



# **AGNICO EAGLE**

**WHALE COVE AREA**

**EXPLORATION PROJECTS**

## **WILDLIFE PROTECTION AND RESPONSE PLAN**

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**Document Control**

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## **SECTION 1 – INTRODUCTION**

This plan proposes mitigation measures and monitoring initiatives to lessen the likelihood that wildlife will become habituated to the exploration sites and eventual infrastructures. The plan identifies measures to deter wildlife from obtaining food waste, finding shelter around the sites, gaining access to harmful substances present on the project site, being injured as a result of vehicle collisions, and damaging AEM property.

Despite these mitigation measures, personnel may occasionally come into contact with wildlife that inhabits the exploration areas. Incidents must be managed to keep both humans and wildlife safe while using only humane control methods.

Furthermore, all staff must be familiar with the standard operating procedures and best practices aimed at ensuring human-wildlife conflicts are minimized during the exploration program and approved pre-development construction activities. All personnel, including contractors, on site have a role to play in ensuring human safety, conservation of wildlife and documenting wildlife activities in the exploration areas.

The plan also provides information on general human-wildlife conflict policies and regulations, species-specific response plans for ungulates and predatory mammals, and general wildlife awareness.

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## **SECTION 2 – HUMAN-WILDLIFE CONFLICTS**

### **2.1 Overview**

Wildlife encounters can take many forms. A conflict occurs when either human or wildlife health, and/or safety are put at risk. Human health and safety can be affected by contact or conflict with wildlife in several ways, including direct or indirect physical injury, and exposure to animal diseases that can infect humans (i.e., rabies).

The most common conflict faced by wildlife is the increased risk of mortality from human encounters, which most often occur when wildlife become habituated to human activity and lose their natural fear of people. The most serious form of habituation is directly correlated to animals obtaining food, which is known as food conditioning. Food-conditioned animals become dependent on humans for sources of food. Because these human-induced habits become engrained in the animal, attempts to deter the habituated behavior generally fail with the end result usually being the death of the animal. Loss of habitat effectiveness (how the animal uses its available habitat), and effects to wildlife movement (how the animal travels through its available habitat) can also result from wildlife in conflict with human development. Ultimately, this will affect both the health and safety of the wildlife species involved. While it is impossible to remove all risk to both human and wildlife health and safety, approaches to minimize the risk do exist. Reactive measures do have their place in stopping the conflicts when they occur, but proactive strategies are the most effective means of preventing potential conflicts.

### **2.2 AEM Policies and Regulations**

The following summarizes the general rules regarding wildlife on the exploration sites and will form the basis of the Wildlife Awareness.

Employees and contractors are advised to report all wildlife related activities on site to the Environmental Department.

#### **2.2.1 General Restrictions for Wildlife Protection**

The following are general restrictions for site workers and contractors, intended to minimize the potential for negative project-related effects (e.g., increased mortality risk) on wildlife in and around the site.

- Wildlife shall have the right-of-way except where it is judged to be unsafe to do so. All species of wildlife (i.e., from small mammals to large carnivores, songbirds to raptors) when encountered by personnel on foot or in vehicles will be given the right-of-way,
- Feeding wildlife is prohibited at all times,

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- Harassment<sup>1</sup> of wildlife is prohibited at all times,
  - The destruction or disruption of wildlife nests, eggs, dens, burrows, and the like, is prohibited at all times,
  - Hunting and fishing is prohibited at all times at the site,
  - Pets are prohibited at all times at the site,
  - Traffic (including ATVs and snowmobiles) is restricted to designated roads and trails.

The site refers to any facility present during the exploration programs.

### **2.2.2 Wildlife Attractants**

A list of potential wildlife attractants is provided below. The list is intended as a general summary of attractants but may not be comprehensive of all potential attractants.

- Food wastes and garbage;
- Chemicals (e.g., salt for drilling) and refuse (e.g., empty fuel containers);
- Wildlife carcasses (e.g., road kills, hunter kills);
- Human activity moving around the site;

### **2.2.3 Garbage Management**

General recommendations directed to minimize wildlife interactions related to food wastes and garbage is provided below.

- Littering is prohibited on and in the vicinity of the exploration sites (including sites and accesses). All garbage (e.g. lunch bags) must be returned to temporary storage containers. Note: organic wastes (e.g., orange peels, apple cores, left over coffee, tea or fruit drinks) are included.
- Food related waste (including packaging) will be transported and incinerated on a daily basis and general waste will be stored for eventual disposal in an approved landfill and then buried or sent to a proper disposal facility in the south.
- Wastes associated with mechanical maintenance and repairs (e.g., motor oil and antifreeze) will be disposed of as an hazardous waste.
- All temporary (small) storage containers for food waste garbage will be wildlife protective (i.e. have bear proof lids).
- No open top buckets or anything similar will be tolerated outside buildings.
- Feeding wildlife is prohibited at all times on or in the vicinity of the site, including during travel to and from the site on workdays.
- Wildlife incidents related to garbage or human food attractants will be reported as soon as possible. See Section 2.2.7 (Reporting Wildlife Observations and Incidents) for more information.
- Improperly disposed of garbage, particularly food wastes will be reported as soon as possible.

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<sup>1</sup> defined as to kill, injure, seize, capture or trap, pursue and includes to stalk, track, search for, or lie in wait for all purposes not authorized by the Environmental Department

- See Section 2.2.7 (Reporting Wildlife Observations and Incidents) for more information.

While Arctic fox tend to be the greatest concern with respect to access to garbage, other animals (e.g., wolverines, wolves and bears) may be attracted to uncontained garbage sources. Problem wildlife data at AEM projects to date, indicate that Arctic fox and wolves are the most likely species to be attracted to the sites.

#### **2.2.4 Wildlife Health**

The following recommendations are intended to reduce potential human effects on wildlife health (including non-vehicle related accidents and consumption of toxic substances).

- Feeding wildlife is prohibited at all times on or in the vicinity of the site, including during travel to and from the site. If caught feeding wildlife, employees will be subject to disciplinary action which could include dismissal.
- Company procedures on the safe and prompt clean-up of any chemical spills will be followed.
- Any observations of wildlife in and around potential sources of contaminants (e.g., fuelling sites) will be reported. See Section 2.2.7 (Reporting Wildlife Observations and Incidents) for details.

#### **2.2.5 Wildlife and Vehicles**

The following recommendations are intended to reduce the incidence of wildlife-vehicle collisions and near misses.

- Wildlife has the right-of-way except where it is judged to be unsafe to do so.
- Obey all traffic signs.
- Respect Maximum speed limit:
- Verbally report wildlife carcasses observed on and in the vicinity of the site, and along roads, as soon as possible. See Section 2.2.7 (Reporting Wildlife Observations and Incidents) for more information.
- Restrict traffic (including ATVs and snowmobiles) to designated access roads and trails.
- Report all wildlife-vehicle collisions that result in the death or injury of wildlife as soon as possible. See Section 2.2.7 (Reporting Wildlife Observations and Incidents) for details.

A near miss between a vehicle and an animal should be reported as a wildlife 'incident'. See Section 2.2.7 (Reporting Wildlife Observations and Incidents) for details.

#### **2.2.6 Wildlife and Buildings**

The following recommendations are intended to reduce the risk of close encounters between wildlife and people

- Skirting should be added around buildings to prevent wildlife access. Under building access ways must be closed at all time.
- Keep sea-can doors closed at all times to avoid wildlife using them as shelter.



- Open top bins and containers for food waste will not be permitted outside buildings.

## **2.2.7 Reporting Wildlife Observations and Incidents**

### **2.2.7.1 Reporting Requirements of Project Workers and Contractors**

- Workers and contractors are required to verbally notify the Environmental Department of the following wildlife observations or incidents as soon as possible.
  - Signs of animal presence (e.g., tracks, scat, nests, burrows) in close proximity (visible to the eye from within the site footprint frequented by workers).
  - Sightings of animals in close proximity (visible to the eye from within the site footprint frequented by workers).
  - Aggressive or unusual wildlife behaviour.
  - Instances of workers feeding wildlife.
  - Instances of improper disposal of garbage or other waste materials.
  - Observed maintenance issues (e.g., improper placement or maintenance of garbage containers).
  - Instances of workers not following vehicle use guidelines (e.g. speed limits).
  - Vehicle collisions with wildlife or near misses.
  - Observations and locations of dead (e.g., road kill) or injured animals.

Following the verbal report of a wildlife incident or observation, the Environment Department will complete a Wildlife Incident Report and forward it to the authorities as necessary. Wildlife fatality reporting will follow the Wildlife Reporting Protocol.

### **2.2.7.2 Reporting Requirements of Wildlife Occurrences**

Wildlife Incident Reports provide essential information that may identify:

- potentially dangerous situations requiring intervention (e.g., problem wildlife);
- situations that require notification to the Nunavut Department of Environment, KIA and the HTO;
- weaknesses in garbage-handling and problem wildlife prevention measures; and
- areas that may require warning signs.

The Environmental Coordinator or designate(s) should ensure that records of wildlife observations and incidents are thoroughly documented. Reports should attempt to include the following information wherever possible:

- Identification and number of wildlife observed;
- Specific timing and location of the observation(s);
- Details regarding the animal behaviour, including direction of approach and departure, what it was doing, any aggressive behaviour, etc.

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- Assessment of local attractants, such as garbage, odours, movement of people, other wildlife, etc.;
  - If local attractants are identified as a factor, determination of what steps were or will be taken to address/remove potential attractants;
  - Identification of any potential mitigation measures available to deter wildlife or limit access and how they will be implemented (refer to Section 2.2.8 for additional information on dealing with problem wildlife); and

### **2.2.8 Protocol for Dealing with Problem Wildlife**

A problem wildlife situation may arise when an animal acts in an aggressive manner and/or is a repetitive nuisance or threat to worker safety. The following protocols should be used to deal with problem wildlife:

- Immediately notify the Environmental Coordinator or designate(s) of any problem wildlife issue.
- Reporting wildlife incidents as they occur will ensure that proactive rather than reactive measures can be taken to prevent a serious outcome (e.g., human injury, destruction of the problem animal). See Section 2.2.7 (Reporting Wildlife Observations and Incidents) for details.
- Notify the GN Wildlife Officer or other designated Government of Nunavut representative, inform them of the problem wildlife encountered on site, discuss appropriate aversive and mitigation actions, and determine timing when lethal methods should be implemented, if necessary.
- The Environmental Coordinator or designate(s) will initiate the appropriate actions in response to a problem wildlife issue, Recommended actions include:
  1. Assess potential local attractants and address or remove all those identified, where practical;
  2. Utilize non-lethal deterrents (e.g., aversive conditioning, noise deterrents, hazing, trapping and relocating), projectiles (e.g., rubber bullets. (Refer to Sections 3 and 4 for species-specific deterrents).

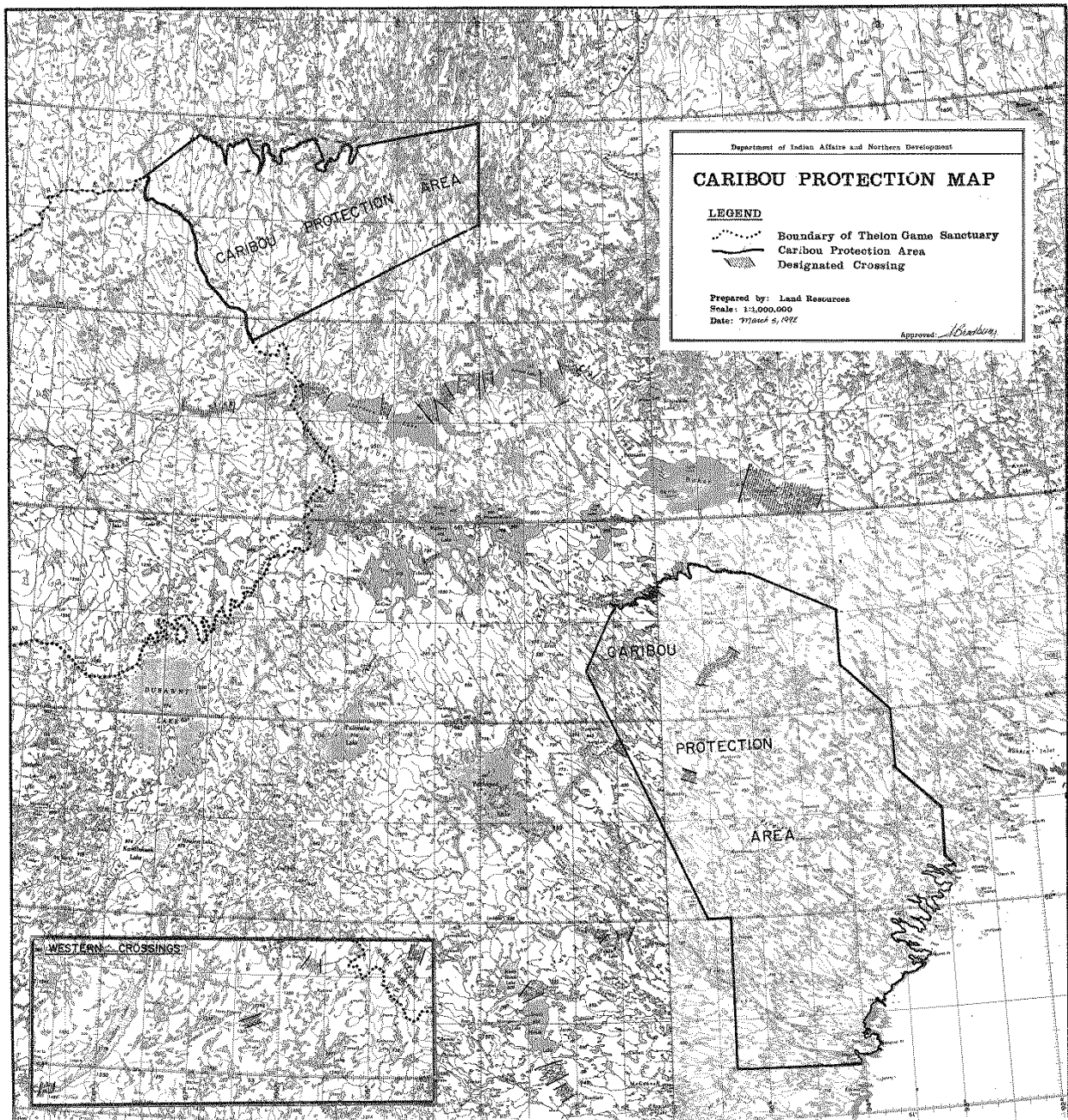
#### **2.2.8.1 Dispatching Problem Wildlife**

1. Prior to dispatching any wildlife on site, the Environment Department will consult with the GN Wildlife Officer for advice/direction. If an animal is destroyed, a description of the lethal measures deployed (e.g., rifle), statement of the rationale for use of lethal measures (e.g., proximity to workers, repeated incidents, observed condition of the animal, etc.), and indication of what previous non-lethal measures were employed (e.g., deterrents, hazing, trapping and relocating (with permission from GN) etc.).
2. Written direction (email) from the GN Wildlife Officer must be obtained prior to dispatching any wildlife, excepted in emergency situation requiring the Manager and the Environment department approbation.
3. Only authorized personnel (Environment Department) are permitted to use lethal and non-lethal projectiles (e.g., rubber bullets) or deploy traps for problem wildlife interventions.

4. Do not attempt to deal with a problem wildlife issue on your own. Problem wildlife can be dangerous.
5. Conform to recommendations regarding predator safety. All staff will receive wildlife awareness training during their orientation.

#### **2.2.9 Protocol for Dealing with Caribou and Muskoxen during their migration**

The Keewatin Regional Land Use Plan identifies caribou protection areas and measures that must be applied when working in these areas.



The protection measures described in the Keewatin Land Use Plan, Appendix H are below

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 than 300 meters above ground level; and
  - (iii) the use of snowmobiles and ATVs (all-terrain vehicles) outside the immediate vicinity of the camp.
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 Plan 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 the 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 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

In addition to the Keewatin Regional Land Use Plan caribou protection measures, AEM has developed a protocol that will be applied.

This protocol has 3 components:

- A caribou and muskox herd sighting and protection protocol
- An work suspension protocol
- An activity restart protocol

### **2.2.9.2 Caribou and muskox herd sighting reporting and protection protocol**

Studies of woodland caribou have demonstrated avoidance of up to 1 km for well sites and 250 m for roads and seismic lines (Dyer et al. 2001). Data from the Ekati Diamond Mine suggests that the instantaneous negative response (alert, stop feeding) of barren-ground caribou to stressors (e.g., truck traffic) increases within 1 km of the source (BHPB 2004).

During migration periods AEM will report any sighting and prevent human activities that could disturb the herd. Caribou will have the “right-of-way”, and will not be blocked or deterred from moving through the Exploration project areas.

AEM will take all possible measures to avoid disturbance to the caribou or muskox herd.

At all times, it's strictly forbidden to harass wildlife. This includes persistently worrying or chasing animals, or disturbing large groups of animals.

#### **When observing herds of caribou or muskox:**

Staff must report immediately the presence of caribou (50 or more) or muskox (10 or more) to the Environmental Department. The Environment Department will notify the KIA, HTO and the Government of Nunavut Environment Department electronically via a “Caribou Migration Alert”. When reporting the presence of the herd, specify the location and the approximate size of the herd.

#### **When to activate the work suspension protocol:**

During migration of caribou (50 or more) or muskox (10 or more) herds, AEM must start implementing the work suspension protocol when the caribou herd is moving in the direction of the activities. The protocol for off-site drilling and/or helicopter activity will commence once a herd is within 5 km of such activities.

### **2.2.9.3 Work suspension protocol**

The activities below could interfere with the caribou migration and will be suspended if necessary:

- helicopter flights
- drill operations

Upon activation of the work suspension protocol, the following steps will be taken:

#### **Drilling and Helicopter Activities**

- Inform all employees at the drill sites who are in the direction of the caribou migration and within 5km of the migration that they will need to start to shut down the drilling operations such that the drills and associated helicopter flights can cease operations before the caribou reach the 3 km<sup>2</sup> stop work buffer area. All such activities will cease when caribou migration is within the 3 km<sup>2</sup> buffer zone.
- Shutdown will include removal of drill rods from the holes and securing of the drill station.
- Organize transport of the affected personnel to the camp.
- During helicopter transport of personnel the Air Traffic Management procedure will be applied to protect the caribou herd (avoidance distance of 1,000 m vertical and 1,500 m horizontal).

#### **2.2.9.4 Winter Road utilization**

- For a group of caribou ( $\geq 50$ ) or muskoxen ( $\geq 10$ ) within 100 m from a winter road:
  - Regular vehicle traffic for transport to and from the sites will be suspended and /or stopped to allow Caribou herds to cross the road.
  - Wildlife has the right of the way and vehicles must wait without disturbing their movements.

#### **2.2.9.5 Activity Restart Protocol**

- Once the caribou survey confirms the caribou herds have moved outside the 3km<sup>2</sup> buffer zone, the activity restart protocol can be activated.

#### **2.2.10 Raptor protection**

Avoidance should be the primary mitigation measure to protect the raptors. Before starting drilling activities, a verification will be completed to verify the presence of raptors and nests in the area. AEM is committed to avoiding any raptor nests and will apply a buffer of 100 metres from a nest site.

#### **2.2.11 Migratory Birds Protection**

Avoidance should be the primary mitigation measure to protect the migratory birds. Before starting drilling activities, a verification will be completed to verify the presence of migratory birds and nests in the area. AEM is committed to avoiding any raptor nests and will apply a buffer of 100 metres from a nest site.



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## **SECTION 3 – SPECIES-SPECIFIC RESPONSE PLANS**

### **3.1 Purpose**

Response plans specific to species groups (i.e., ungulates and predatory mammals) are required to ensure that all personnel at the exploration sites are provided guidance on how to respond in a manner that is safe to both humans and wildlife should they encounter wildlife on or around the project site.

### **3.2 Species Groups Addressed**

Ungulates (caribou and muskoxen) and predatory mammals (polar and grizzly bears, wolverine, wolf and Arctic fox) have the highest potential for interactions with humans during an exploration project, and thus require specific response plans. If other wildlife are encountered, adaptive management strategies will be implemented if mitigation techniques and the mine policies and regulations mentioned in this document are not effective for these species. The proposed wildlife monitoring program will be the best measure of identifying potential areas in need of new mitigation strategies, or changes in policies or regulations.

For each of the species groups described below, the seasonal activity in the project area is discussed, as well as the protocol in the event of an encounter.

#### **3.2.1 Ungulates**

##### ***3.2.1.1 Seasonal Activity in the Project Area***

Information from the Government of Nunavut shows that the areas of exploration are located near an area used by the caribou during calving and post-calving. This particular situation will need to be correctly assessed to avoid impacts on the caribou, which is an important resource for the Inuit. The protection measures described in this management plan will help to minimize the impacts.

##### ***3.2.1.2 Response to Encounters***

###### **Caribou**

It is extremely rare for humans to have physical altercations with caribou. Caribou do rut in the fall when relatively high numbers can be found from time-to-time on the site and the levels of aggression displayed, particularly by males, increases substantially. There is literature suggesting that a bull caribou may attack a person or vehicle during the rut. Therefore, a close encounter with caribou (during the fall) or muskoxen could be dangerous.

If you encounter a single or herds of caribou, the following actions should be taken:

- Back away slowly;
- Ensure animal(s) have an escape route;
- Do not make sudden movements;
- Do not make loud noises or attempt to scare the animal(s);
- Use radio/satellite phone to report the presence of the animal(s) to the Environmental Department;

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- Stay in radio/phone contact until the animal(s) moves away or you have returned to a safe area
  - (e.g. inside vehicle or building); and
  - Wait for the animal(s) to pass before continuing work in the area

### **Muskox**

Although considered rare, muskoxen will charge humans if they are threatened (especially lone bulls). Being a sedentary species, the muskoxen will have the tendency to stand their ground when threatened, defending their territory or their young

If you encounter a single or herds of muskoxen the following actions should be taken:

- Back away slowly;
- Ensure animal(s) have an escape route;
- Do not make sudden movements;
- Do not make loud noises or attempt to scare the animal(s);
- Use radio/satellite phone to report the presence of the animal(s) to the Environmental Department;
- Stay in radio/phone contact until the animal(s) moves away or you have returned to a safe area
- (e.g. inside vehicle or building); and
- Leave the area and wait for the animal(s) to go away before continuing work in the area

## **3.2.2 Predatory Mammals**

### **3.2.2.1 Seasonal Activity in the Project Area**

#### **Polar and Grizzly Bear**

The areas included in the current exploration projects are located on the west side of the Whale Cove community. Polar and grizzly bears could be encountered. Polar bears have been more commonly seen.

**These are extremely dangerous under all circumstances as they are known to prey on humans. Get help immediately if you see a polar bear.**

#### **Wolverine**

The presence of wolverines is thought to occur in the project area on an infrequent basis. The limited evidence for wolverine in the area is not surprising given their wide-ranging movements and characteristically low population densities.

#### **Wolf**

Wolves are seen occasionally in these areas. Similar to wolverines, the limited evidence for wolves in the area is not surprising given their wide-ranging movements and characteristically low population densities.

#### **Arctic Fox**

Arctic foxes are the most common predatory mammal species to be encountered in this area.

### **3.2.2.2 Response to Encounters**

Predatory mammals such as wolves, wolverines, Arctic fox and grizzly bears rarely attack people. However, they are extremely strong and vicious, and should be given respect. **Polar bears are known to attack humans.** Members of the dog family (such as wolves and foxes) are more at risk of carrying rabies, and other zoonotic diseases, and therefore should be avoided. Arctic fox in particular are easily tamed, quickly losing their fear of humans and often approaching very close. Sick or injured animals may no longer be able to feed themselves, and could be in a state of starvation. Often they show few physical signs that something may be wrong, but typically act more aggressively or even 'friendly' towards humans. Therefore, a close encounter with a predatory mammal could be dangerous. All bites and scratches from wildlife should be reported immediately to Health & Safety since animals can be vectors for rabies.

#### ***If you encounter a predatory mammal, the following actions should be taken:***

- Back away slowly and do not turn your back on the animal;
- Do not make sudden movements;
- Do not make loud noises or attempt to scare the animal if it is simply traveling through the area;
- Use radio/satellite phone to report the presence of the animal to the Environmental department;
- Stay in radio/phone contact until the animal moves away or you have returned to a safe area. (e.g. inside vehicle or building); and
- Wait for the animal to pass before continuing work in the area.

#### ***If the predatory mammal does not back away, or shows interest in you:***

- Continue to back away slowly and ensure a 10 m distance between yourself and the animal;
- Make sure the animal has a safe route of escape;
- Make noise to alert the animal of your presence or to scare it off;
- Avoid provoking it;
- Return to a safe area as soon as possible (e.g. inside a building or vehicle); and
- Keep the Environmental department informed of the situation using the radio/phone.

#### ***If the predatory mammal still does not back away, call for deterrent action by the Environment Department***

The Environment Department is to treat all predatory mammals that are threatening or aggressive as they would treat a grizzly bear or polar bear, which are perceived to be the most dangerous. All predatory mammals that are showing interest in a person or site facilities must be aggressively deterred to prevent habituation to the site. Detailed response recommendations are provided in Section 3.2.2.3 below. If an

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animal is not of an immediate safety concern, the Environment Department should discuss options to deter or remove the animal with Government of Nunavut conservation personnel.

### **3.2.2.3 Environment Department Protocols for Managing Problem Predatory Mammals**

As part of the detailed response plan, the Environment Department will follow the procedures included here when responding to predatory mammal sightings and encounters. It is assumed that the reporting person(s) has followed procedures for predatory mammal incidents, and has requested the Environment Department to be dispatched due to the failure of human presence to deter the predatory mammal. If an animal is not of an immediate safety concern, the Environment Department should discuss options to deter or remove the animal with Government of Nunavut conservation personnel. All wildlife problems are to be recorded in the wildlife database.

#### **The Environment Department will:**

- Collect all deterrent equipment and receive briefing from the Environmental Coordinator or delegate (s) on location and circumstances of the call.
- When firearms are to be used there will always be two individuals, one person with a firearm (12 gauge) for deterrent use, the other as back up having a rifle (30-06 caliber at least) or a 12 gauge with 1-ounce lead slugs. No lethal force will be taken without consent from the Environmental Coordinator in conjunction with the consultation of the Government of Nunavut Wildlife Officer unless the situation is deemed to be life threatening.
- The appropriate action, usually less than lethal deterrent, will be chosen and used in an effort to scare the predatory mammal away.
- If the deterrent is successful, the incident will be recorded in the Wildlife database and should detail the type and level of deterrent used, information on the predatory mammal involved, and all information on the circumstances leading up to the incident.

#### ***If the deterrent is not effective and the predatory mammal continues to approach or doesn't move away from the area of human activity or project footprint.***

- Increase deterrent efforts to less than lethal projectile (rubber bullet) if not already being employed.
- Ensure the animal has an open escape route.
- Continue aggressive use of less than lethal projectile deterrents to try and chase the animal away.

#### **Dispatching**

All but the most aggressive animals should have been deterred at this point. If the situation escalates further the Environmental Coordinator must be contacted and made aware of the situation. No further action will be taken until consultation with the GN Wildlife Officer has been completed.

NO LETHAL ACTION WILL BE TAKEN UNTIL CONSENT IS GIVEN BY GN WILDLIFE OFFICER UNLESS THE SITUATION IS DEEMED TO BE LIFE THREATENING.

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**The following will be determined by the Environmental Coordinator or designate in conjunction with the the Manager or designate. Any and all possible actions will be taken to communicate with the GN wildlife officer prior to making an internal decision.**

***The risk to human life or property is imminent since the predatory mammal has not responded to non-lethal deterrent options and the safety of the team or site property is now compromised.***

- Shoot with the intention of stopping the threat, using 1-ounce lead slugs or with the rifle, to kill the animal
- Shots should be aimed at the chest area, not the head or hind quarters
- If lethal force has been used, the Environment Department must complete a full report detailing the event immediately.
- The GN conservation officers will be notified by phone. Direction will then be given to properly dispose of the carcass.
- Any wildlife showing signs of rabies will be dispatched (never shot in the head) and reported.

NOTE: Lethal action against any wildlife without consent from the GN Wildlife Officer can result in legal ramifications. Additionally, unnecessary deterring of wildlife can be considered harassment and can also result in legal ramifications.

Any AEM employee who does not follow the above mentioned steps **will be** subject to disciplinary measures.

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### 3.2.3 Species at risk

If species at risk are encountered or affected, the primary mitigation measure will be avoidance. The avoidance will include contact with or disturbance to each species, its habitat and/or its residence. A list of the species at risk is available in Appendix A and at [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca) to get the current status of a species.

Monitoring will be undertaken to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring will include recording the locations and dates of any observations of species at risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken to avoid contact or disturbance to the species, its habitat, and/or its residence.

## SECTION 4 – WILDLIFE AWARENESS INFORMATION AND ENCOUNTER STRATEGIES

This section deals with general predatory mammal (i.e. wolves, wolverines, grizzly bears and polar bears) awareness information and encounter strategies. It does not replace the need to take a recognized wildlife awareness course.

### 4.1 Factors that Influence a Predatory Mammal's Reaction

Wolverines, wolves, grizzly bears and polar bears will react differently to chance encounters with humans, depending upon many factors, including each animal's past experience with humans. Their reaction is difficult to predict because of the variability of factors with each encounter.

- Female mammals may aggressively defend their young (for example, female bears with cubs are more likely to attack than to flee).
- Wolverines or bears may defend a food cache (for example, a bear's main objective is to eat from the time it leaves its den to the time it returns to a winter den). Hunting bears will cache food after eating part of it by covering the food with dirt, branches or leaves. They will often establish a daybed nearby and return later for another meal). Animals will aggressively defend their food cache.
- Individual Space: All predatory mammals have a minimum distance surrounding them within which any intrusion is considered a threat. A cornered or surprised predatory mammal may be dangerous. If there is no cover to retreat to, their usual response to danger is to attack or to stand their ground.
- Old, wounded or predatory mammals with teeth malformations can be dangerous because they are very hungry or starving.
- Wolverines, wolves, Arctic fox and bears are easily attracted to human food sources and may become aggressive to obtain it. Predatory mammals that have obtained food from humans become "human

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food habituated.” These mammals are accustomed to humans and link people as sources for obtaining food.

- Young animals which are inexperienced hunters and/or recently weaned are also at a greater risk to take advantage of human food source opportunities.

## **4.2 Animal Encounters**

Most of animal safety is prevention – avoiding an encounter is the best way to stay safe while working in the home ranges of Arctic fox, wolverines, wolves, and grizzly bears. **Polar bears are extremely dangerous and help should immediately be sought.**

## **4.3. How to React to Animal Encounters**

Your reaction should depend on circumstances and the behavior of the mammal.

1. Stop and assess the situation before you act.
2. Does the wolverine, wolf or bear know you are there?
3. How is the animal reacting to the nearby activity?
4. Remain calm.
5. Do not turn your back on the animal.

**DO NOT RUN** – You will trigger the animal’s natural response to chase you. Wolverines, wolves and bears are extremely fast and you cannot outrun them.

### **Some Simple Rules:**

- Respect them – they can kill you
- Be alert at all times
- Watch for signs
- Make noise – don’t surprise animals
- Travel in groups when possible
- Be cautious in noisy areas (streams)
- Know the types of areas animals use during the year
- Do not approach them
- Never feed them
- Get trained and carry deterrents
- Remember carcass equals danger – look for ravens, strong odours
- Mentally rehearse encounters

### **4.3.1 Specific situations: Animal Encounters**

#### ***Wolverine, wolf, or bear is not aware of you:***

- Leave the area quietly in the same direction that you came from.

- Move while the predatory mammal is not aware of you and stop moving when the mammal lifts its head to check its surroundings.
- Stay downwind so the wolverine, wolf or bear will not pick up your scent.
- When you have moved a safe distance away, and preferably to your truck or shop where you can watch, wait until the predatory mammal leaves.
- Report the event to the Environmental department immediately

***If the wolverine, wolf or bear is unaware of you and approaching:***

- Allow the mammal the right of way. Make sure there is a safe escape route and that you are not in the way.
- Return to your vehicle or building when available or allow the animal a wide berth.
- Report the event to the Environmental department immediately

***If you cannot leave undetected:***

- Move upwind so the animal can pick up your scent; this will help it identify you as human.
- If possible, try to keep the predatory mammal in your sight.
- Watch to see if the predatory mammal leaves when it smells that a person is nearby.
- Report the event to the Environmental department immediately

***If the wolverine, wolf or bear is aware of you but in the distance:***

- Continue walking at the same general pace and towards a safe area (vehicle or building)
- **DO NOT RUN.**

***The wolverine, wolf or bear is aware of you and close:***

- Predatory mammals will feel threatened in a close confrontation. Generally their natural tendency will be to reduce or to remove the threat. Assist the wolverine, wolf or bear by acting as non-threatening as possible.
- Do not make direct eye contact.
- Do not make any sudden moves.
- Do not run.
- In the case of a bear, they need to identify you as a person, so talk in low tones and slowly wave your arms over your head.
- Attempt to give the wolverine, wolf or bear an opportunity to leave. Be sure they have an open escape route.
- Try to back away slowly.
- If the mammal begins to follow you, drop your jacket, or pack or some other article (not food) to distract the wolverine, wolf or bear. This may distract the bear long enough for you to escape.



- Report to the Environmental department immediately

***The wolverine, wolf or bear is close and threatening:***

- If you have a deterrent such as a bear banger or bear spray be prepared to use it depending on how close the predatory mammal is.
- If you do not have a deterrent, or if using the deterrent is not successful, act as non-threatening as possible.
- Talk to the predatory mammal in a calm authoritative tone of voice.
- Do not startle or provoke the predatory mammal by making sudden moves.
- Back slowly away from the wolverine, wolf or bear and drop a pack, jacket, or some other article in order to distract the mammal momentarily.
- Remember that the wolverine, wolf or bear may be defending their cubs that you have not yet seen or they may have a food cache nearby. Attempt to look as non-threatening as possible.
- Report to the Environmental department immediately

***The wolverine, wolf or bear is very close and approaching:***

A distance of less than 50 meters in an open area is considered very close.

- If the predatory mammal continues to approach, use your deterrent when in range.
- If the predatory mammal does not respond to the deterrent you must now **STAND YOUR GROUND!**
- Report to the Environmental department immediately

***The wolverine, wolf or bear charges:***

In the case that you have done something that has provoked the wolverine, wolf or bear into showing signs of aggression towards you. It is often not clear to the person what they have done to provoke the mammal until after the attack. It is important that you act passively, humble your posture and do not look directly at the wolverine, wolf or bear. Always keep the mammal in sight. Never yell or throw things as these are obvious signs of aggression

**When faced with a charging wolverine, wolf or bear:**

- First, use your deterrent, either a banger or pepper spray. If authorized (only Environment Department representatives or local security personnel) to carry a firearm, shoot the predator.
- **DO NOT PLAY DEAD IF THE PREDATORY MAMMAL CONSIDERS YOU FOOD.**
- You must defend yourself with whatever means are available, act aggressively towards the animal.
- Stand up on something high and try to make yourself look bigger. Try to appear dominant. Try to frighten it. Yell, scream, shout and wave your arms. Jump up and down and fight back.
- Hold your jacket or backpack over your head to make yourself look bigger

- If being aggressively attacked in a predatory attack, fight back. Concentrate your efforts on the face, eyes and nose of the bear. Use whatever means you have, rocks, sticks, tools, hardhat, or simply kick and punch with all the strength you can muster.
- Report to the Environmental department immediately

***There are two types of bear attacks***

**Provoked Attacks:**

- You have done something that has provoked the bear into showing signs of aggression towards you. It is often not clear to the person what they have done to provoke the bear until after the attack.
- It is important that you act passively, humble your posture and do not look directly at the bear. Always keep the bear in sight.
- Never yell at the bear or throw things at the bear, these are obvious signs of aggression towards the bear.
- Report to the Environmental department immediately

**Predatory Attacks:**

- The bear is hunting or stalking you! You are being treated as potential food. DO NOT PLAY DEAD IF THE BEAR CONSIDERS YOU FOOD
- You must defend yourself with whatever means are available, act aggressively towards the bear. Stand up on something high and try to make yourself look bigger.
- Try to appear dominant. Try to frighten the bear. Yell, scream, shout and wave your arms. Jump up and down and fight back. Hold your jacket or backpack over your head to make yourself look bigger.
- Use your deterrent; either a banger or pepper spray.
- If deterrent is unsuccessful, and only as an absolute last resort, and if authorized to carry a firearm, shoot the bear.
- Report to the Environmental department immediately

## **4.4 Wildlife Deterrents**

### **4.4.1 Noise**

- Pyrotechnics, including bangers, screamers, whistlers and flares. Requires a magazine launcher.

### **4.4.2 Wildlife chemical Deterrents**

Bear sprays are highly effective but they must be used correctly to be effective. As with all deterrents, they have their good points and their bad points.

- The main ingredient in bear spray is “Capsicum” an extract from hot peppers.
- Capsicum needs to strike the eyes, nose or mouth of the mammal, (open membranes) to be effective.
- These sprays can only be used at very close range, 3 to 8 m or 10 to 25 ft.

- You cannot discharge the bear spray too early – or it will be completely ineffective.
- If the predatory mammal comes within the range of the bear spray – aim directly into their face and spray.
- You must be aware of the wind direction. If the wind is blowing towards you, the spray will be carried by the wind into your face.
- Bear spray may not be effective in sub-zero weather. (Spray cans do not fire well in very cold temperatures.) In colder weather you need to keep the can of bear spray warm in order for it to fire effectively.
- Bear spray will not be effective in the rain. When you fire a can of bear spray, the spray will create a billowing cloud of capsicum and propellant. Rain can/will wash the spray right out of the air before it strikes the bear in the face.
- If you have used your can of bear spray to deter a mammal, wash the nozzle off with soap and water to remove the scent. Replace your can of spray as soon as possible. You do not want to have another bear encounter with half a can of spray left.
- Bear sprays have a shelf life. Always replace your bear spray when you are nearing the end of the shelf life. The Capsicum does not deteriorate over time; it is the canister seals that deteriorate over time.
- Do not test your can of spray before going out into the field. You need to take a full can of spray into the field, not a partially used one.

Wildlife chemical deterrents are only to be used for the purpose they are intended for. Misuse of wildlife deterrents such as chemical sprays, bangers, and pyrotechnics is considered a criminal offence.

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## **SECTION 5 – TRAINING PROTOCOL**

### **5.1 Scope**

The Wildlife Training Protocol outlines recommended levels of training that specific groups of people at the Exploration division should receive. It is important that human activity at the site does not result in wildlife encounters that put people or wildlife at risk. All personnel on site have a role to play in ensuring human safety, conservation of wildlife, and documenting wildlife activities in the project area.

### **5.2 Assumptions and Key Considerations**

The Environmental Coordinator or designates (s) will be responsible for ensuring that employees, contractors and visitors at the Exploration sites receive wildlife training appropriate to their roles and responsibilities.

The Environment Department will be responsible for all deterrent action whenever it is necessary to deter wildlife from camp infrastructure or personnel. All members of the Environment Department will receive specialized training in various levels of deterrent use.

### **5.3 Training**

Mandatory wildlife awareness for all staff will be included in the site induction, toolbox meetings, and through print media.

#### **5.3.1 Wildlife-Human Conflict**

- General restrictions for wildlife protection
- Wildlife Attractants
- Garbage Management
- Wildlife Health
- Wildlife and Vehicles
- Preventing Problem Wildlife
- Dealing with Problem Wildlife
- Reporting Wildlife Observations and Incidents

#### **5.3.2 Wildlife Awareness Training**

This training will be aimed at providing awareness of potential wildlife encounters that may occur at the exploration sites. The course should review:

- Wildlife that commonly occur near the site
- Behavior of wildlife that may be encountered near the site
- Wildlife encounters
- Wildlife deterrents

### **5.3.3 Environment Department**

In addition to the required site orientation, the Environment Department may require additional training. The following training is recommended, especially for those without experience in situations where wildlife occurrences are common.

#### ***Bear Safety Training***

Provided by a qualified contractor or Territorial, Provincial or Federal Wildlife Officer, this course will provide:

- Instruction on the use of lethal and non-lethal deterrents for emergency response to bear incidents;
- Techniques for euthanizing bears during an emergency response;
- Other types of deterrent options available in non-emergency situations;
- In depth aversive conditioning techniques;
- Necropsy techniques, and biological sampling; and
- Practicum.

#### ***Carnivore Safety Training***

Provided by a qualified contractor or Territorial, Provincial or Federal Wildlife Officer to include:

- Biology, ecology and behavior of wolverine, wolf, Arctic fox;
- Rabies and other zoonotic diseases;
- Detailed deterrent and aversive conditioning techniques;
- Instruction on the use of lethal and non-lethal deterrents for emergency response to incidents involving large carnivores;
- Necropsy techniques and biological sampling; and
- Practicum.

## **Appendix A – SPECIES AT RISK IN NUNAVUT**

Species at Risk 1	COSEWIC  Designation	Schedule of SARA	Government Organization with Primary Management Responsibility 2
Eskimo Curlew	Endangered	Schedule 1	Environment and Climate Change Canada (ECCC)
Ivory Gull	Endangered	Schedule 1	ECCC
Ross’s Gull	Threatened	Schedule 1	ECCC
Harlequin Duck (Eastern population)	Special Concern	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	Government of Nunavut (GN)
Peregrine Falcon	Special Concern  ( <i>anatum-tundrius</i> complex <sub>3</sub> )	Schedule 1 - Threatened ( <i>anatum</i> ) Schedule 3 – Special Concern ( <i>tundrius</i> )	GN
Short-eared Owl	Special Concern	Schedule 3	GN
Red Knot ( <i>rufa</i> subspecies)	Endangered	Schedule 1	ECCC
Red Knot ( <i>islandica</i> subspecies)	Special Concern	Schedule 1	ECCC
Horned Grebe (Western population)	Special Concern	Pending	ECCC
Red-necked Phalarope	Special concern	Pending	ECCC
Buff-breasted Sandpiper	Special concern	Pending	ECCC
Felt-leaf Willow	Special Concern	Schedule 1	GN
Porsild’s Bryum	Threatened	Schedule 1	GN
Peary Caribou	Endangered	Schedule 1	GN
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	GN/Fisheries, Oceans and the Canadian Coast Guard (DFO)
Grizzly Bear	Special Concern	Pending	GN
Wolverine	Special Concern	Pending	GN
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Atlantic Walrus	Special Concern	Pending	DFO
Beluga Whale (Cumberland Sound population)	Threatened	Schedule 2	DFO
Beluga Whale (Eastern Hudson Bay population)	Endangered	Pending	DFO
Beluga Whale (Western Hudson Bay population)	Special Concern	Pending	DFO
Beluga Whale (Eastern High Arctic – Baffin Bay population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Canada – West Greenland population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Arctic	Schedule 2	Pending	DFO
Killer Whale (Northwest Atlantic / Eastern Arctic populations)	Special Concern	Pending	DFO
Narwhal	Special Concern	Pending	DFO