



# Canada – Lupin Mine Wildlife Management Plan (care and maintenance)

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## DOCUMENT CONTROL

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## **1 INTRODUCTION**

The overall goal of the Wildlife Management Plan (WMP) is to minimise and monitor the potential effects of the Lupin operation while under care and maintenance. The purpose of the plan is to provide details on elimination, reduction, or control of the adverse effects on wildlife during care and maintenance. Wildlife encounters may occur at any time and it is everyone's responsibility to ensure the safety of people and animals on site. The report includes general procedures that should be reviewed by ALL personnel who work at the Lupin Mine Site.

## **2 GENERAL MITIGATION MEASURES**

Animals may interact with the mine during normal movements within their home range. The mitigation plan guidelines will be enforced on the Project disturbance footprint and on all potentially affected areas during care and maintenance. Wildlife Mitigation Plan addresses wildlife management and human safety concerns, and outlines numerous mitigation measures, safety procedures, and contingency plans that will be followed during care and maintenance.

General mitigation measures include:

### **2.1 WILDLIFE INCIDENTS AND MORTALITY**

- Provide wildlife awareness and sensitivity training (especially bear awareness training) for all on-site personnel to familiarise them with an ecologically responsible code of ethics regarding wildlife and wildlife habitat;
- Report all wildlife incidences immediately;
- Construct berms or fences around open pits to prevent access by wildlife;
- Consider using Inukshuks in conjunction with berms to direct animals around open pits and other high traffic areas;
- Where appropriate, use an electric or non-electric fence in selected areas to exclude wildlife;
- Inspect the airstrip for wildlife prior to take-off and landing of all aircrafts;
- Skirt all buildings, low level stairs and stair landings to the ground;
- Where possible, eliminate blind spots around buildings;
- Provide windows on all exits;
- Employees must not feed or harass wildlife;
- Use signs and radios to warn drivers when wildlife, especially caribou, is present in an area. All vehicles or personnel travelling in vehicles will have a radio;
- The speed limits on the road will be strictly enforced (generally 50 kph under most circumstances)
- Vehicle operators will yield to wildlife crossing on roads, be vigilant in watching for wildlife near roads, and take all reasonable measures to avoid vehicle-wildlife incidences;
- Install wildlife crossing signs at high frequency wildlife crossing areas or in areas where animals are found to reside near roads;
- Hunting is not permitted by any employee, whether on or off duty;



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- Implement and enforce a waste management plan to minimise the presence of attractants such as garbage and waste food. Incinerate any possible attractants as quickly as possible, with minimum storage time;
- Ensure the Projects' incinerator has an inventory of spare parts so that equipment failure does not result in attracting wildlife to the area;
- Immediately report all dead animals in close proximity to the Project area. Carcasses will be removed to at least 1 km from mine facilities, or incinerated.

## **2.2 WILDLIFE MONITORING**

- All on site personnel will be informed as part of their site orientation that any and all wildlife sightings must be recorded and/or reported.
- A Wildlife Sighting Record Log will be posted in at least one public area (usually the kitchen/dining hall) of all camps, and it will be expected that any wildlife sightings in the general vicinity of the site be recorded on the record sheet as soon as possible with the time, date, description of the wildlife identified and GPS coordinates of sighting location, when ever possible. Sightings will also be reported directly to the site supervisor as soon as possible after sighting. If sighting occurs in the field (outside 1 km of camp/site) field staff will record the details of the sighting in the field and provide the information to their supervisor upon return to the camp site. The sighting record log will also be updated as soon as possible with the information.
- If the wildlife sighting merits a hazard alert (i.e., a grizzly bear within 5 km of camp) the observer will report immediately to the site supervisor with the details of the sighting, and appropriate warnings and alerts will be issued to all staff in the area.

## **2.3 WILDLIFE MOVEMENTS AND DISTRIBUTION**

- Reduce noise by use of muffled exhaust systems and meeting emission guidelines;
- Enforce a minimum general flying altitude of 300 m (1,000 feet) above ground level throughout the Project; 610 m (2,000 feet) for all site supply and crew change flights, whenever flying over areas likely to have nesting migratory birds, and whenever flying over known raptor nesting areas during the nesting season; and 1,100 m vertical (3,600 feet) and 1,500 m (5,000 feet) horizontal distance near areas where migratory birds are known to concentrate (e.g. breeding colonies, moulting areas), and near identified caribou water crossings when sites are active;
- Air traffic will use only prescribed flight corridors and altitudes near known concentrations of wildlife;
- Aircraft approach and departure flight paths may be developed to minimise disturbance to wildlife;
- Restrict vehicles to designated roads and prepared work areas only, and prohibit recreational use of off-road vehicles;
- Manage visual or noise disturbances near animals, primarily caribou.



### **3 SPECIFIC MITIGATION MEASURES**

#### **3.1 CARIBOU**

- Establish a caribou (ungulate) alert system to immediately warn personnel of the number and location of ungulates, so that staff can act appropriately relay this information to vehicle and equipment operators;
- If a group of caribou is observed in the vicinity of construction or operation activity, implement and monitor traffic activity controls with the appropriate response, including reducing speed, re-routing or stopping traffic, control/stoppage of construction or operations, and/or re-scheduling flights;
- Deter caribou from hazardous areas using berms and Inukshuks.

#### **3.2 GRIZZLY BEAR, WOLVERINE, FOXES AND WOLVES**

- Report all grizzly bears observed in the vicinity of the Project or mine personnel immediately to site manager;
- Establish a Wildlife Response Team trained in the techniques and procedures for deterring carnivores from hazardous areas (e.g. camps, roads, and airstrip);
- Implement a Waste Management Plan that includes the disposal of food and non-toxic combustible waste by incineration;
- Store edible and aromatic products (including oil and paint) in sealed containers or bear-proof trailers or compounds;
- Where possible, all field crews must keep their lunches locked in a vehicle or aircraft;
- Sheathing will be placed along the base of facilities where wastes and aromatic products and compounds are found; and
- Remove all dead animals near the mine footprint that could attract predators to at least 1 km from mine facilities, or incinerate.

#### **3.3 RAPTORS AND MIGRATORY BIRDS**

- Where possible, schedule potentially disturbing activities within 1.6 km of known territories outside of the nesting season, i.e. from September to April;
- All aircraft will observe a minimum general flying altitude of 300 m (1,000 feet) above ground level throughout the Project; 610 m (2,000 feet) for all site supply and crew change flights, whenever flying over areas likely to have nesting migratory birds, and whenever flying over known raptor nesting areas during the nesting season; and 1,100 m vertical (3,600 feet) and 1,500 m (5,000 feet) horizontal distance near areas where migratory birds are known to concentrate (e.g. breeding colonies, moulting areas), and near identified caribou water crossings when sites are active;
- Avoid all disturbances to nests, specifically during the early part of the nesting cycle (late May through to early July, depending upon the species) to minimise the risk of nest site abandonment;
- Although birds may vary in their response to disturbance, treat all nest sites with equal precaution, regardless of the response of the bird;
- Avoid activity within 100 m of a nest unless unavoidable and necessary.



- Avoid all activity within 100 m of an occupied nest site prior to the fledging period (when chicks fly from the nest) to reduce the risk of premature nest departure. Severe disturbance at the nest often causes young raptors to jump out of the nest before they are ready, greatly reducing their survival rate. This period covers approximately 10 to 20 August for peregrine falcons in the RSA;

#### **4 HANDLING AND DISPOSAL OF FOOD WASTE**

The improper handling, storage and disposal of food and food wastes can quickly result in wildlife being attracted to site. If wildlife finds an easily attainable food reward they can quickly become a serious threat to human safety including a significant risk of property damage. More often the result is a dead wildlife.

The leading causes of wildlife being attracted into camps and receiving food rewards are:

- Outside storage of the food waste (garbage bins or storage boxes);
- Poor scheduling of garbage pickup and disposal;
- Overloading of incinerators.

This mitigation procedure outlines the steps that the High Lake Project will take to ensure that none of these problems occur anywhere on the project site.

##### **4.1 FOOD WASTES**

- Incinerators will be located in a secure building
- All food waste will remain inside the building in which it is generated until it is picked up by site services and taken directly to the incinerator(s) for immediate disposal.
- Food wastes and other domestic garbage from all areas of the accommodation complex are to be brought to the kitchen storage area for disposal with kitchen wastes.
- Waste and uneaten food from lunches being consumed away from the main dining area and lunchrooms are to be brought to the camp kitchen for proper disposal.
- Waste from the kitchen and kitchen storage area is to be collected daily and taken to the incinerator for immediate incineration. Depending on the number of people in camp, the frequency of collection and incineration of garbage may have to be increased.
- At no point will food waste and kitchen garbage be allowed to accumulate to greater than a proper incinerator load i.e. no more than 60% of the incinerator(s) burning chamber.
- Small amounts of cooking grease from grills and grease traps will be incinerated with kitchen garbage – this aids in burning wet garbage. Large amounts of grease presents a fire and wildlife attractant risk and must be handled according to the 'Used cooking oil from the deep fat fryer' procedure below.
- Waste aerosol cans and batteries are disposed of and handled separately.