



Wildlife Mitigation and Monitoring Plan

**Qilalugaq Diamond Project
Naujaat, NU**

Introduction

This Wildlife Mitigation and Monitoring Plan (WMMP/Plan) has been prepared in regards to exploration activities associated with North Arrow Minerals' (North Arrow's) Qilalugaq Diamond Project (Project/Property), Naujaat, NU.

North Arrow is a Vancouver based mineral exploration company committed to the responsible exploration and development of resources within Canada.

Exploration programs have the potential to impact wildlife and wildlife habitat. Potential impacts to wildlife and wildlife habitat include displacement from and avoidance of habitat, habituation and attraction to personnel and/or exploration areas, and unintentional interactions and disturbance. North Arrow further recognizes that caribou is of particular sensitivity in the regional Project area. Accordingly, North Arrow will strive to prevent or minimize potential impacts on caribou and other wildlife and wildlife habitat, by implementation of procedures outlined in this document.

The main purpose of the Plan is to formally outline North Arrow's wildlife protection, avoidance and mitigation strategies. The Plan will function as a set of Standard Operating Procedures for North Arrow staff and contractors working on the Project and in lands proximal to the Project. The Plan commits to wildlife protection by preventing or minimizing personnel/wildlife interactions and wildlife impacts.

The Plan addresses the following specific wildlife species, species groups and their critical habitats:

- those that occur within and immediately adjacent to the Project site or along Project flight paths during project operations,
- those that are important harvestable species, and
- those with special conservation status

Wildlife Mitigation and Monitoring Plan

All employees and contractors of the company will be trained in the internal policies, procedures and made familiar with the Terms and Conditions of the Project's licenses and permits. Training will include, but not be limited to:

- Wildlife Safety
- Wildlife Mitigation Measures
- Wildlife Monitoring and Reporting

The company will adopt the following best management practices to protect wildlife and wildlife habitat, and mitigate against disturbance to wildlife and sensitive areas. These policies will be strictly enforced.

Approaching and feeding wildlife is prohibited. There are absolutely no exceptions to this rule. If wildlife are present in the area, all employees and contractors are to avoid any contact with wildlife.

Harassment and disturbance of wildlife is prohibited. If employees or contractors are approaching a work site where migrating caribou, caribou cows and calves, or other wildlife are present, work will be halted until the animals have moved on a distance of 1 kilometre (km) from the site.

If employees and/or contractors encounter wildlife at any time, every effort should be made to stay out of sight of wildlife or redirect travel away from wildlife where possible, to avoid impact to the wildlife.

Hunting and fishing is prohibited. While conducting business on behalf of North Arrow, hunting and fishing is strictly forbidden. There are no exceptions to this rule.

Flight altitudes must be strictly adhered to. Except during take-off and landing, and in the event of an emergency, fixed wing aircraft and helicopters will maintain a minimum altitude of 610 metres (m) above ground level if flying through places where there are migrating caribou, caribou cows and calves and other wildlife and migratory birds. In areas where there are colonies of birds observed, the flight levels will be restricted to a vertical distance of 1000 m and a horizontal distance of 1500 m.

Helicopter pilots will be instructed that they are not to fly over wildlife in a way to cause them to change behavior, run or flee at any time, within or outside of migration. If such an interaction should occur incidentally, helicopter pilots will be instructed to divert and/or change altitude until the wildlife has moved on.

During the period from April 1 through June 25 of each year, in the event caribou are observed along the Transportation Corridor, the pilot will notify the Wildlife Observers and Permittee will cease helicopter operations until the caribou have moved on.

Outside of the period from April 1 through June 25 of each year, in the event caribou are observed along the Transportation Corridor, the pilot will attempt to choose an alternative travel route until the caribou have moved on. If caribou are present in such numbers or in an area around which an alternative and safe flight path or overland travel route is not possible (for instance, if caribou are observed within 1 km of site operations at Q1-4 kimberlite, operations are to be suspended until the caribou have moved away a distance of at least 1 km)

then helicopter operations shall cease until the caribou have moved on so that the caribou are not motivated to flee the area.

In the event of bad weather or an emergency, when low-level flights or landings are required, these instances will be documented in the Wildlife Observation Log (Appendix 2).

Caribou and Muskoxen disturbance minimized. All employees and contractors shall cease activities that may interfere with the migration or calving of caribou or muskox until the caribou or muskox have passed or left the area.

All employees and contractors shall not block or cause any diversion to caribou and muskox migration, and shall cease activities likely to interfere with migration such as airborne geophysics surveys, drilling, bulk sampling or movement of equipment or personnel until such time as the caribou and muskox have passed and left the area.

When caribou are observed within 1 km of project operations at the Q1-4 kimberlite, all employees and contractors shall suspend all operations, including low-level over flights or drilling/sampling, until the caribou are no longer in the immediate area.

Bear Safety Training will be provided. All employees and contractors will receive Bear Safety Training. Bear safety information and material will be kept in a binder on site. Parks Canada published the “Safety in Polar Bear Country” and the Department of Environment, NU published “Bear Safety: Reducing bear-people conflicts in Nunavut”. These documents are included in Appendix 1 for reference and will be referred to in the safety orientation that all personnel, contractors and consultants receive when they arrive at site. A copy of the manuals will be kept at the camp office and in Vancouver at North Arrow’s office.

All den sites are to be avoided. Dens are not to be disturbed. An environmental and wildlife scan of proposed drill sites (once known) is proposed prior to drilling to map out active den sites for avoidance. If an active den site is discovered, the GPS coordinates will be recorded in the Wildlife Observation Log and an alternative site, the requisite distance away, will be sought. Wildlife Logs will be provided to the appropriate regulatory authorities following completion of work programs. If suspected active dens sit within buffer distances set out in the Wildlife Interaction Procedures (below), the Proponent will contact Environment and Natural Resources to discuss alternative mitigation options.

Birds are not to be disturbed. An environmental scan of the exploration areas is proposed prior to exploration activities to map out nests for avoidance (e.g., a 100 m buffer around the nests). No eggs or nests are to be disturbed by any activities. If any employee or

contractor comes across any active nests (i.e., with eggs or young), they are to cease all activities immediately to ensure that the nest is not disturbed until nesting is complete and the young have left the nest. Coordinates are to be recorded on the Wildlife Observation Log.

Sightings of wildlife will be recorded. All wildlife sightings are to be recorded in the Wildlife Observation Log (template included in Appendix 2). This information will be reported in the required annual reports provided to various regulatory agencies.

Aquatic Life will be protected. Working in and around waterbodies must be done in such a way that prevents disturbance to aquatic life and habitat.

Waterlines must be properly placed and screened in accordance with the “Freshwater Intake End-of-Pipe Screen Guideline” (DFO). No wastes are to enter any water-bodies. All sumps, fuel caches and hazardous materials must be located at least 31 meters from the high water mark of any water-body unless otherwise approved by the appropriate regulatory authority.

Waste will be managed properly. Proper fuel and hazardous waste storage and handling of cooking wastes will prevent problems with attracting wildlife. All waste will be stored while in the field such that it is not accessible to wildlife, and will be compacted and transported from the field to the camp on a regular basis.

Wildlife Interaction Procedures:

1. Approaching and/or feeding wildlife is **strictly prohibited**.
2. Harassing wildlife is **strictly prohibited**.
3. Wildlife observations are to be logged on the template provided.
4. Firearms may only be carried for safety reasons.
5. All firearms at the work site must be:
 - a. Appropriately licensed.
 - b. Accompanied by appropriate owner's documents.
 - c. Reported to the Project Manager if there is a discharge for any reason.
6. Hunting is **strictly forbidden** to ALL employees and contractors while conducting business on behalf of North Arrow with no exceptions.
7. Any crucial nesting, denning, migratory or river crossing habitat must be avoided by low-flying aircraft. If a den or nesting colony is encountered, the location should be recorded in the Wildlife Observation Log. The area must subsequently be avoided.
8. Activities in proximity to the following migration or calving areas must adhere to the appropriate buffer distances:
 - a. Caribou = within 1 km – cease activity until caribou have moved the requisite distance (>1 km) away
9. Eggs and nests are not to be disturbed by field activities. Nest locations are to be recorded in the Wildlife Observation Log and a 100 m buffer around nests will be

required.

10. Other than for emergency situations, helicopters must not land in any area where wildlife is present.
11. All food and waste should be properly handled and stored in camp and while in the field to prevent wildlife attraction. Poor food storage and waste disposal are the leading cause of human/wildlife interaction.
12. Waste containers are to be kept clean and sanitary.
13. Nuisance wildlife is to be reported to the GNU conservation officer.

Department of Environment Conservation Office (NU):

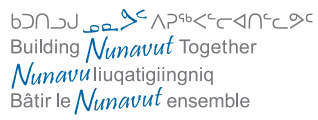
Conservation Officer II for Naujaat – Peterloosie Papatsie	(867) 462-4002
Conservation Officer III for Baker Lake (Supervisor) - Russell Toolooktook	(867) 793-2944
Conservation Officer Regional Manager – Rob Harmer	(867) 857-3172

Caribou Monitoring and Mitigation Protocol:

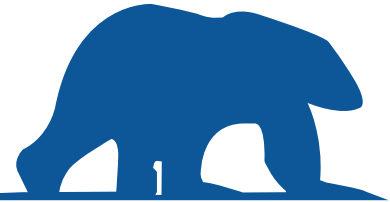
A specific Protocol has been generated for caribou for the Qilalugaq Diamond Project that has been written by North Arrow and reviewed and accepted by the Government of Nunavut Department of Community and Government Services, Economic Development and Transportation, the Department of Environment, the Hamlet of Naujaat and the HTO of Naujaat in April 2016. This Protocol is located in Appendix 3 and should be referred to and followed with regards to caribou.

Appendix 1

Safety in Polar Bear Country and Bear Safety: Reducing bear-people conflicts in Nunavut Pamphlets



BEAR SAFETY



Reducing Bear-People Conflicts in Nunavut

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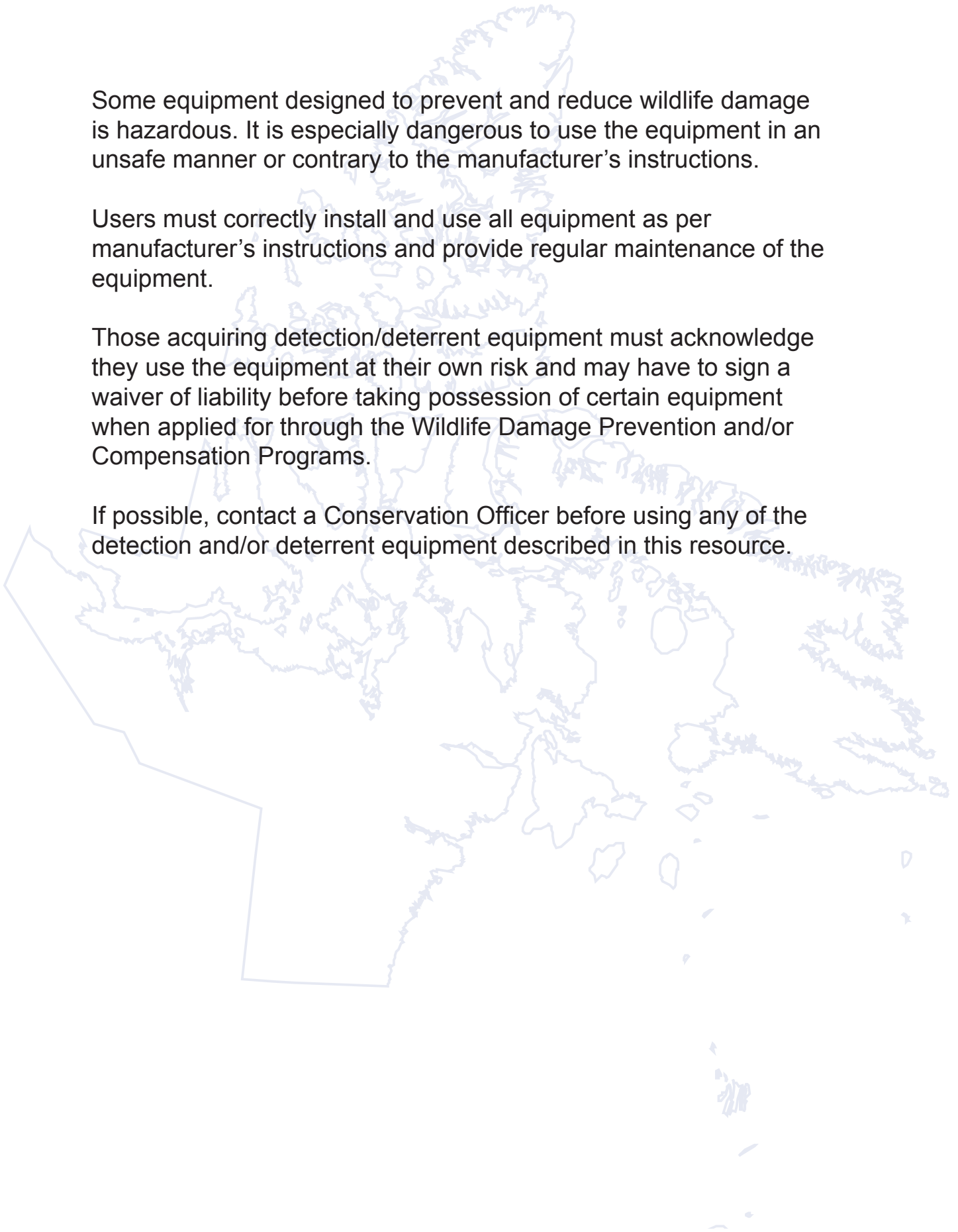
Safety

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.



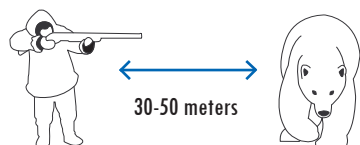
DETERRENTS

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.)**.



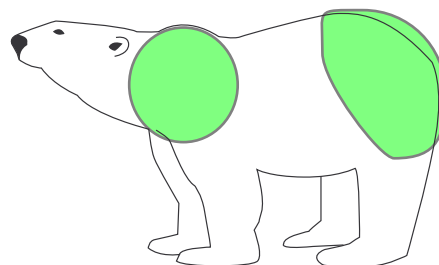
Load rubber bullets one at a time directly into the chamber of a shotgun with an open-choke (cylinder bore). Load the magazine with lead slugs (lethal ammunition) so you are prepared if the bear attacks. Do not use rubber bullets in semi-automatic shotguns, as the low powder loads in rubber bullets do 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.



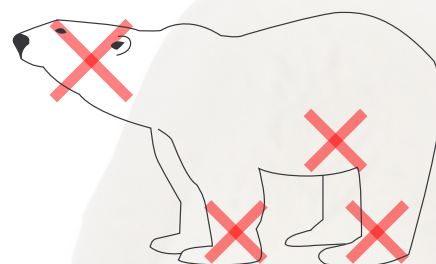
Call out to the bear before firing so that it associates you (humans) as the source of the pain. Make sure the bear has a clear path to escape.

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.

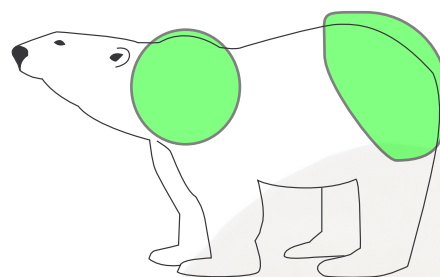
DETERRENTS

Bean-Bag Round

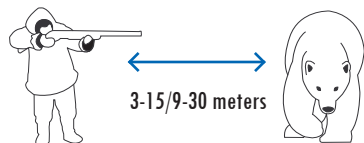
Similar to rubber bullets, bean-bag rounds are an effective alternative to lethal management. These less-lethal projectiles are used to inflict pain, creating a negative association with the situation and with humans. Bean-bag rounds are designed to cause momentary discomfort and surprise; when used 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.)**



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.



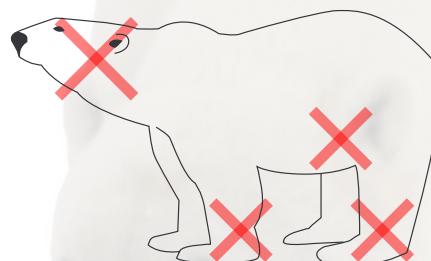
- Load rubber bullets directly into the chamber of an open-choke shotgun
- Aim for a large muscle mass, such as shoulder or rump
- Let the bear know your location before firing
- Make sure the bear has a clear path to escape



- rounds can jam and render the firearm unusable. Use either a hinge or pump-action shotgun with a chamber size of 2 3/4" or larger.

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



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

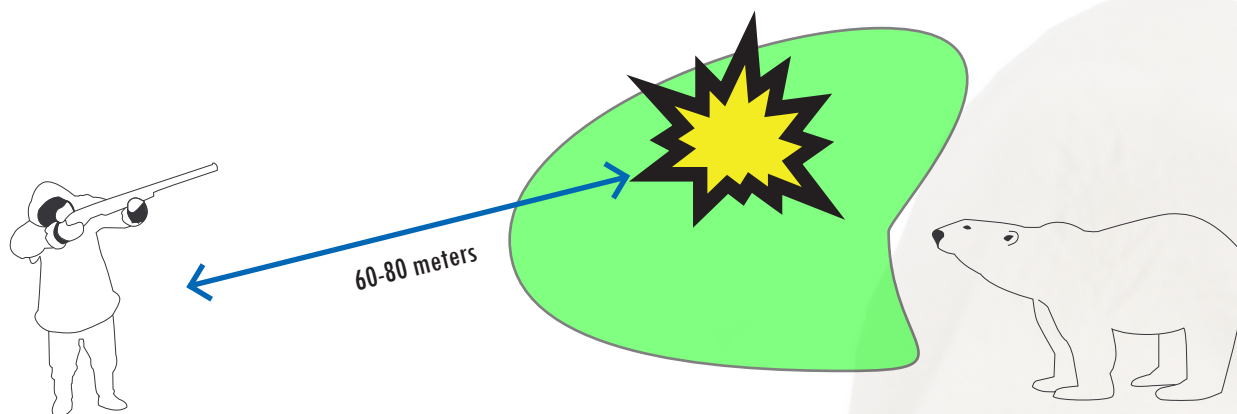
DETERRENTS

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 3/4" 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

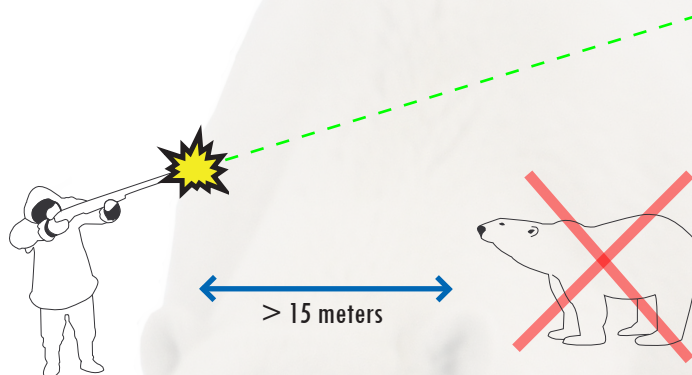
Warning shots create a loud abrupt noise at the gun's muzzle and a slight disturbance to the ground upon the bullet's impact. Shots fired from a firearm may scare a bear; however, some bears show little concern for warning shots and will continue to approach or remain in the area. Warning shots can also 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



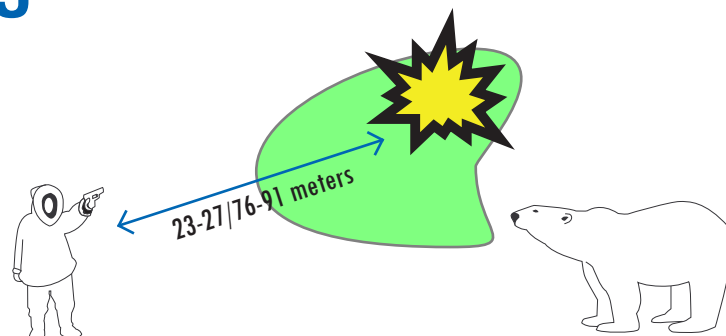
Safety Precautions

- 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.)**

- 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.**

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

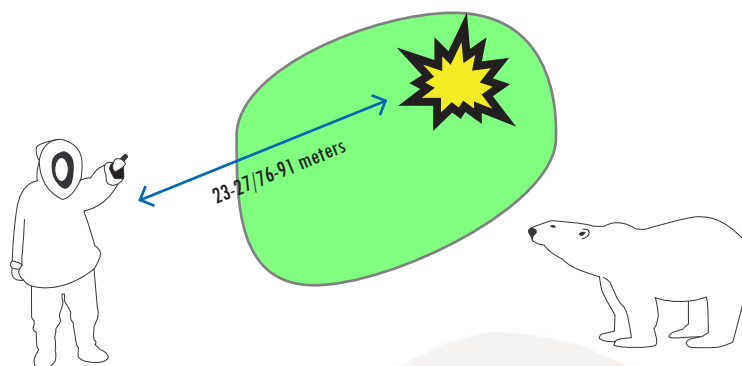
Pen Launcher

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 Screammers, 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

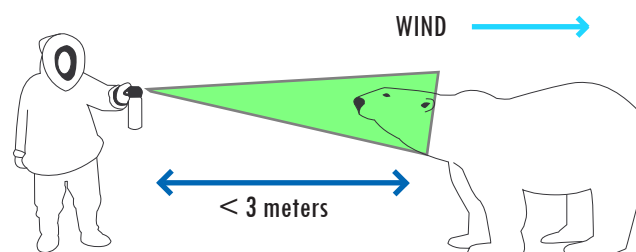
- Do not shoot at people; it may cause death or serious injury
- 15mm scare cartridges pose a fire risk. Ensure that there are no flammables downrange
- Do not shoot at dry vegetation, gas products, or wildlife closer than recommended
- Have a lethal firearm present and ready
- This ammunition must only 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

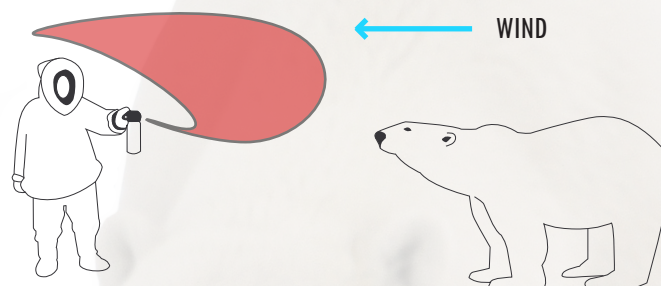
Pepper spray, also known as capsicum spray or bear spray, is a chemical deterrent that causes temporary burning, tearing and swelling in the eyes and nose, and inflammation of the throat and lungs, which restricts breathing to shallow gasps. It also causes severe irritation to the surface of the skin. 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.



- 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

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.



IMPORTANT

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



Bear reacts to pepper spray - © Bob Saunders

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

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.

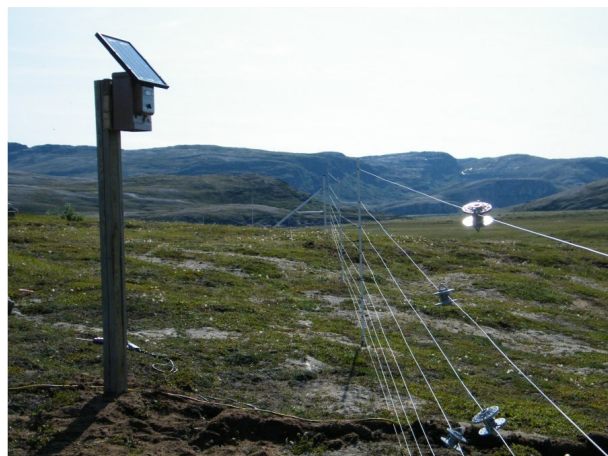
Alternating positive and negative charges between wires will deliver a shock even on dry ground or rocky conditions. Permanent fences can be erected to protect outpost camps, cabins, caches, etc. Portable fences can be used at temporary camps.

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.

Safety Precautions

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



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



Temporary electric fencing around a camp site

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



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

- 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

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



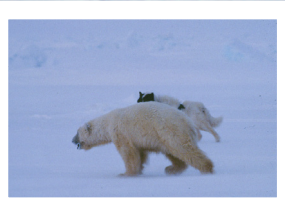
A trained dog and an experienced handler can effectively detect and deter bears. Certain breeds of dogs, such as the Canadian Inuit Dog (sled dog), the Blackmouth Cur and the Karelian Bear Dog, are well known for their ability to avert bears and chase them from areas where they may come into contact 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.

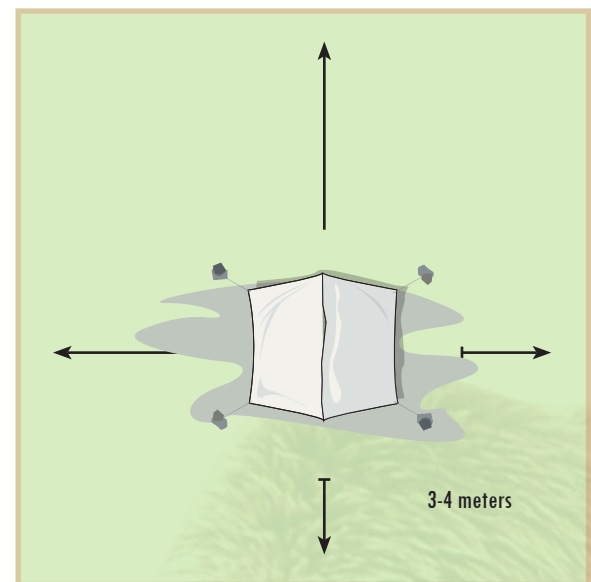
Additional care must be taken when travelling on the land with a dog. Dog food can attract bears; uneaten food should not be left out overnight and care should be taken to ensure a dog does not cache uneaten food around camp.



DETECTION

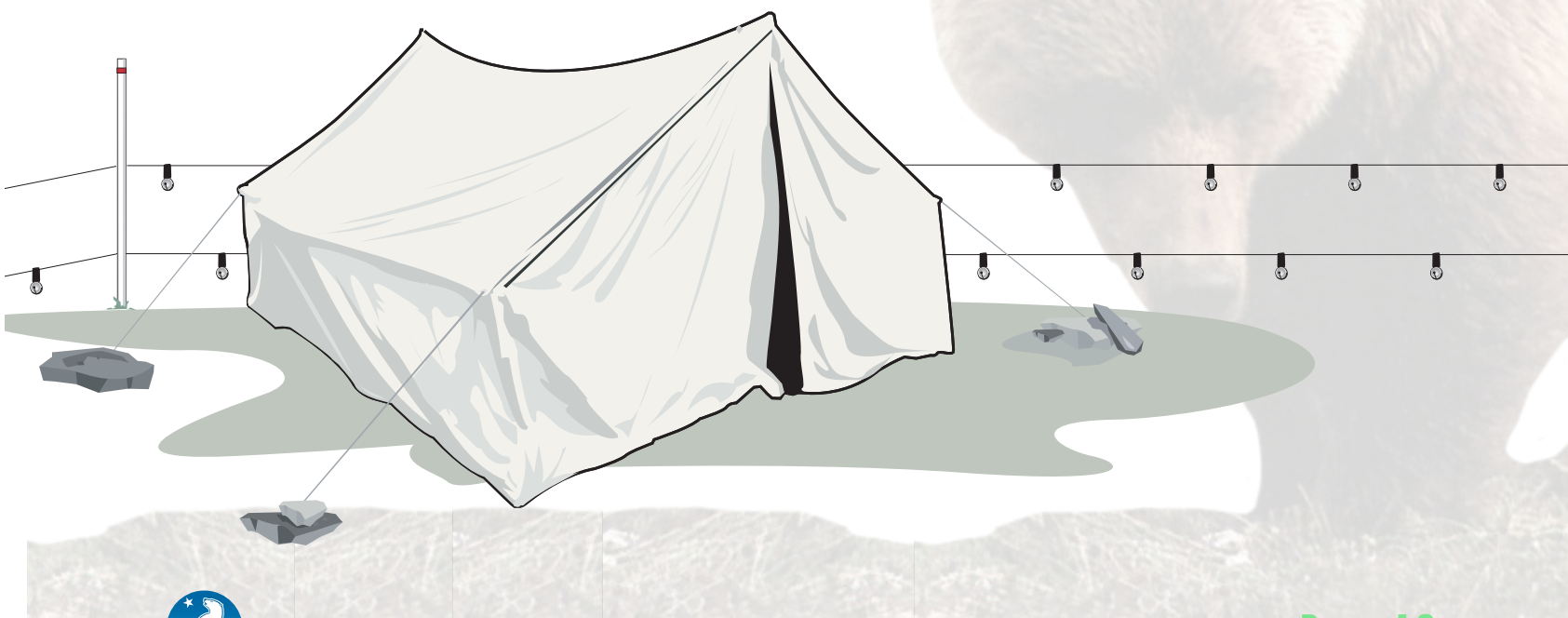
Tripwire Fences

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.



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.

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



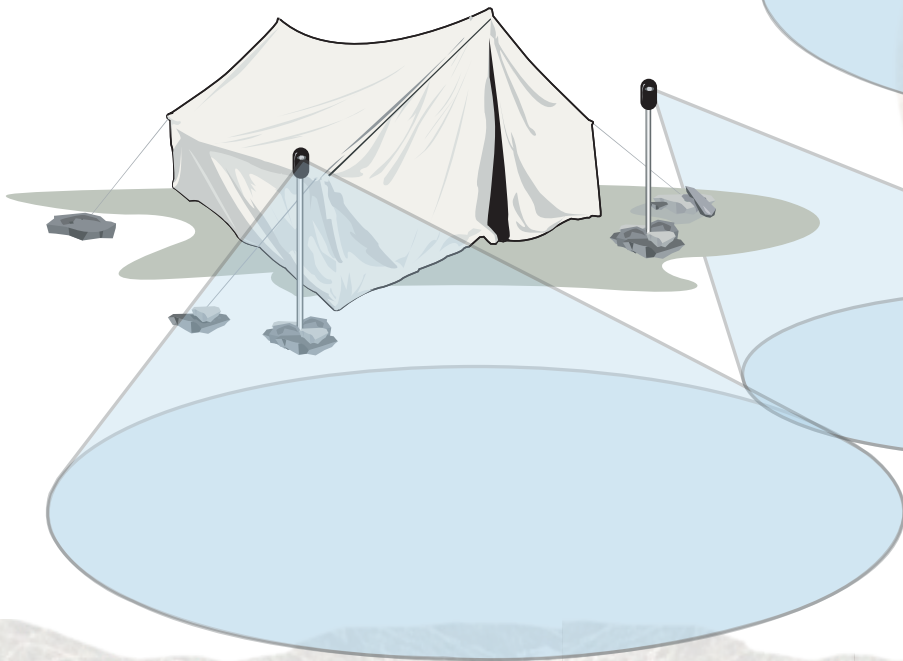
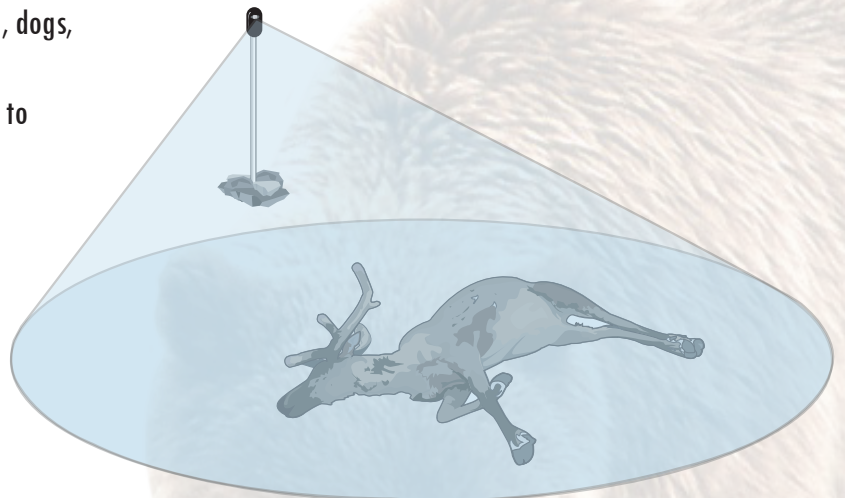
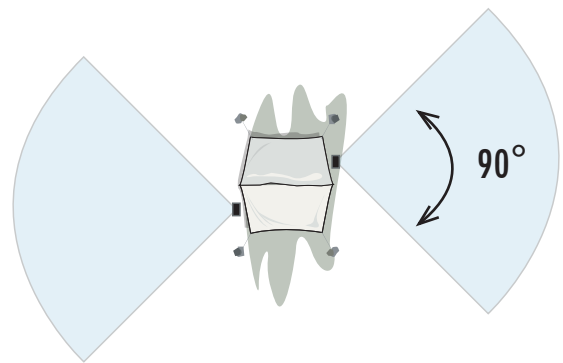
DETECTION

Motion Sensing Devices

Commercially-made devices 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 separate 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

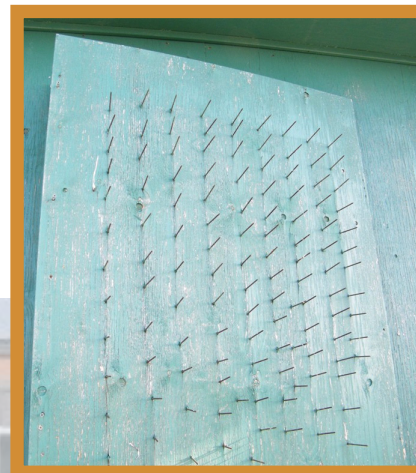
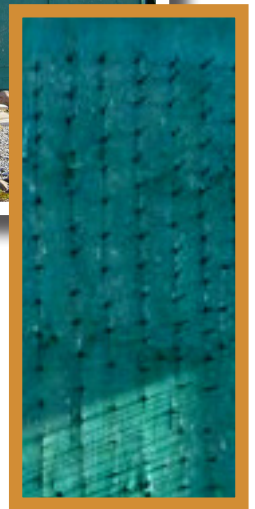
Cabins

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.

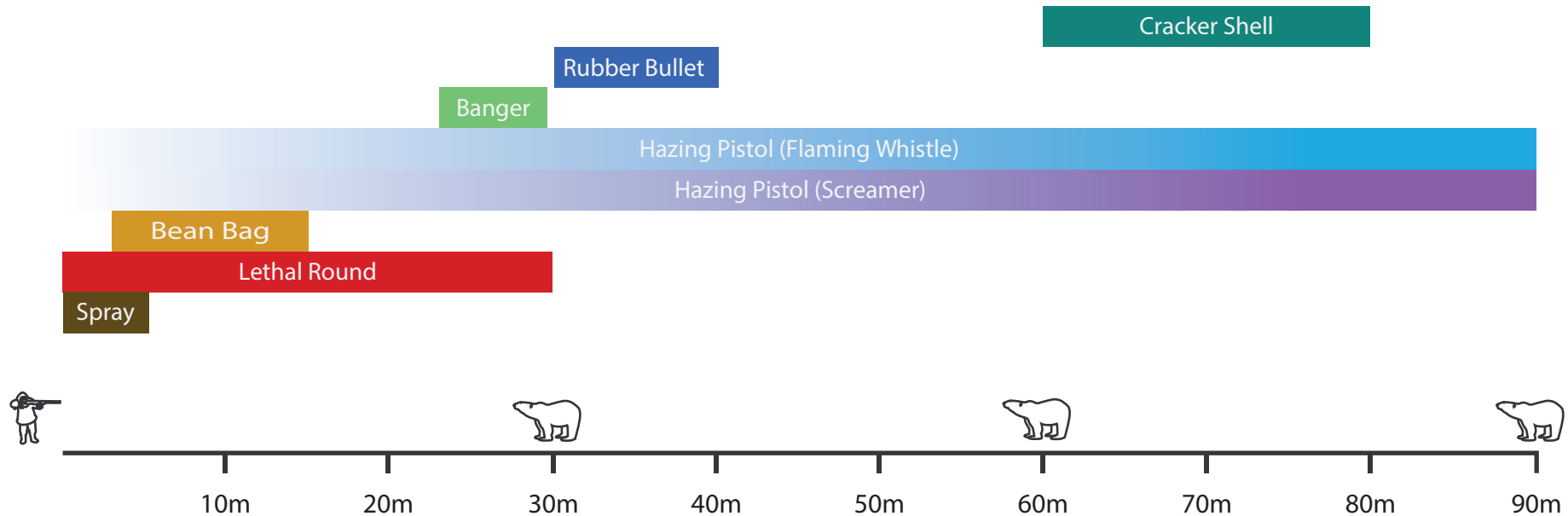


The main cabin door is protected by a bear board on hinges. The bear board door can be removed when the cabin is being used regularly



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

Appendix 2

Wildlife Observation Log

Wildlife Log / Record of Observations – Naujaat 2017 Drilling/Sampling Program

[illegible]

Appendix 3

North Arrow Minerals Caribou Monitoring and Mitigation Protocol

Wildlife Monitoring and Mitigation Protocol ("Protocol") - Qilalugaq Diamond Project, Naujaat, NU

Permittee will adhere to the terms and conditions of all regulatory instruments related to the Qilalugaq Diamond Project (the "Project") and will comply with all applicable legislation. With respect to wildlife monitoring and disturbance mitigation, with a particular emphasis on caribou, Permittee will implement and adhere to the following wildlife monitoring and mitigation measures during permitted land use activities ("Operations"):

Wildlife Monitoring

1. Permittee will keep a wildlife log documenting all wildlife sightings and mitigation measures taken during Operations. The wildlife log will record all wildlife observations made from the air or on the ground using the form of Wildlife Log / Record of Observations attached to this Protocol. Each record should include locations (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible.
2. Permittee will hire two (2) independent wildlife observers (the "Wildlife Observers") through the Arviq Hunters and Trappers Organization (HTO). The Wildlife Observers will be directly supervised by the HTO and not Permittee, however the Wildlife Observers will be subject to the same corporate policies and standards as all employees and contractors of the Permittee including, but not limited to, safety, environmental, and confidentiality policies. Wildlife Observers will report to both the HTO and Government of Nunavut Department of Environment (GN-DOE) on the effects of the exploration operations on wildlife, with copies of such reporting provided to the Permittee. Wildlife Observers will be provided with radios to allow for direct communication with Permittee's Project Manager and the helicopter pilot and overland vehicle operators, as applicable. A Wildlife Observer shall be present at the Q1-4 kimberlite site of operations during active Operations, or such other reasonable schedule as agreed to by the Permittee and HTO.
3. In addition to the Wildlife Observers, all employees and contractors of Permittee will be instructed to act as wildlife observers with responsibility to report and record wildlife sightings. As part of this instruction, the Permittee will ensure each employee is made aware of this wildlife monitoring and mitigation protocol and are provided with training and direction on how to implement these measures.

Suspension of Operations in the presence of Caribou

4. Permittee shall cease Operations that may interfere with the migration or calving of caribou until the caribou have passed or left the area.
5. Permittee shall not block or cause any diversion to caribou migration, and shall cease Operations likely to interfere with caribou migration such as airborne geophysics surveys, drilling, bulk sampling or movement of equipment or personnel until such time as the caribou have passed or left the area.
6. When caribou are observed within 1 km of project operations at the Q1-4 kimberlite, Permittee shall suspend all Operations, including low-level over flights or drilling, until caribou are no longer in the immediate area.

Aircraft/Helicopter Flights

7. With the exception of take-off and landing, aircraft/helicopter flights should avoid low-altitude flying wherever possible and when considered safe by the pilot.
8. First daily helicopter flight to site operations will be used as an initial reconnaissance trip to check for caribou along the Transportation Corridor and the vicinity and will include a Wildlife Observer.
9. Helicopter pilot shall continuously monitor the Transportation Corridor for wildlife during all transport activities.
10. Permittee shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
11. Permittee shall advise all aircraft pilots of this Protocol including the relevant flight restrictions and shall enforce their application over the project area, including the Transportation Corridor.
12. During the period from April 1 through June 25 of each year, in the event caribou are observed along the Transportation Corridor, the pilot will notify the Wildlife Observers and Permittee will cease helicopter operations until the caribou have moved on.
13. Outside of the period from April 1 through June 25 of each year, in the event caribou are observed along the Transportation Corridor, the pilot will attempt to choose an alternative travel route until the caribou have moved on. If caribou are present in such numbers or in an area around which an alternative and safe flight path or overland travel route is not possible (for instance if the caribou are within 1 km of site operations at Q1-4 kimberlite and such Operations are suspended) then helicopter operations shall cease until the caribou have moved on so that the caribou are not motivated to flee the area.
14. In the event a Wildlife Observer, employees or contractors on the ground observe caribou, they shall notify the Wildlife Observer who shall notify the helicopter pilot. The pilot will attempt to use a safe, alternative flight path or shall suspend helicopter operations as applicable.

Overland Transportation

15. First daily overland vehicle trip to site operations will be used as an initial reconnaissance trip to check for caribou along the Transportation Corridor and the vicinity and will include a Wildlife Observer.
16. Overland vehicle operator shall continuously monitor the Transportation Corridor for wildlife during all transport activities.
17. Permittee shall advise all overland vehicle operators of this Protocol including the relevant restrictions and shall enforce their application over the project area, including the Transportation Corridor.
18. In the event caribou are observed along the Transportation Corridor, the vehicle operator will notify the Wildlife Observer and driving operations shall cease until the caribou have moved on so that the caribou are not motivated to flee the area. Provided it is safe to do so, the vehicle operator will shut down any combustion engines and will remain within their vehicles until the caribou have departed.
19. In the event a Wildlife Observer, employees or contractors on the ground observe caribou, they shall notify the Wildlife Observer who shall notify the overland vehicle operator. The vehicle operator will attempt to use a safe, alternative travel route. If this is not possible (for instance if the caribou are within 1 km of site operations and such Operations are suspended), then all vehicular operations shall cease until the caribou have moved on.

Caribou Monitoring Group

20. Permittee should collaborate with the GN to establish a project-specific **Caribou Monitoring Group**. This group should consist of representatives of:
 - GN, Department of Environment (GN-DoE);
 - The Arviq (Naujaat) Hunters and Trappers Organization (HTO);
 - The Hamlet of Naujaat (Hamlet);
 - Permittee.
21. The Permittee shall prepare an **Annual Caribou Monitoring Report**. The report should include, but not be limited to:
 - Effect predictions and effectiveness of mitigation related to sensory disturbances, energy expenditures, project related caribou mortality, and the estimated zone of influence imparted by project activities;
 - Wildlife sightings in proximity to drill sites, sample areas and overland travel routes will be recorded in a wildlife sightings log by independent observers (see above), including location, numbers observed and reactions.
22. The **Annual Caribou Monitoring Report** shall be delivered to the **Caribou Monitoring Group** not later than December 1 of each year in which there are Operations on the Property. A copy of the **Annual Caribou Monitoring Report** must also be sent to the Nunavut Impact Review Board (NIRB).
23. Each member of Caribou Monitoring Group shall designate a contact person, including email address, for the purposes of effective communication during any period of active Operations.
24. If caribou are sighted during Operations, Permittee will send an email to the Caribou Monitoring Group outlining the number of caribou observed, the location of the caribou, whether the travel path of the helicopter or overland vehicle was altered, and/or if any drill, helicopter or overland vehicle was shut down time as a result of caribou being present. The email shall be sent on the day of the caribou sighting using the form of email notice attached to this Protocol. This email notification will be in addition to and separate from any reporting by the Wildlife Observers to the HTO.
25. A copy of the wildlife log will be sent to the Caribou Monitoring Group on the last day of each month during which there are Operations and as part of the Annual Caribou Monitoring Report.

Notice of Operations

26. Permittee will confirm the start date of Operations with the Caribou Monitoring Group not less than one week prior to the start of Operations.
27. Permittee will prepare a radio notification for broadcast to the community announcing: the start of Operations; a brief description of the helicopter flight schedule and / or the overland transport schedule; and contact details of Permittee's on-site Project Manager.
28. Permittee will prepare a notice containing similar details and post the notice on prominent bulletin boards throughout the Hamlet.