesting birds, the following considerations will be taken to protect the Red-necked Phalarope, Harris's Sparrow, Rusty Blackbird and Short-eared owl:

- All staff, contractors and project visitors will be trained on how to identify these birds and their preferred nesting grounds.
- If an employee, contractor, or Project visitor suspects they have encountered a bird of special concern or its nest, a report to the Project supervisor will be provided to determine the best course of action moving forward. The report will include the coordinates of the sighting, description of the bird or nest, and if possible, a picture.
- Confirmed nesting locations of these birds will be recorded and preserved for future Project planning and monitored accordingly to ensure no disturbance occurs. If necessary, a wildlife specialist will be consulted to establish further mitigation measures.

Table 3. Information Summary for Species at Risk

Species	Distinguishing Features	Sensitive Period	Habitat
Barren-Ground Grizzly Bear (*Ursus arctos*) 	• Noticeable shoulder hump • Light gold to black fur (lighter colors typical on Tundra)	October – May (hibernation and birthing) May – June (breeding)	Excavated Den – preference for sloped terrain with aquatic beds and low shrub land cover
Wolverine (*Gulo gulo*) 	• Looks like a "small bear" • Glossy, coarse fur (brown to black) • Pale facial mask, and tan-yellowish lateral body stripes • Long, busy tail	May – August (breeding) January – May (implantation, pregnancy and birthing)	Dens are located in talus boulders, eskers, under deadfall, or in snow tunnels
Transverse Lady Beetle (*Coccinella transversoguttata*) 	• Orange to red wings • Black band on wings with 4 elongated spots	Unknown	Generalists – no record of species in Nunavut but it is possibly present
Red-necked Phalarope (*Phalaropus lobatus*) 	• Breeding adults have a white throat with a reddish patch on the neck • Non-breeding adults are gray with a streaky back and black ear patches • Center stripe down tail	June – July	Shorebird preferring freshwater ponds, lakes and streams

Harris's Sparrow (*Zonotrichia querula*) 	• Larger than most sparrows • Black face • Pink bill • Black markings around the eyes resembling eye shadow	May – August	Dense vegetation of stunted conifers with interspersed shrubs
Rusty Blackbird (*Euphagus carolinus*) 	• Breeding males are dark, glossy black with a greenish sheen. • Breeding females are charcoal gray or silvery-gray • Bills are slightly curved and thin • Eyes are pale yellow for both sexes	May – July	Coniferous forests near wetlands
Short-eared Owl (*Asio flammeus*) 	• Active during daylight • Mottled brown bodies • Yellow eyes • Black markings around the eyes resembling eye shadow	April – August	Widespread and variable; largely open areas where they can perch in low trees or on the ground

6. Archaeological Sites

Disturbance mitigation measures will be taken to ensure that any known or undocumented archaeological or paleontological sites or artifacts are not disturbed. These include, but are not limited to:

- No staff, contractors or Project visitors will operate any vehicle over a known or suspected archaeological or paleontological site.
- No staff, contractors or Project visitors will remove, disturb, or displace any archaeological artifact or site, or any fossil or paleontological site.
- ATHA will immediately contact the KIA, CIRNAC and the Government of Nunavut Department of Culture and Heritage (CH) should an archaeological site or specimen, or a palaeontological site or fossil, be encountered or disturbed by any land use activity. A report will be prepared documenting the discovery and sent to the regulating bodies. Reports will include GPS coordinates, a brief description of the site and/or artifact and photos (if possible).
- All staff, contractors or Project visitors will immediately cease any activity that may disturb an archaeological or paleontological site if encountered during the course of a land use operation until permitted to proceed with the authorization of CH.
- All staff, contractors or Project visitors will follow the direction of CH in restoring disturbed archaeological or paleontological sites to an acceptable condition. If these conditions are attached to either a Class A or B Permit under the Territorial Lands Act CIRNAC's directions will also be followed.
- All staff, contractors or Project visitors will provide all information requested by CH concerning all archaeological sites or artifacts and all paleontological sites and fossils encountered in the course of any land use activity.
- If possible, when conducting till sampling, geological mapping, prospecting and/or ground geophysical surveys all relevant field personnel will have maps with any known sites marked.
- Before commencing any work where ground disturbance may occur, the area will be surveyed for the potential for archaeological or paleontological sites.
- Building of inuksuk is prohibited.
- ATHA will ensure that all persons working under its authority are aware of these conditions concerning archaeological sites and artifacts and paleontological sites and fossils.

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APPENDIX I

Reporting Contact Information

In the event of an archaeological or paleontological find, contact:

Nunavut Department of Cultural Heritage (CH)	**Phone:** 867-975-5500 **OR** 867-934-2046 **Fax:** 867-975-5504
CIRNAC Lands Administration	**Phone:** 867-975-4283 **OR** 867-975-4285 **OR** 867-975-4280
KIA Office	**Phone:** 867-645-5734 **Email:** LandsAdmin@kivalliqinuit.ca

For wildlife communication or in the event of a kill on IOL, contact:

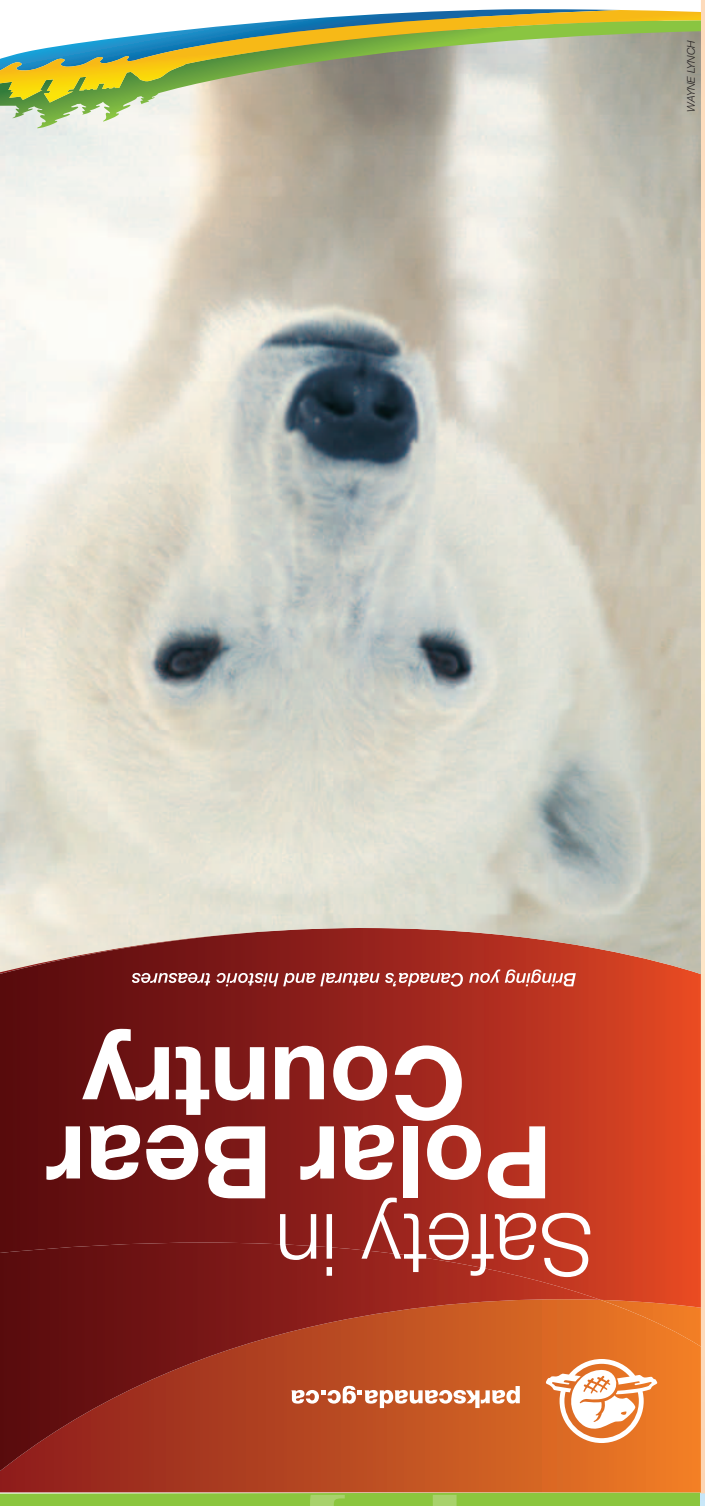
Baker Lake HTO	**Phone:** 867-793-252 **Fax:** 867-793-2034 **Email:** bakerlake@kivalliqhto.ca
Aqiaggiag HTO	**Phone:** 867-645-2350 **Fax:** 867-645-3257 **Email:** ranking@kivalliqhto.ca
KIA Office	**Phone:** 867-645-5734 **Email:** LandsAdmin@kivalliqinuit.ca

For interactions with carnivores and other problem wildlife, contact:

GN, Department of Environment Local Conservation Office – Baker Lake	**Phone:** 867-793-2944

APPENDIX II

Bear Safety Resources



Bringing you Canada's natural and historic treasures

Safety in Polar Bear Country

parkscanada.gc.ca

WAYNE LYNCH

Parks Canada Parcs Canada

Canada

ISBN: 978-1-100-16418-2 R62-342/2010E

Polar Bear CONSERVATION

Nanuq, the great white bear, is found in many of Canada's northern national parks and in some national historic sites. Wherever bears and people occupy the same area, conflict can arise. Polar bears and people have coexisted for thousands of years but contact between the two must be minimised to continue this legacy. Successful polar bear conservation requires your co-operation.

For your safety, and the safety of the bears, learn about safe travel in polar bear country and take precautions. By choosing to travel in polar bear country you not only accept the associated risks, but also the responsibility to alter your plans, actions and attitudes to accommodate these magnificent animals.

Report all polar bear sightings and signs to park staff, as soon as possible.

FOR MORE INFORMATION:

Auyuittuq National Park and Quttinirpaaq National Park
Box 353
Pangnirtung, NU X0A 0R0
PHONE: **867-473-2500**
E-MAIL: nunavut.info@pc.gc.ca

Sirmilik National Park
Box 300
Pond Inlet, NU X0A 0S0
PHONE: **867-899-8092**
E-MAIL: sirmilik.info@pc.gc.ca

Ukkusiksalik National Park
Box 220
Repulse Bay, NU X0C 0H0
PHONE: **867-462-4500**
E-MAIL: ukkusiksalik.info@pc.gc.ca

Torngat Mountains National Park
Box 471
Nain, NL A0P 1L0
PHONE: **1-800-922-1290** or **709-458-2417**
E-MAIL: torngats.info@pc.gc.ca

Wapusk National Park
Box 127
Churchill, MB R0B 0E0
PHONE: **204-675-8863**
E-MAIL: wapusk.np@pc.gc.ca

Western Arctic
Ivvavik National Park
Aulavik National Park
Tuktut Nogait National Park
Pingo Canadian Landmark
Box 1840, Inuvik, NT X0E 0T0
PHONE: **867-777-8800**
E-MAIL: inuvik.info@pc.gc.ca

Margo Supplies
A supplier of bear deterrents and warning devices.
www.margosupplies.com

SUGGESTED READINGS

Bromley, Marianne. 1996. *Safety in Polar Bear Country.* Northwest Territories Renewable Resources, Yellowknife. 24 pp.

Canadian Wildlife Service. *Hinterland Who's Who.* http://www.hww.ca/hww2.asp?id=99

Stirling, I. 1988. *Polar Bears.* University of Michigan Press. Available in soft cover from Fitzhenry and Whiteside, Markham, ON. 220 pp.

Safety in Bear Country Society. 2006. *Polar Bears: A Guide To Safety.* Available from Distribution Access, 1-866-999-5292. DVD.

CREDIT: *Bromley, Marianne. 1996.* Safety In Polar Bear Country. *Northwest Territories Renewable Resources, Yellowknife, NWT. 24 pp.*

This pamphlet was developed for national parks in the Arctic. Polar bears and bear encounters are more numerous in Ukkusiksalik and Wapusk National Parks than other Arctic national parks. Independent travelling in these parks is not recommended, but guided trips are available. Contact Ukkusiksalik or Wapusk National Parks for further information.

MORE about Polar Bears

Polar bears are the largest land carnivore in North America. An adult male typically weighs 300-450 kg, stretching 3 metres from nose to tail. They are strong, fast, agile on land or ice, and are expert swimmers and divers. Their sense of smell is exceptional, their eyesight comparable to a human's. Polar bears are naturally curious, not fearless as they have been labelled. They are shy and prefer to avoid confrontations with humans and other polar bears. Their primary prey is the ringed seal but they will also prey on birds, eggs, small mammals, and even humans. They also scavenge anything from beached whales to human garbage. In the heat of summer, polar bears may appear slow and docile, but they are capable of moving swiftly and with purpose.

SAFETY in Polar Bear Country

Each encounter with a polar bear is unique. Good judgement, common sense and familiarity with polar bear behaviour are required in all situations. This pamphlet provides guidelines for avoiding and dealing with polar bear encounters. For your safety and the safety of the bears, please read this pamphlet carefully and seriously consider the risks involved with travel in polar bear country. Further information is available in the DVD *"Polar Bears: A Guide to Safety"* developed by Parks Canada and the Safety in Bear Country Society.

After a *polar bear attack* or *encounter* follow this emergency check list:

1. **STAY CALM** and ensure you are safe.
2. Check that all people in your group are accounted for.
3. Call for help by radio or satellite phone. (Get contact numbers at your orientation to the park.)
4. Report location and time of incident.
5. Report number of people involved.
6. Report extent of injuries and property damage.
7. Report numbers and last locations of all polar bears involved in the incident.
8. Report reason for the attack if known (female protecting cubs, surprise, defending food source, etc.)
9. Report description of bears (male or female, size, markings, etc.)
10. Stand by to provide additional information to rescuers.

Polar bear behaviour is **very different** from that of **grizzly** and **black bears**.

Polar bears are predators, primarily hunting seals, while grizzlies and black bears mostly eat plants. As predators, polar bears will investigate humans, their camps and may even consider humans as a food source.

AVOIDING an ENCOUNTER

Ask Parks Canada staff about current bear activity. Some areas may be closed due to bear activity; obey written and oral warnings.

Be alert and aware of your surroundings. Scan all around with binoculars at regular intervals. Be vigilant! Watch for signs such as tracks, droppings, diggings, wildlife carcasses and polar bear dens.

Travel in daylight and avoid areas of restricted visibility. Be especially careful in areas along the coast, where a polar bear may be hidden behind boulders, pressure ridges (pushed up sea ice), driftwood or vegetation.

Travel in groups and stay together to increase your safety. The larger the group the greater the chances of deterring a bear.



Never approach a bear for any reason. Every bear defends a "critical space", which varies with each bear and each situation: it may be a few metres or a hundred metres. Intrusion within this space is considered a threat and may provoke an attack. Approaching a bear could be considered disturbing wildlife which is an offence under the National Parks Wildlife Regulations.

Never approach a fresh kill or carcass as polar bears will defend their food. Adult polar bears will often only eat the fat of beached whales, seals and other kills, but other bears may scavenge from these carcasses.

Never feed bears. A bear that finds food from a human source begins to associate humans with food. This can result in the bear losing its natural tendency to avoid people and becoming persistent in its search for human food. The consequences for you and the bear can be serious. A bear that associates food with humans is more likely to injure people and these bears may have to be relocated or killed. It is also illegal to feed any wildlife in a national nark.

Use sealed bags and containers or bear-proof canisters to store food and garbage. Pack out all garbage.

Eliminate or reduce odours from yourself and your camp. Avoid using scented soaps and cosmetics and avoid bringing strong smelling foods.

Consider hiring a guide if you are uncertain about your ability to deal with polar bears. Ask about their experience, how they will avoid encountering a polar bear and about plans of action should you encounter a bear. A larger group can also increase safety, ask about the size of group.

CHOOSING a SAFE Campsite

Avoid bear feeding areas.
A polar bear's primary food source is seal so these species are often found in the same places.

- **In fall, winter and early spring** most polar bears are on the sea ice hunting seals by the floe edge, open water leads and along pressure ridges. Bears and seals can also be found in places where the ice is thin or cracked, such as tide cracks in land-fast ice or at toes of glaciers. Seals can more easily maintain breathing holes in these areas.
- **In early spring,** females with cubs tend to hunt along pressure ridges and cracks in land-fast ice (particularly in bays) where seal birthing dens are found.
- **During the ice-free summer season,** when polar bears are forced ashore, they can be found anywhere but they generally hunt and scavenge along coastlines, beaches and rocky islands. Keep an eye on the ocean, polar bears are often well hidden when swimming.

Stay away from polar bear den sites.
Unlike other bears, there is no time when all polar bears are inactive in dens.

- **Maternity dens** are excavated by pregnant females in snow drifts on leeward (wind protected) slopes of coastal hills and valleys. In the Baffin Region, dens can be found at high elevations on snowfields and glaciers. Maternity dens are occupied from fall to early spring. The dens are inconspicuous, however, bear tracks leading to and from the site in early autumn or late spring or ventilation holes can indicate their presence.
- **Temporary dens** are excavated in snow drifts or pressure ridges by polar bears (males, females and females with cubs) that are active over the winter. The dens can be used as resting places or as temporary shelter from bad weather. They can be used from a few days to several months.
- **Summer retreat dens** are excavated during the open water season in the remaining snow banks or into the permafrost. These can also be at higher elevations on snowfields and glaciers or the valleys leading up to them. Male and female bears of all age groups use them to keep cool and avoid insect harassment.

Avoid camping on beaches, islands, along coastlines and on obvious movement corridors.

- Before making camp, look around for tracks or other signs of bear activity.
- Polar bears often travel along coastlines using points of land and rocky islets near the coast to navigate.
- In the summer, blowing sea ice may transport polar bears into coastal areas. Avoid areas where the pack ice is blowing in to shore.
- Valleys and passes are often used to cross peninsulas or islands and to move from one area to another.
- Polar bears travel and hunt along the edges of ice floes.

Camp inland on a butte or bluff with a good view of surrounding terrain. Avoid areas where bears might hide, such as blind corners, snow banks, pressure ridges and other places with visual impediments.

Set up tents in a line rather than a circle and maintain at least 5 metres between them. If a bear comes into camp, it will not feel surrounded and will have an avenue of escape without feeling threatened. Keep watch 24 hours per day. Take turns keeping watch during sleeping periods.

Do not sleep in the open without a tent. You may look like a seal and polar bears are very curious. People sleeping in the open have been attacked.

Cook at least 50 metres from your sleeping area in a place visible from your tent. Strain food particles from dishwater and store with garbage. Dump dishwater at least 50 metres from your sleeping area, rivers, streams and lakes.

Store food and garbage in bear-proof containers or sealed bags and containers secured under rocks within view of your tent. A permit is required to set up a food cache.
Placing pots on top may serve as an alarm. If you have a warning system, store your food within its perimeter. DO NOT store food inside your tent.

HANDLING an ENCOUNTER

Before your trip, discuss possible plans of action for dealing with bears in a variety of circumstances and be sure everyone understands. The actions of each individual either contribute to or detract from the safety of everyone else.

Every attack or encounter is different. To find out more about bear behaviour, hire a guide or talk to knowledgeable people in the community.

Stay calm, notify everyone in the group, be aware of your surroundings and assess the situation. What is the bear doing? What is the bear's behaviour?

If a bear does not know you are there:

- **quietly back away and leave the area** either in the direction you came or make a wide detour around the bear. Do not run, move quickly or make motions that might attract the bear's attention.
- **stay downwind,** so the bear cannot smell you and detect your presence.
- **keep an eye on the bear.**

If a bear knows you are there and shows signs of being curious, such as:

- moving slowly with frequent stops,
- standing on hind legs and sniffing the air,
- holding its head high with ears forward or to the side,
- moving its head from side to side, or
- trying to catch your scent by circling downwind and approaching from behind.

THEN:

- **help it to identify you as a human,**
- **wave your arms over your head and talk in low tones,**
- **move slowly upwind** of the bear so it can get your scent.

If the bear has been surprised at close range or shows signs of being agitated or threatened, such as:

- huffing, panting, hissing, growling or jaw-snapping,
- stamping its feet,
- staring directly at a person, or
- lowering its head with ears laid back.

THEN:

- **act non-threatening.** Do not shout or make sudden movements, which might provoke the bear. Never huff or hiss as this can cause a polar bear to charge.
- **avoid direct eye contact.**
- **back away slowly.** DO NOT RUN.
- **be prepared to use deterrents.**

If the bear shows signs of stalking or hunting you, such as:

- following you or circling you,
- approaching directly, intently and unafraid,
- returning after being scared away, or
- appears wounded, old or thin.

THEN:

- **fight back!** Use any potential weapon, group together and make loud noises.
- **DO NOT RUN.**
- **be prepared to use deterrents.**

If a bear charges:

- **stand your ground and be prepared to fight!** Focus on hitting the bear in sensitive areas, especially the face and nose if possible. Bluff charges are rare.

Never get between a bear and her cubs.

If a female with cubs is surprised at close range or separated from her cubs she will likely attack to defend her cubs.

- **leave the area immediately.**
- **stay in a group.**
- **fight back if she attacks.**



WAYNE LYNCH

Always leave an escape route for the bear.

Carry deterrents and know how to use them.

Report all bear sightings and signs to park staff.

CONTACT PARKS CANADA FOR MORE INFORMATION.

DETERRENTS

Reducing the threat posed by a polar bear during an interaction may be difficult. Non-lethal deterrents cannot be depended on to ensure safety. The best way to live safely with bears is to avoid contact with them.

Any potential weapon must be considered, such as skis, poles, rocks, blocks of ice or even knives.

Stay together as a group. This can be a deterrent and actions, such as making noise, jumping, waving arms, throwing things, may help to drive a polar bear away.

COMMERCIAL deterrents

- **Noisemakers** including air horns, pistol and pen launched bear bangers may scare a bear away.
- **Pepper spray** is effective against polar bears, but has some limitations. It must be warm enough to atomize and it must be used at close range. Also be aware of wind direction to avoid having the spray blow into your face.
- **Know how and when to use these deterrents and practice beforehand.**
- **Availability of commercial deterrents is limited in the north,** most will have to be purchased elsewhere and transported as dangerous goods.
- **Portable solar electric fences** may deter a bear at your campsite if properly installed and maintained.
- Contact Parks Canada for more information.

In Canada's national parks it is unlawful to possess a firearm unless you are a licensed guide or bear monitor with a permit. Consider hiring a guide or a bear monitor for increased safety. If you operate a guiding or outfitting business and wish your guides to be considered for a firearms permit, please contact the National Park or Site or Field Unit Office.

The exception to this regulation is for beneficiaries of the Inuvialuit Final Agreement, the Nunavut Land Claim Agreement, the Labrador Inuit Land Claims Agreement, the Nunavik Inuit Land Claim Agreement and any future land claim agreements, who can carry firearms when engaged in traditional activities within national parks within their land claim area.

WARNING systems

Set up a portable trip-wire or motion detector alarm system around your tent to alert you if a polar bear approaches your camp. Before leaving home, contact Parks Canada for more information.

You may wish to take a dog, but only one that has proven experience with polar bears. Several dogs are better than one. Know how to handle them. Keep them staked so they cannot run to you for protection and stake them downwind from your sleeping area. Be sure to clean up any dog food leftovers. Dogs must be under control at all times within national parks to avoid wildlife harassment.

Designate a bear monitor to keep watch if a polar bear might be nearby. Consider moving your camp if there is a bear in the area.

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Department of Environment
Avatiliqiyikkut
Ministère de l'Environnement

BEAR SAFETY

Reducing Bear-People Conflicts in Nunavut

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Prepared By: Tyler Ross, Sarah Medill and Bob Hansen

Safety

Some equipment designed to prevent and reduce wildlife damage is hazardous. It is especially dangerous to use the equipment in an unsafe manner or contrary to the manufacturer's instructions.

Users must correctly install and use all equipment as per manufacturer's instructions and provide regular maintenance of the equipment.

Those acquiring detection/deterrent equipment must acknowledge they use the equipment at their own risk and may have to sign a waiver of liability before taking possession of certain equipment when applied for through the Wildlife Damage Prevention and/or Compensation Programs.

If possible, contact a Conservation Officer before using any of the detection and/or deterrent equipment described in this resource.

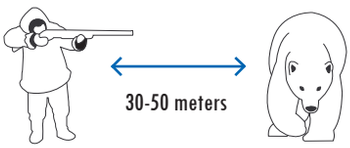
DETERRENTS

Rubber Bullets



Some bears are not deterred by noise. When noise is unsuccessful, rubber bullets are often the most effective alternative to lethal management. Less-lethal projectiles, such as rubber bullets, are used to inflict pain, creating a negative association with the situation and with humans. These rounds are designed to cause momentary discomfort and surprise; when used correctly they do not penetrate the hide or seriously injure the bear. Rubber bullets are effective between **30-50 meters (100-165 ft.).**

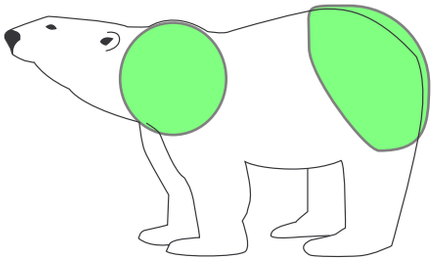
Load rubber bullets one at a time directly into the chamber of a shotgun with an open-choke (cylinder bore). Load the magazine with lead slugs (lethal ammunition) so you are prepared if the bear attacks. Do not use rubber bullets in semi-automatic shotguns, as the low powder loads in rubber bullets do not work properly with the action - rounds can jam and render the firearm useless. Use a pump-action shotgun with a chamber size of 2 ¾" or larger.



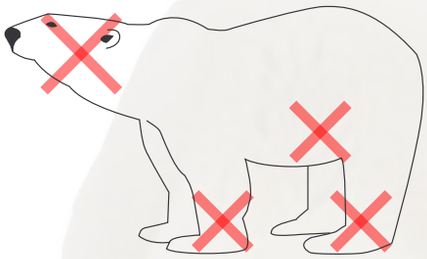
Call out to the bear before firing so that it associates you (humans) as the source of the pain. Make sure the bear has a clear path to escape.

Safety Precautions

- Do not shoot at people; it may cause death or serious injury
- Do not shoot at wildlife closer than 30 meters
- Have a lethal firearm present and ready
- Use only in recommended firearm (12 gauge shotgun with open choke)
- Do not use rubber bullets in semi-automatic shotguns, as the low powder loads in rubber bullets do not work properly with the action - rounds can jam and render the firearm useless



- Load rubber bullets directly into the chamber of a shotgun with an open-choke (cylinder bore)
- Aim for a large muscle mass, such as shoulder or rump
- Let the bear know your location before firing
- Make sure the bear has a clear path to escape



- Do not shoot for the head, belly, hindquarters, or lower limbs. This could severely injure the bear.

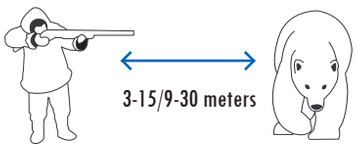
DETERRENTS

Bean-Bag Round

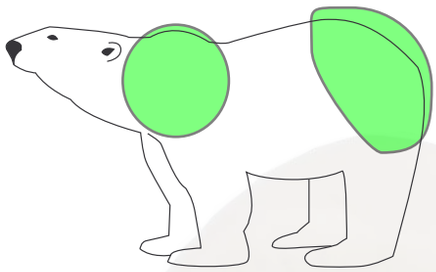


Similar to rubber bullets, bean-bag rounds are an effective alternative to lethal management. These less-lethal projectiles are used to inflict pain, creating a negative association with the situation and with humans. Bean-bag rounds are designed to cause momentary discomfort and surprise; when used correctly they do not penetrate the hide or seriously injure the bear. Bean-bag rounds can be used at close ranges: **3-15 meters (10-50 ft.).** A "standard round" is also available, which works at a longer range: **9-30 meters (30-100 ft.)**

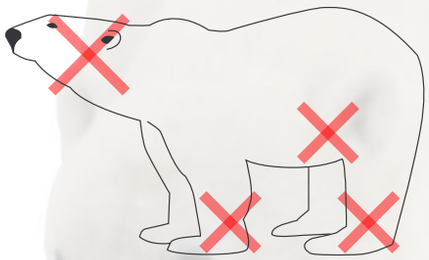
Load bean-bag shells one at a time directly into the chamber of an open-choke shotgun. Load the magazine with lead slugs (lethal ammunition) so you are prepared if the bear attacks. Do not use bean-bag rounds in semi-automatic shotguns, as the low powder loads in the shells do not work properly with the action - rounds can jam and render the firearm uses. Use either a hinge or pump-action shotgun with a chamber size of 2 ¾" or larger.



Call out to the bear before firing so that it associates you (humans) as the source of the pain. Make sure the bear has a clear path to escape.



- Load rubber bullets directly into the chamber of an open-choke shotgun
- Aim for a large muscle mass, such as shoulder or rump
- Let the bear know your location before firing
- Make sure the bear has a clear path to escape



- Do not shoot for the head, belly, hindquarters, or lower limbs. This could severely injure the bear

Safety Precautions

- Do not shoot at people; it may cause death or serious injury
- Do not shoot at wildlife closer than recommended
- Have a lethal firearm present and ready
- Use only in recommended firearm (12 gauge shotgun with open choke)
- Do not use rubber bullets in semi-automatic shotguns, as the low powder loads in rubber bullets do not work properly with the action - rounds can jam and render the firearm useless

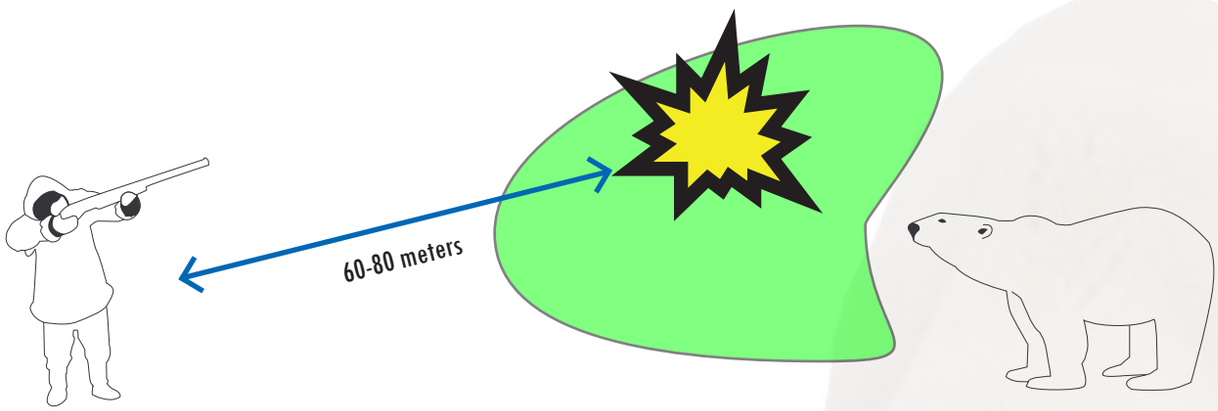
DETERRENTS

Cracker Shells

Bears dislike sudden loud noises. Cracker shells are fused projectiles that travel a certain distance before exploding. The abrupt loud noise creates a negative association with the situation and with humans. Most bears are scared off by cracker shells but others learn to ignore the noise, especially when there is nothing else to deter the bear or if there are attractants or food. 12 gauge Cracker shells are effective between **60-80 meters (165-ft.).**



When used properly, cracker shells cause no physical harm or discomfort to a bear. Load shells one at a time into an open-choke shotgun. Do not use cracker shells in semi-automatic shotguns, as the low powder loads in the shells do not work properly with the action - rounds can jam, making the firearm useless. Use either a hinge or pump-action shotgun with a chamber size of 2 ¾" or larger. Load the magazine with lead slugs (lethal ammunition) so you are prepared if the bear attacks.



- Do not shoot directly at the bear - **You want the shell to explode between you and the bear**
- Fire into the air at a **45 degree angle above the ground**, judging distance and wind speed/direction
- Judge your distance. **If the shell explodes behind the bear the blast may scare the bear towards you**
- Let the bear know your location before firing. If it does not know the source of the noise it may run in your direction
- Make sure the bear has a clear path to escape

Safety Precautions

- Do not shoot at people; it may cause death or serious injury
- Cracker shells pose a fire risk. Ensure that there are no flammables downrange
- Do not shoot at dry vegetation, gas products, or wildlife closer than 60 meters
- Have a lethal firearm present and ready
- Use only in recommended firearm (12 gauge shotgun with open choke)
- Do not use cracker shells in semi-automatic shotguns, as the low powder loads in rubber bullets do not work properly with the action - rounds can jam and render the firearm useless



DETERRENTS

Warning Shots

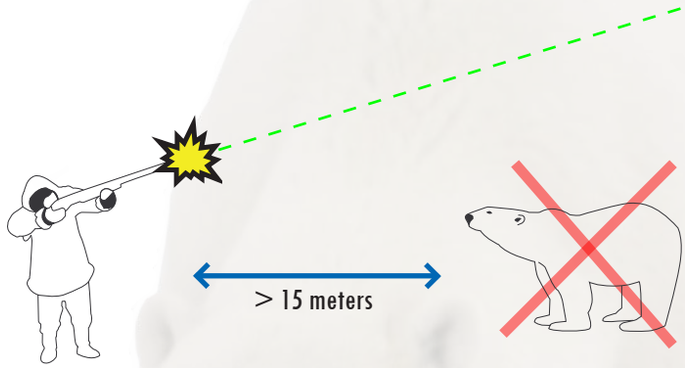


Warning shots create a loud abrupt noise at the gun's muzzle and a slight disturbance to the ground upon the bullet's impact. Shots fired from a firearm may scare a bear; however, some bears show little concern for warning shots and will continue to approach or remain in the area. Warning shots can also be a safety hazard for bears and people. Often bears are injured by ricocheting bullets intended to scare it away. Using a firearm to deter bears does allow for immediate use of lethal force.

Warning shots can be fired from any firearm that makes a loud noise when discharged. Keep track of the number of warning shots fired - each one fired means that there is one less shell or cartridge left in the firearm for you to use if you must shoot the bear.

Think about where you are shooting . Do not fire warning shots in the direction of people, communities, known campsites/ cabins, or other populated areas.

- Let the bear know your location before firing. If it does not know the source of the noise it may run in your direction
- Do not shoot directly towards the bear. Shoot in the air and to the side of the bear
- Make sure the bear has a clear path to escape
- If the warning shots are not working switch to another technique (other deterrents, yelling and/ or throwing things at the bear) - you do have a firearm if the bear turns its attention to you



Safety Precautions

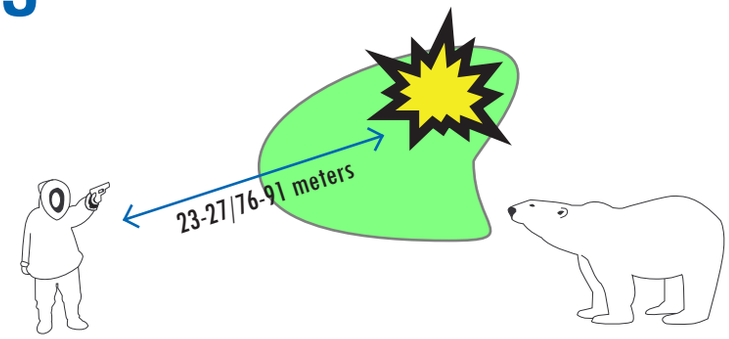
- Be conscious of where your warning shot will land - do not shoot at or near people, or objects off which a bullet may ricochet
- Do not shoot directly at wildlife
- Do not fire all rounds - you may need to shoot the bear if it turns its attention to you

DETERRENTS

15mm Scare Cartridges



Bear Scare Cartridges are 15mm projectiles that create loud noises when fired. The abrupt loud noise creates a negative association with the situation and with humans. Most bears are scared off by scare cartridges but others learn to ignore the noise, especially when there is nothing else to deter the bear or if there are attractants or food. 15mm cartridges are fired from a 'pistol launcher', which uses blanks to project the cartridge. There are three different types of bear scare cartridges:



Bangers - A flash bang cartridge that explodes, creating a sudden loud noise and flash of light. Bangers are effective between **23-27 meters (75-90 ft.)**

Screamers - Make a loud screeching sound while traveling through the air. In low light conditions they produce a strong visual effect. Screamers are effective between **76-91 meters (250-300 ft.)**

Flaming Whistles - Produce a loud whistling noise and a sparkling tracer effect as they travel through the air. Flaming Whistles are effective between **76-91 meters (250-300 ft.)**

Safety Precautions

- Do not shoot at people; it may cause death or serious injury
- 15mm scare cartridges pose a fire risk. Ensure that there are no flammables downrange
- Do not shoot at dry vegetation, gas products, or wildlife closer than recommended
- Have a lethal firearm present and ready
- This ammunition must only be used to deter nuisance wildlife or wildlife that is endangering human safety. If possible, contact a conservation officer before using this deterrent

- Fire into the air at a **45 degree angle above the ground**, judging distance and wind speed/direction
- Judge your distance. **If the shell explodes behind the bear the blast may scare the bear towards you**
- Let the bear know your location before firing. If it does not know the source of the noise it may run in your direction
- Make sure the bear has a clear path to escape
- Do not shoot directly at the bear - **You want the shell to explode between you and the bear.**



DETERRENTS

Pen Launcher

A different style of 15mm Bear Scare Cartridges can be fired from a 'pen launcher'. The cartridges are screwed into the end of the launcher one at a time; the thumb lever is then drawn back and released to fire the cartridge. A variety of signal and safety flares can also be fired from pen-type launchers. There are two different types of bear scare cartridges that can be fired from the pen launcher.

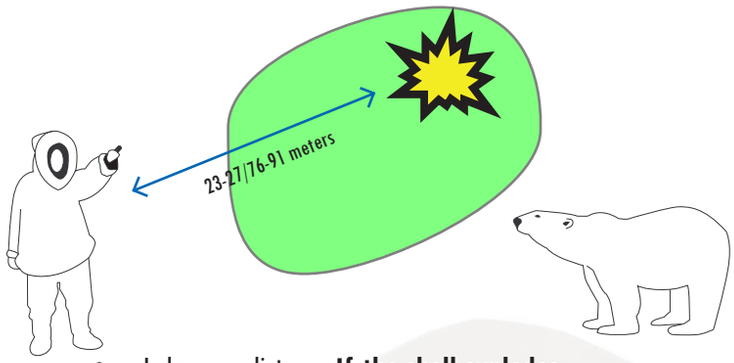


Salute Flares - Also known as Bear Bangers, these cartridges explode with an extremely loud bang after traveling approximately 125 ft. Salute Flares are effective between **23-27 meters (75-90 ft.)**

Siren Flares - Also known as Screamers, these cartridges make a loud high pitched screeching sound while traveling through the air. Siren Flares are effective between **76-91 meters (150-200 ft.)**







- Judge your distance. **If the shell explodes behind the bear the blast may scare the bear towards you.**
- Let the bear know your location before firing. If it does not know the source of the noise it may run in your direction
- Make sure the bear has a clear path to escape

Safety Precautions

- Do not shoot at people; it may cause death or serious injury
- 15mm scare cartridges pose a fire risk. Ensure that there are no flammables downrange
- Do not shoot at dry vegetation, gas products, or wildlife closer than recommended
- Have a lethal firearm present and ready
- This ammunition must only be used to deter nuisance wildlife or wildlife that is endangering human safety. If possible, contact a conservation officer before using this deterrent



DETERRENTS

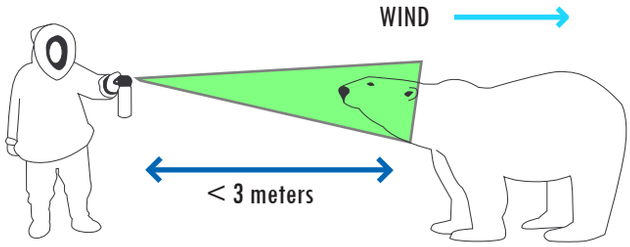
Pepper Spray



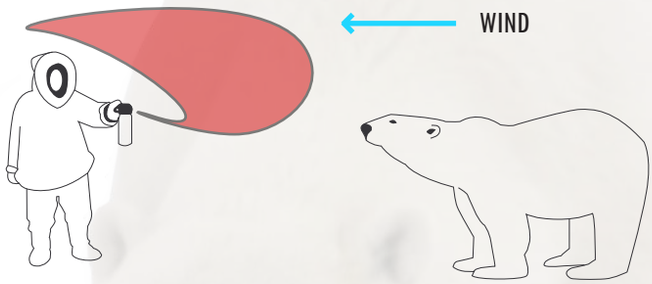
Pepper spray, also known as capsicum spray or bear spray, is a chemical deterrent that causes temporary burning, tearing and swelling in the eyes and nose, and inflammation of the throat and lungs, which restricts breathing to shallow gasps. It also causes severe irritation to the surface of the skin. These effects are only temporary and cause no permanent damage to bears, or people who accidentally come into contact with the spray. Unlike other projectile deterrents, pepper spray is only effective at short distances: **< 3 meters (165- ft.)** Therefore, it should only be used as a last resort.

Pepper spray does not work well in damp, rainy or cold weather. Keep the canister in a holster under your jacket to keep the canister at an effective working temperature.

Pepper spray is not a repellent - it will not keep bears from investigating or damaging property.



- Remove the "safety wedge"
- Discharge the pepper spray with the wind at your back
- Aim for the animal's face, specifically the eyes, nose and mouth
- Leave the area immediately after using the pepper spray



IMPORTANT

Judge wind direction - do not discharge the pepper spray into a head-wind, as it may blow back into your face

Safety Precautions

- Do not use on people; it may cause serious injury
- It is illegal to use pepper spray for any purpose other than defending yourself from an animal attack
- Do not use in cabins, tents, vehicles or other enclosed areas, as it will incapacitate the user(s)
- Effects are only temporary and a predatory bear may resume its approach once it has recovered
- This product must only be used to deter nuisance wildlife or wildlife that is endangering human safety. If possible, contact a conservation officer before using this deterrent



Bear reacts to pepper spray - © Bob Saunders

DETERRENTS

Noisemakers

Noisemakers can be considered anything that makes loud, unfamiliar noise. Commercial products such as rattlers or air horns are available for purchase. However, simple home solutions are also effective; pots and pans, banging on the walls of a shed or cabin, etc. Use whatever is available to you.





Noisemakers are a simple, first level deterrent. However, bears quickly become accustomed to sounds when no other negative effect is present. Have other deterrents or a lethal firearm present and ready in case the noisemakers are ineffective.





Safety Precautions

- Do not use sirens or horns on/near people; it may result in hearing damage or loss
- Have a lethal firearm present and ready
- Use noise makers when bears show interest in your camp, cabins, or persons

DETERRENTS

Electric Fencing

Electric fences deliver a shock to bears that come into contact with the wires. The shock causes momentary surprise and discomfort. The effects are only temporary and cause no permanent damage to bears, or people who accidentally come into contact with the wires.

Alternating positive and negative charges between wires will deliver a shock even on dry ground or rocky conditions. Permanent fences can be erected to protect outpost camps, cabins, caches, etc. Portable fences can be used at temporary camps.

Fence charging units can be recharged either by generators or by solar power. Fences do require regular maintenance and monitoring to ensure that an appropriate level of charge is being delivered. When snow begins to accumulate they may become grounded out or buried.

Consult the manufacturer's guidelines for safety and installation instructions.



A permanent high tensile electric fence and a solar-powered charger



Temporary electric fencing around a camp site

Safety Precautions

- Have other deterrents and/or a lethal firearm present and ready in case the fence is damaged and/or ineffective
- Follow the manufacturors guidelines for instilation, operation and maintainance

DETERRENTS

Vehicles



Bears are less of a risk to people who are travelling by all-terrain vehicles (ATV), snowmobiles, on-road vehicles (cars and trucks), boats or aircraft. When chasing problem wildlife away from people and/or property, consider the following when traveling with a vehicle:

- Do not depend entirely on your vehicle for protection. If it breaks down you may be forced to stay on the land longer than you anticipated, or you may have to travel on foot
- If a bear is approaching, and it is safe to do so, start the engine of your ATV, boat, or snowmobile. The noise and/or movement may encourage the bear to leave
- Do not use your vehicle as an excuse to approach wildlife. This includes watching bears and other wildlife at garbage dumps The more experience a bear has with any deterrent the less effective it becomes.
- Do not use your vehicle to chase an animal if the terrain makes it unsafe to do so. Do not chase a bear with your vehicle while towing a trailer or sled. You may need to stop and turn abruptly.
- If using a helicopter stay 100m behind the bear and 30m above the ground, in this position, drive the bear towards an obvious, or desired escape route



Safety Precautions

- Never chase a bear if you are unarmed. If your vehicle breaks down you may be vulnerable
- Remain at a safe distance
- Do not chase a bear alone. Have a second person present, following in an additional vehicle if possible
- Vehicles must only be used to deter nuisance wildlife or wildlife that is endangering human safety. If possible, contact a conservation officer before chasing any animal

WARNING

Bears, particularly during the summer, may overheat and die from the stress and overexertion caused by a fast and/or long chase

Wildlife Act - Section 74 - Pursuit of a wild animal

(1) No person shall chase, weary, harass or molest a wild animal

(2) A person does not contravene subsection (1) by lawful harvesting

(3) Notwithstanding anything else in the Act, a person may use a vehicle to chase a bear away from a dwelling, municipality, camp or settlement or its immediate vicinity if it is necessary to defend life or property and may avoid killing the bear

DETECTION

Dogs



A trained dog and an experienced handler can effectively detect and deter bears. Certain breeds of dogs, such as the Canadian Inuit Dog (sled dog), the Blackmouth Cur and the Karelian Bear Dog, are well known for their ability to avert bears and chase them from areas where they may come into contact with people. Regardless of the breed, it is important to know beforehand how your dog(s) will react to an approaching bear. An inexperienced dog, or one which fails to warn of an approaching bear, is more of a hazard than a help.

Dogs used to detect and deter bears should not be treated as pets and are best kept on a leash when travelling, or chained outside of tents and/or cabins. A loose dog may not be useful in you encounter a bear, as the dog could run away.

Dogs are naturally pack animals and may be more confident when two or more are kept together for bear detection and defense. A small group of dogs may be able to chase and scare a bear from the area, creating an unpleasant encounter that may discourage the bear from returning. A single barking dog may be enough to prevent a bear from approaching a camp. However, some dogs may not bark at bears when tied up because they may feel vulnerable to an attack.

Additional care must be taken when travelling on the land with a dog. Dog food can attract bears; uneaten food should not be left out overnight and care should be taken to ensure a dog does not cache uneaten food around camp.





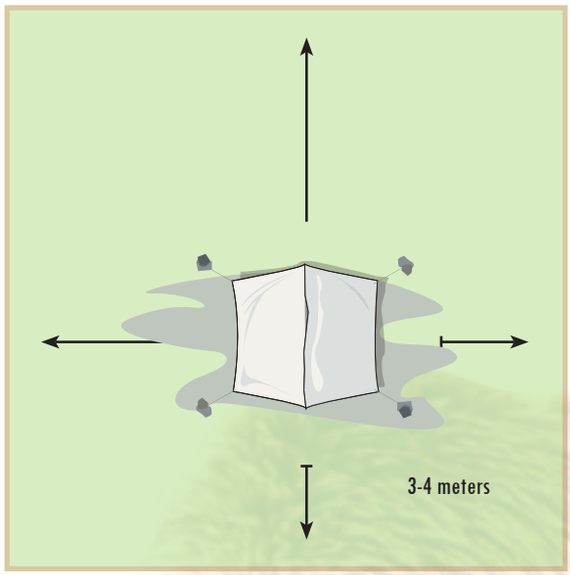


DETECTION

Tripwire Fences

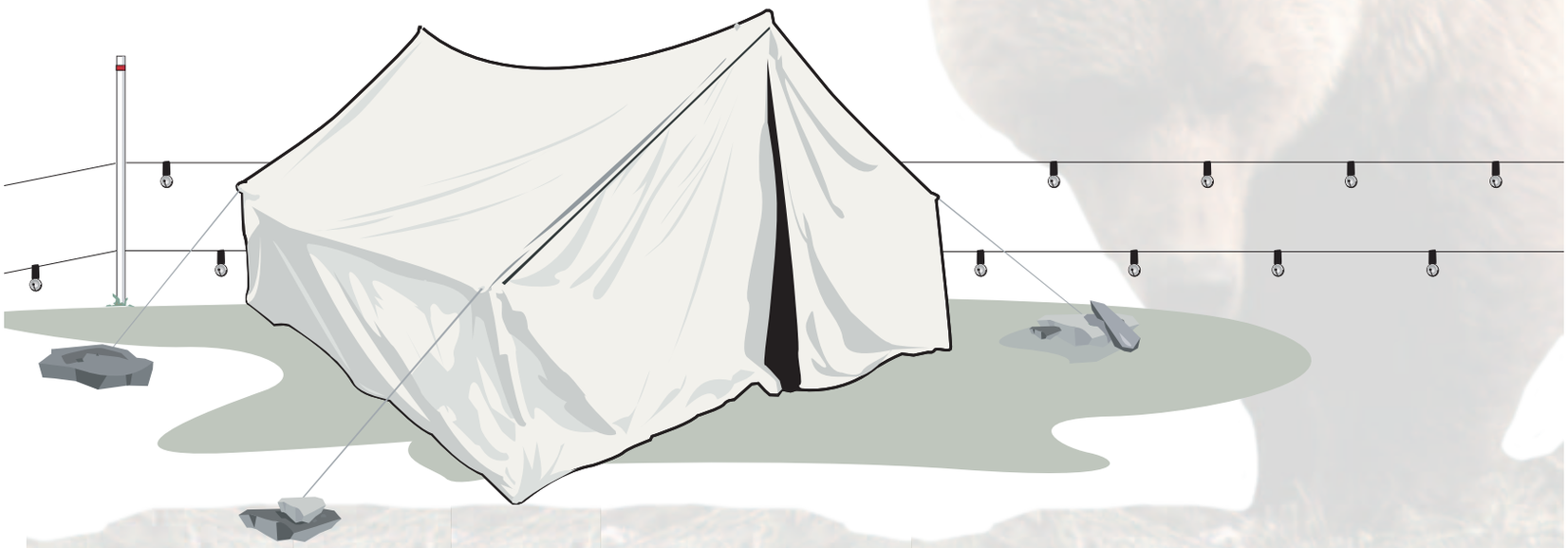
Tripwire fences can provide advanced warning of an approaching bear. In some cases the noise produced by a tripwire fence may be enough to deter a bear. However, they are intended to be a means of detection, and you should always carry additional deterrents or firearms. Tripwire fences can be as basic as setting up a rope with noisemakers (pots and pans, bells, etc.) attached at various points. There are also commercially available models that, when triggered, set off loud sirens and lights.





The fence should be set a height that cannot easily be stepped over, or passed under by a bear.

Tripwire fences, whether homemade or commercially purchased, should be placed at a distance of several meters around your camp in order to allow for easy movement and enough time to react to an approaching bear.

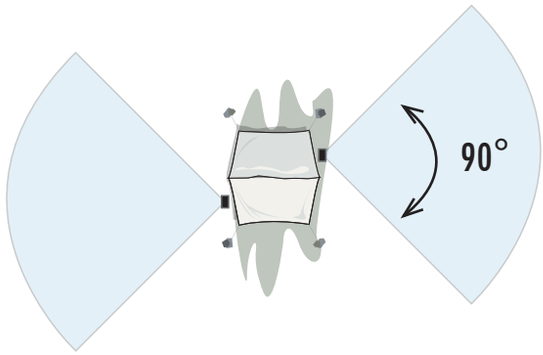


DETECTION

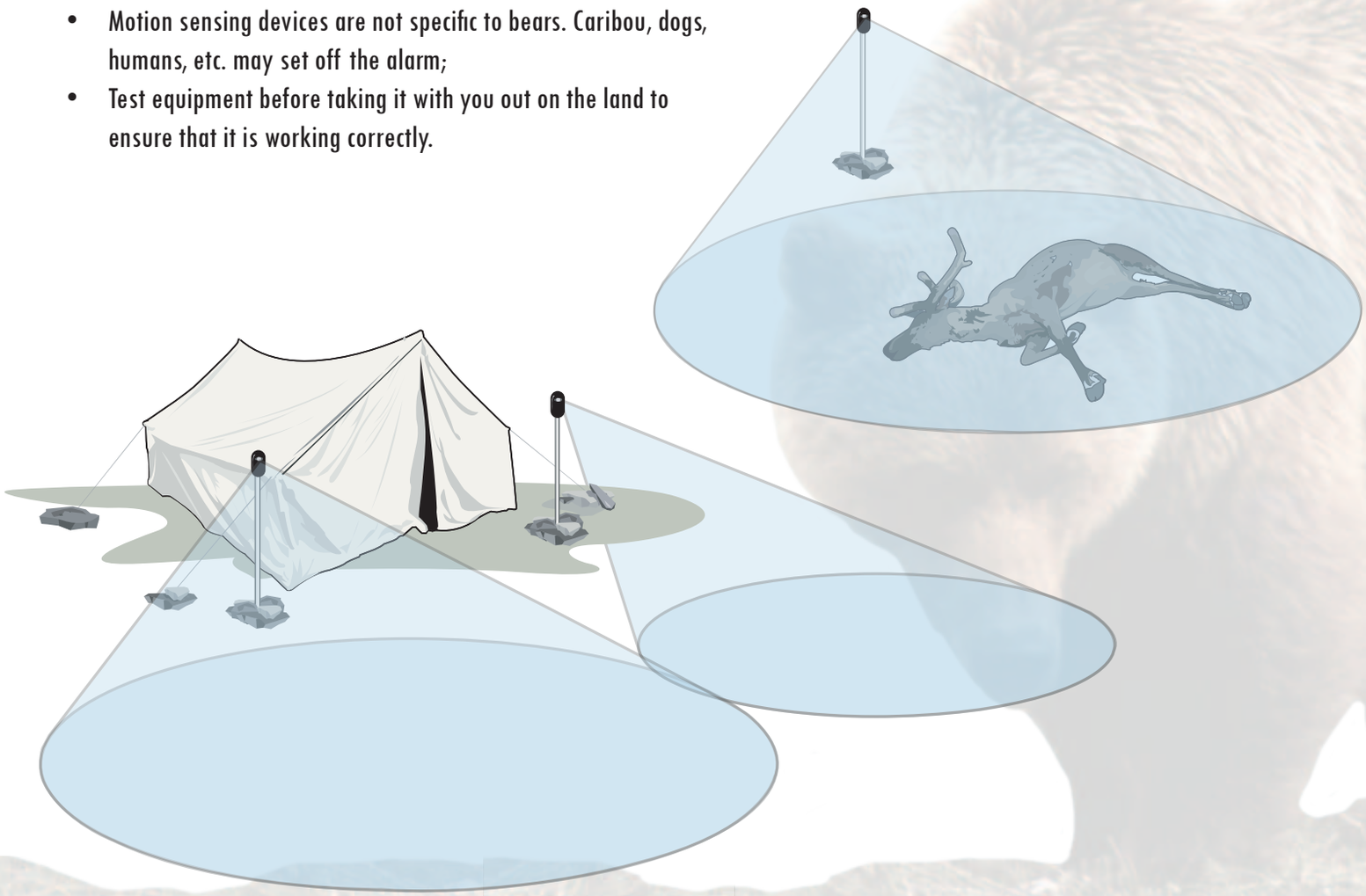
Motion Sensing Devices



Commercially-made devises are available that set off alarms and flashing lights when heat and movement are detected. Most motion sensors detect movement within 40 meters of the unit, but only in the direction in which the sensors face. There may be issues with short battery lifespan in periods of cold weather.



- Lights and sirens may be enough to scare away some curious animals but not all animals will be deterred;
- Detection systems are meant to alert you that animals have entered the protected area;
- You must be prepared to deter the animal with other methods;
- Motion sensing devices are not specific to bears. Caribou, dogs, humans, etc. may set off the alarm;
- Test equipment before taking it with you out on the land to ensure that it is working correctly.



CAMP SAFETY

Tent Camping

When choosing where to camp, safety should be your top priority. Regardless of whether you are in polar bear or grizzly bear habitat, you should choose campsites that meet the following criteria:

- Ensure that you have a clear view of the surrounding area;
- Avoid camping in areas with bear signs (scat, tracks, hair, daybeds, and kills);
- Avoid camping near rushing water and waterfalls - water features can make it difficult to hear approaching bears and may make it difficult for a bear to hear you and your deterrents;
- Place camps well back from any coast, river bank, flow edge, pressure ridge, or open water as these are likely travel/hunting routes for bears;
- Valleys and passes are also more frequently used and may contain more of the bear's natural food than higher ground
- In the summer, remnant snow banks can attract bears as it provides a cool place to rest and an escape from nuisance insects;
- Do not camp near animal carcasses or areas of recent whaling or havest;
- Avoid preexisting campsites if they are littered. Visitors before you may have allowed a bear access to food or garbage, which increases the likelihood of future bear problems in that area.



Tents surrounded by a temporary electric fence.



CAMP SAFETY

Cabins

When staying overnight in cabins the same care should be taken to reduce the chance of attracting a bear to the area; this means proper handling of food and garbage. Failure to maintain a clean cabin may result in a bear approaching the area looking for food.

- Cooking areas (inside or outside the cabin) need to be kept clean. Cooking stoves and other equipment must be kept free of grease;
- If possible, maintain seperate sleeping and food storage/cooking areas;
- Honey buckets should be emptied daily into the latrine;
- Bear deterrents should be at hand;
- Having a flashlight or other lights may be helpful. Remember that if you leave a lit building into the darkness it is difficult to see. Exterior lights can make working in and around the cabin safer in the dark season;
- Be careful when exiting the cabin and look around for bears;
- Consider using additional detection and deterrent systems to protect yourself and your cabin.



A cabin window covered by a bear board



(Above) Barrels with a metal ring and lever/bolt system provide reasonable resistance to bears. These containers are ideal for storing or transporting large quantities of food (or wastes) and other attractants for longer stays at camps or cabins.



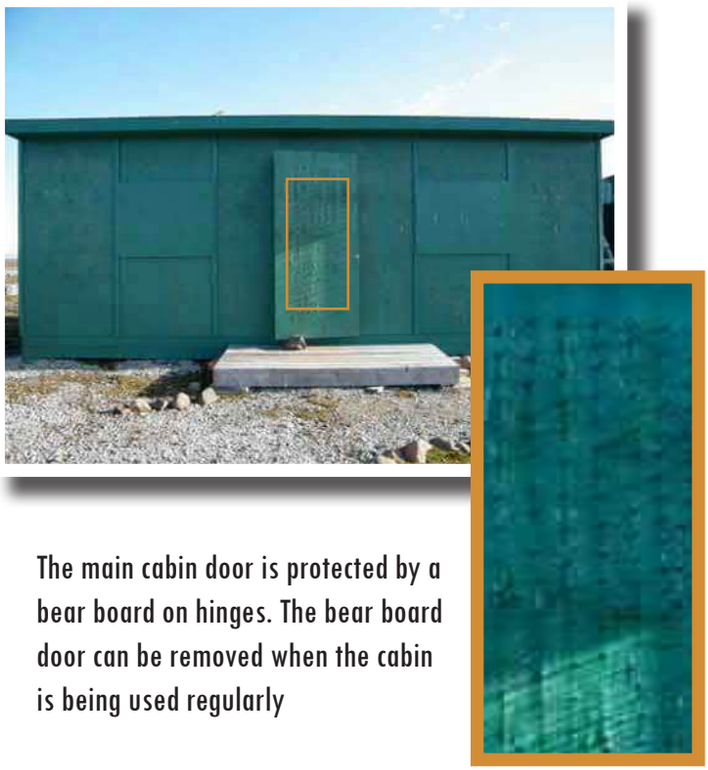
(Left) A metal, bear-proof box that can be used to secure country foods and waste from bears. These boxes are well-suited for use around homes and permanent camps.

CAMP SAFETY

Cabins

When cabins are unoccupied for a period of time, special considerations should be taken to prevent damage from bears.

- Treat grey water and latrines with lime and bury with earth;
- Remove any attractants (food, garbage, dirty clothes, oil, anti-freeze, fuels) or store them in a bear resistant or airtight container;
- Bears have been known to chew on inflatable boats, plastic gas cans, sleeping bags, tents, and snow machine seats. These should be made inaccessible;
- Board windows and doors for extra protection to prevent bears from breaking in. Bears often gain entry by pushing on the doors or windows;
- Build “bear boards” by driving plenty of nails or screws through plywood so that $1^{1/2}$ - 2 inch points are exposed on the outside of the board. This will discourage a bear from pushing on windows or doors;
- To maintain year-round emergency access you can still secure a “bear board” on the doors and windows, allowing them to be opened by human hands only. The boards can be removed when staying at the camp to prevent injury or damage to clothing;
- When bear boards are placed on vertical surfaces you reduce the risk of severe injuries to bears. Also, they remain in place and work when snow buildup might make boards placed on the ground ineffective.

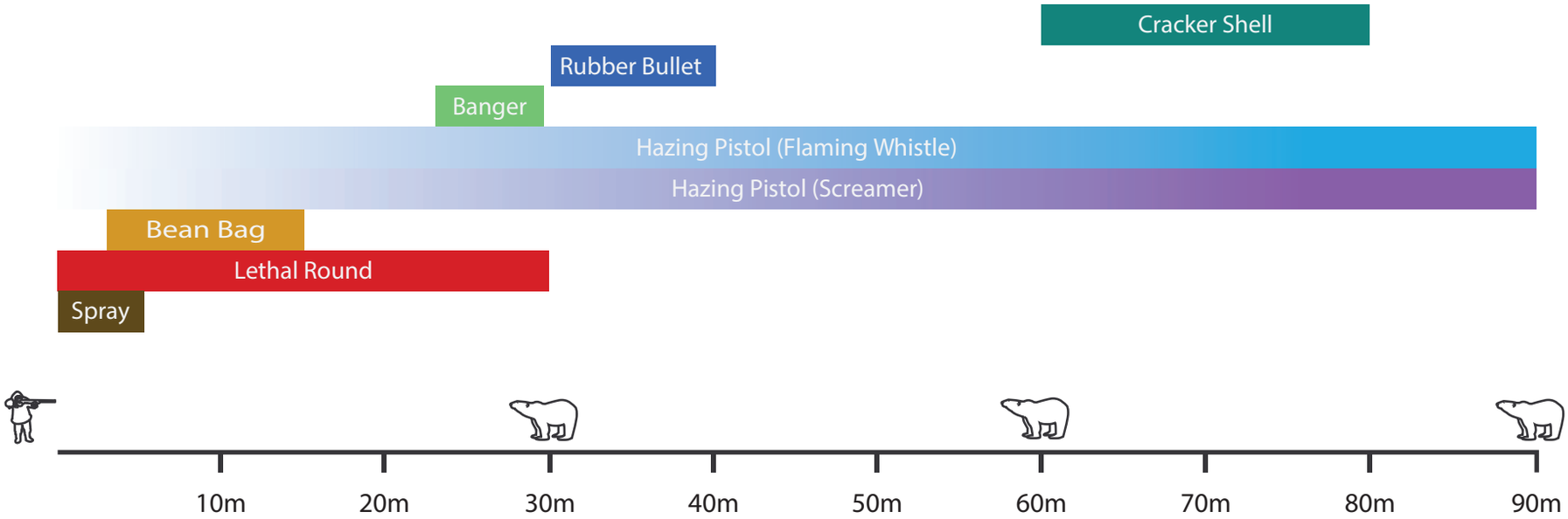


The main cabin door is protected by a bear board on hinges. The bear board door can be removed when the cabin is being used regularly



Properly-spaced nails on a bear board covering a cabin door

DETERRENT RANGES



Bear spray is an option of last defense, as its effective range is less than 3 meters.

A bean bag round should be used when the bear is 3-15 meters away; a "standard round" is also available, which is effective between 9 and 30 meters (consult the manufacturer's guidelines). A bean bag round fired from closer than the prescribed range could penetrate the bear's hide and severely wound the bear.

The explosive screamer round makes a continuous noise right from the muzzle of the pistol to a maximum distance of 90 meters. Bears typically flee from the source of the noise, so the screamer can be used throughout its range of travel.

The flaming whistle round makes a continuous noise right from the muzzle of the pistol to a maximum distance of 90 meters. Bears typically flee from the source of the noise, so the screamer can be used throughout its range of travel.

The explosive noise of the banger must occur between the shooter and the bear. A banger can travel 23-27 meters before exploding, so they are not to be used on a bear closer than 30 meters.

A rubber bullet should be used when the bear is 30-50 meters away. A rubber bullet fired from closer than 30 meters could penetrate the bear's hide and severely wound the bear.

The explosive noise of the cracker shell must occur between the shooter and the bear. A cracker shell can travel 60-80 meters before exploding, so they are not to be used on a bear closer than 60 meters.

MAKE SURE THE BEAR HAS A CLEAR AND OBVIOUS ESCAPE PATH BEFORE FIRING DETERRENTS

Nunavut

APPENDIX III

Caribou Mitigation Measures

APPENDIX H

DIAND Caribou Protection Measures

1. (a) The Permittee shall not, without approval, conduct any activity between May 15 and July 15 within the Caribou Protection Areas depicted on the map certified by the Engineer as the "Caribou Protection Map" and annexed to this Land Use Permit.

   (b) A Permittee may, upon approval by the Land Use Inspector, operate within the said Caribou Protection Areas beyond the May 15 deadline set out in 1(a), provided that, when monitoring information indicates that caribou cows are approaching the area of operation, the Permittee will implement 1(c).

   (c) On cessation of activities pursuant to 1(a) or 1(b), the Permittee will remove from the zone all personnel who are not required for the maintenance and protection of the camp facilities and equipment, unless otherwise directed by the Land Use Inspector.

   (d) The Permittee may commence or resume activities prior to July 15 within those parts of the Caribou Protection Areas released by the Land Use Inspector for the reason that caribou cows are not expected to use those parts for calving or post-calving (note 1).

2. (a) In the event that caribou cows calve outside of the Caribou Protection Areas, the Permittee shall suspend operations within the area(s) occupied by cows and/or calves between May 15 and July 15.

   (b) In the event that caribou cows and calves are present, the permittee shall suspend:
   (i) blasting;
   (ii) overflights by aircraft at any altitude of less that 300 meters above ground level; and
   (iii) the use of snowmobiles and ATVs (all-terrain vehicles) outside the immediate vicinity of the camp.

NOTE

1. The Land Use Inspector's decision will be based on the existing caribou information.
2. Concentrations of caribou should be avoided by low-level aircraft at all times.

3. (a) During migration of caribou, the Permittee shall not locate any operation so as to block or cause substantial diversion to migration.
   (b) The Permittee shall cease activities that may interfere with migration, such as airborne geophysics surveys or movement of equipment, until the migrating caribou have passed.

4. (a) The Permittee shall not, between May 15 and September 1, construct any camp, cache any fuel, or conduct any blasting within 10 kilometres of any "Designated Crossing" as outlined on the map certified by the Engineer as the "Caribou Protection Map" and annexed to this Land Use Permit.
   (b) The Permittee shall not, between May 15 and September 1, conduct any diamond drilling operation within 5 kilometres of any "Designated Crossing" as outlined on the map certified by the Engineer as the "Caribou Protection Map" and annexed to this Land Use Permit.

KIA Sample Land Use Permit Caribou and Muskox Protection Conditions

35. The Permittee is given permission to conduct the approved land use operations between May 15 and July 15, provided that when caribou and muskox cows are approaching the area of operation, the Permittee shall cease blasting, overflights by aircraft at any altitude less than 300 meters above ground level, and the use of snowmobiles and ATVs (all-terrain vehicles) outside the immediate vicinity of the camp. Other activities shall also be suspended if caribou approach the immediate vicinity of the specific operation and the monitoring work (described in another clause) indicates that there is stress on the animals.

36. During the presence of caribou and muskox within sight and sound of a camp, all personnel will remain quietly in camp.

37. The Permittee may resume activities prior to July 15 if the caribou and muskox cows have ceased to use the area for calving and post-calving.

39. The Permittee shall not locate any operation so as to block or cause substantial diversion to migration of caribou.

40. The Permittee shall cease activities that may interfere with migration or calving, such as airborne geophysics surveys or movement of equipment, until the migrating caribou have passed.

41. The Permittee shall not conduct any operation within 5 km of any "Designated Crossing" as outlined on the map annexed to this Land Use Permit.

From KIA Land Use Permit BHP 197C141

MOBILE CARIBOU CONSERVATION MEASURES

Introduction

The Lessee shall comply with the measures set out herein. The Lessee shall immediately report to the Landlord any deviation from these measures, including the reason for the deviation.

The Landlord reserves the right, based on the presence of caribou within the area of the Property in any year, to vary the dates set out herein and shall provide notice to the Lessee of any such variation.

Wildlife Monitoring Personnel

The Lessee shall have wildlife monitoring personnel present at the Property during any season when caribou are reasonably expected to be present. The names of such personnel shall be sent to the Landlord and they shall maintain communication at all reasonable times. The Lessee shall monitor and immediately report the presence of caribou to the Landlord in accordance with the following directives. The report shall specify the location and estimated numbers.

A. IOL within designated calving grounds

Section 1. On IOL within designated calving grounds (as designated by the Government of Nunavut) between May 1st and July 31st (the closure period):

1) No activities shall occur except as authorized by the Landlord.

Section 2. On IOL within designated calving grounds between August 1st and September 30th, the Lessee shall conduct monitoring and mitigation as follows:

2i) If collar data or observations indicate that there are one (1) or more collared caribou or twenty-five (25) or more caribou observed within the thirty (30) km early warning zone from the boundary of the Property, then monitoring within a five (5) km buffer zone shall be conducted every second day (e.g., height of land surveys, road surveys, remote camera surveys).

2ii) If monitoring indicates that there are twenty-five (25) or more caribou within five (5) km of the Property boundary, then the Lessee shall monitor within a five (5) km buffer zone around the Property on a daily basis, and shall immediately suspend work that has the potential to disturb caribou, including suspension of drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), suspension of all ground operations and camp closure, until caribou numbers are below the threshold within the buffer zone.

Section 3. On IOL within designated calving grounds between October 1st and April 15th, the Lessee shall conduct monitoring and mitigation as follows:

(3i) If collar data or observations indicate that there are one (1) or more collared caribou or fifty (50) or more caribou observed within thirty (30) km of the boundary of the Property, then monitoring within a five (5) km buffer zone shall be conducted every second day (e.g., height of land surveys, road surveys, remote camera surveys).

(3ii) If monitoring indicates that there are fifty (50) or more caribou within two and a half (2.5) km of the Property, then the Lessee shall immediately reduce above-ground activities that have the potential to disturb caribou, including non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), until caribou numbers are below the threshold within the buffer zone.

Section 4. On IOL within designated calving grounds between April 16th and April 30th, the Lessee shall conduct monitoring and mitigation as follows:

(4i) If collar data or observations indicate that there are one (1) or more collared caribou or twenty-five (25) or more caribou within fifty (50) km of the boundary of the Property that appear to be moving in the direction of the activities, then monitoring within a five (5) km buffer zone shall be conducted every second day (e.g., height of land surveys, road surveys, snow track counts (if appropriate), remote camera surveys).

(4ii) If monitoring indicates that there are an estimated twenty-five (25) or more caribou within the five (5) km buffer zone for the Property, then the Lessee shall conduct monitoring within a five (5) km buffer zone on a daily basis, and shall immediately suspend any activities that have the potential to disturb caribou, including suspension of drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), suspension of all ground operations, and camp closure, until caribou numbers are below the threshold within the buffer zone.

B. IOL within other seasonal caribou ranges

Section 5. On IOL between June 1st and July 15th outside of designated calving grounds, the Lessee shall conduct monitoring and mitigation as follows:

(5i) If collar data or observations indicate that there are one (1) or more collared caribou or ten (10) or more caribou observed within the fifty (50) km early warning zone for the Property, then monitoring within a five (5) km buffer zone shall be conducted every second day (e.g., height of land, road surveys, snow track counts (if appropriate), remote camera surveys).

(5ii) If monitoring indicates that there are an estimated ten (10) or more caribou within the five (5) km buffer zone for the Property, then the Lessee shall conduct monitoring within a five (5) km buffer zone on a daily basis, and shall immediately suspend any activities that have the potential to disturb caribou, including suspension of drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m

above ground level (except as necessary for emergency purposes), suspension of all ground operations and camp closure until caribou numbers are below the threshold within the buffer zone.

Section 6. On IOL between July 16th and September 30th outside of designated calving grounds, the Lessee shall conduct monitoring and mitigation as follows:

(6i) If collar data or observations indicate that there are one (1) or more collared caribou or twenty-five (25) or more caribou observed within thirty (30) km of the Property, then monitoring within a five (5) km buffer zone shall be conducted every second day (e.g., height of land surveys, road surveys, snow track counts (if appropriate), remote camera surveys).

(6ii) If monitoring indicates that there are twenty-five (25) or more caribou within five (5) km of the boundary of the Property, then the Lessee shall conduct monitoring within a five (5) km buffer zone on a daily basis, and shall immediately suspend any activities that have the potential to disturb caribou, including suspension of drill operations, blasting activities, non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), and camp closure until caribou numbers are below the threshold within the buffer zone.

Section 7. On IOL between October 1st and April 15th outside of designated calving grounds, the Lessee shall conduct monitoring and mitigation as follows:

(7i) If collar data or observations indicate that there are one (1) or more collared caribou or fifty (50) or more caribou observed within thirty (30) km of the boundary of the Property, then monitoring within a five (5) km buffer zone shall be conducted every second day (e.g., height of land surveys, road surveys, remote camera surveys).

(7ii) If monitoring indicates that there are fifty (50) or more caribou within 2.5 km of the boundary of the Property, then the Lessee shall immediately reduce above-ground operations that have the potential to disturb caribou, including non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), and suspension of above ground operations, until caribou numbers are below the threshold within the buffer zone.

Section 8. On IOL between April 16th and May 31st, the Lessee shall conduct monitoring and mitigation as follows:

(8i) If collar data or observations indicate that there are one (1) or more collared caribou or twenty-five (25) or more caribou observed within fifty (50) km of the boundary of the Property that appear to be moving in the direction of the activities, then monitoring within a five (5) km buffer zone shall be conducted every second day (e.g., height of land surveys, road surveys, snow track counts (if appropriate), remote camera surveys).

(8ii) If monitoring indicates that there are an estimated twenty-five (25) or more caribou within the five (5) km buffer zone for the Property, then then the Lessee shall conduct

monitoring within a five (5) km buffer zone on a daily basis, and shall immediately suspend any activities that have the potential to disturb caribou, including drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), suspension of all ground operations and camp closure, until caribou numbers are below the threshold within the buffer zone.

C. Freshwater crossings

Section 9. On IOL between May 15th and September 30th, the Lessee will not construct camps or other permanent structures or conduct blasting within ten (10) km of designated caribou freshwater water crossings. Exploration activities will not be permitted within 5 km of water-crossings between May 15th and September 30th. Between May 15th and September 30th, the Lessee shall conduct monitoring and mitigation as follows:

(9i) If collar data or observations indicate that there are one (1) or more collared caribou or twenty-five (25) or more caribou observed within twenty-five (25) km of the boundary of the Property that appear to be moving in the direction of the activities, then monitoring within a five (5) km buffer zone around the water crossing shall be conducted every second day (e.g., height of land surveys, remote camera surveys).

(9ii) If monitoring indicates that there are fifty (50) or more caribou within five (5) km of the boundary of the Property that appear to be moving in the direction of the water crossing, then the Lessee shall conduct monitoring within a five (5) km buffer zone on a daily basis, and shall immediately suspend any activities that have the potential to disturb caribou, including suspension of drill operations, blasting activities and non-essential ground movements and aircraft traffic below 300 m above ground level (except as necessary for emergency purposes), suspension of all ground operations, camp closure, and removal of all non-essential personnel, until caribou numbers are below the threshold within the buffer zone.

D. Aircraft

Section 10. The Lessee shall ensure that aircraft (fixed-wing and helicopter) flights over occupied calving and post-calving areas shall be at least 610 m above ground level and avoid areas of known caribou concentrations (subject to pilot discretion regarding aircraft and human safety). In other seasons aircraft shall be at least 300 m above ground level.

APPENDIX IV

Applicable Guidelines and Legislations

Exploration activities at the Angilak Property is conducted according to the following Regulations, Guidelines and Recommendations including, but not limited to:

Federal

- Aeronautics Act
- Canada-Wide Standards for Dioxins and Furans (Canadian Council of Ministers of the Environment)
- Canada Wildlife Act
- Canadian Environmental Protection Act (Environment Canada)
- Department of Fisheries and Oceans Operational Statements and Guidelines
- Draft Fuel Storage and Handling Guidelines, April 2009, Indian and Northern Affairs Canada - Nunavut
- Fisheries Act (Fisheries and Oceans Canada; DFO)
- Guidelines for Spill Contingency Planning (INAC)
- Migratory Birds Convention Act and Migratory Birds Regulations
- National Fire Code of Canada (Federal)
- Nunavut Land Claims Agreement
- Public Health Act
- Species at Risk Act
- Territorial Lands Act
- Transportation of Dangerous Goods Act (Transport Canada)
- Workers' compensation Board
- Workplace Hazardous Materials Information System (WHMIS)
- Technical Document for Batch Waste Incineration (ECCC)

Territorial

- Caribou Protection Plan/Caribou Protection Measures
- Draft Recommended Best Practices For The Storage And Handling Of Petroleum And Allied Petroleum Products on Federal Crown Lands in Nunavut
- Environmental Guidelines for the Burning and Incineration of Solid Waste
- Fire Prevention Act (Territorial)
- Nunavut Environmental Protection Act
- Nunavut “Guideline for the General Management of Hazardous Waste”
- Nunavut Waters Act and Nunavut Surface Rights Tribunal Act
- Nunavut Wildlife Act
- The Mine, Health and Safety Act and Regulations (Nunavut)
- The NWT and Nunavut Safety Act, the Occupational Health and Safety Regulations

APPENDIX V

Wildlife Mitigation Procedures Poster

Wildlife Mitigation Procedures

If individual or small groups of caribou (<50) are encountered

- Move calmly and slowly away from the animal(s).
- Do not divert movement of the animal(s) or disrupt feeding.
- Do not scare the animal(s) with loud noises or sudden movements.
- Allow animal(s) to pass safely beyond the work area before resuming activities.

If muskox are encountered

- Move calmly and slowly away from the animal(s).
- Do not divert movement of the animal(s) or disrupt feeding.
- Do not scare the animal(s) with loud noises or sudden movements.
- Leave the area animal(s) are occupying.
- Allow animal(s) to pass safely beyond the work area before resuming activities.

If wolves or wolverines are encountered

- Move calmly and slowly away from the animal(s).
- Do not turn your back to the animal.
- Do not block the animal(s) route or exit path.
- Do not scare the animal(s) with loud noises or sudden movements.
- Inform a Wildlife Monitor of the presence of the animal.
- Allow animal(s) to pass safely beyond the work area before resuming activities.

If the animal shows interest in you

- Continue to move away slowly and avoid provocation.
- Contact the helicopter pilot for a pick-up.
- Do not block the animal(s) route or exit path.
- Alert the animal to your presence by making noise.
- Deploy wildlife deterrents if necessary (bear spray, bear bangers).
- Leave the area and return to camp.

If a grizzly bear or polar bear is sighted

- Move calmly and slowly away from the animal(s).
- Do not turn your back to the animal.
- Contact the helicopter for an immediate pick-up.
- Deploy wildlife deterrents if necessary (bear spray, bear bangers).
- Leave the area and return to camp.
- Report sightings to required agencies.