



# Wildlife Management and Monitoring Plan

Lockhart All Season Road Geotechnical  
Investigation

October | 2023

## Document Control

The Government of the Northwest Territories Department of Infrastructure (GNWT-INF) and its contractors are responsible for the distribution, maintenance and updating of the Wildlife Management and Monitoring Plan.

This document will be reviewed and possibly revised as needed, but at least annually, considering changes in the law, environmental factors, GNWT policies, and any other pertinent site-specific changes. Version history is provided in the table below.

Version	Section(s) Revised	Description of Revision	Issue Date
1.0	N/A	Submitted with Land Use Permit application	October 2023

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# 1 Introduction

This Wildlife Management and Monitoring Plan (WMMP) has been developed for use by the Government of the Northwest Territories Department of Infrastructure (GNWT-INF; the Proponent) and contractors for Lockhart All-Season Road (LASR) Geotechnical Investigation (the Project).

## 1.1 Purpose and Objectives

The purpose of the WMMP is show how the GNWT will meet regulatory requirements for the Project. The objectives of the WMMP are as follows:

- To describe mitigation proposed to reduce Project impacts to wildlife and wildlife habitat.
- Describe how adaptive management will be applied to wildlife mitigation and monitoring.
- Constitute part of the engagement with communities, regulatory agencies, and interested parties in wildlife effects mitigation and monitoring.

## 1.2 Project Contacts

### **GNWT-INF Contacts**

David-Scott McQuinn  
Manager, Slave Geological Province Corridor  
Strategic Infrastructure  
Government of Northwest Territories  
7th Floor, YK Centre 4922 48th Street  
PO Box 1320 Yellowknife, NT  
X1A 2L9 Phone: (867) 767-9045 Ext. 31022  
Email: David-Scott\_McQuinn@gov.nt.ca

### **Contractor Contacts**

To be determined.

## 1.3 Roles and Responsibilities

The GNWT-INF is ultimately responsible for the success of this plan and approves all relevant policies and documents, auditing, action planning and the verification process. GNWT-INF contractors are responsible for the implementation of this plan including overall management and internal reporting.

All GNWT and Contractor personnel involved in this Project will be made aware of this Plan and the requirements set out for the management and monitoring of wildlife and wildlife habitats.

## 1.4 Engagement

Refer to the Project Engagement Plan.

## 1.5 Associated Plans

The WMMP will be implemented in conjunction with other Site management and monitoring plans to support the Project. Other management and monitoring plans that are relevant to this WMMP are the Engagement Plan, the Spill Contingency Plan and the Waste Management Plan.

## 1.6 Legislation and Guidelines

This plan been developed in consideration of the applicable Territorial and Federal legislation including the following guideline:

- Wildlife Management and Monitoring Plan (WMMP) Process and Content Guidelines (GNWT-ECC 2021)

Relevant legislation includes:

- Northwest Territories *Wildlife Act*
- Northwest Territories Species at Risk (NWT) Act
- Species at Risk Act (SARA)
- *Migratory Birds Convention Act* (MBCA) and Migratory Birds Regulations
- *Mackenzie Valley Resource Management Act* and Mackenzie Valley Land Use Regulations

# 2 Project Description

## 2.1 Project Description

The Government of the Northwest Territories - Department of Infrastructure (GNWT-INF) is proposing to conduct Geotechnical Investigations to gather information in support the development of the Lockhart All Season Road (LASR) between Highway 4 (the Ingraham Trail) at Tibbitt Lake to Lockhart Lake. The Geotechnical Investigations will consist of assessing potential hard-rock quarries and granular resources (collectively referred to as target areas) as material for construction of an all-season road.

Potential target areas that have been identified for further investigation between Highway 4 and Lockhart Lake from desktop evaluation and previous studies are provided in Appendix A. Additional potential target areas may be identified based on on-going engagement and studies.

Project operations that occur in the summer will include the use of heli-portable drills and will use existing camps in the area. No new roads or trails are required.

Project operations occurring in the winter will include the use of heli-portable drills and the construction of spur roads from the Tibbitt to Contwoyto Winter Road for the Project. Work will be supported by existing camps or by the creation of a mobile camp. Generally, hard-rock quarries will be assessed by drill, while granular resources will be sampled by digging test pits. The assessment of each target area will include describing geochemistry, volumes, subgrade conditions, drainage and ground temperature. Monitoring equipment may be installed (e.g., such as ground temperature monitors) and may include monuments or other surface infrastructure. The development of fuel caches may be required to support testing pitting and drilling operations.

## 2.2 Project Map

Refer to Appendix A for project maps.

# 3 Potential Impacts

## 3.1 Affected Species or Habitat Features

The Project will take place in the range of barren-ground caribou, and in areas where they may be present during winter operations. The Project will assess potential granular deposits which may include eskers that can be used as dens or travel corridors by wildlife. Vegetation clearing will be required, which may have the potential to affect migratory bird nests or raptor nests. The ranges of other wildlife, such as moose, black bears, grizzly bears, and wolverine also overlap with the Project.

## 3.2 Potential Impacts to Wildlife and Wildlife Habitat

Potential impacts to wildlife and wildlife habitat from the Project include:

- Year-round direct habitat loss will be limited to the clearing of vegetation and disturbance of soils for drills and test pits. In the winter, there is added potential for habitat loss due to spur roads and camps needed for a winter program.
- Indirect habitat loss may result from the disturbance caused by noise, odors and activity from drilling, from helicopters, vehicles and camps, and extend beyond the area of direct habitat loss. Indirect habitat loss may be greatest during operations during the migratory bird breeding season (early May to mid-August in the C8 zone) (Government of Canada 2018), on eskers, and when caribou are present.
- Wildlife mortality or injury could result from destruction of nest during the nesting season, wildlife interactions at the camps, or collisions with vehicles on the winter roads.

### 3.3 Species At Risk

The intent of the *Species at Risk Act* (SARA), and the *NWT Species at Risk Act* (SARA (NWT)) is to protect species at risk from becoming extirpated or extinct because of human activity. While the former was enacted by the Government of Canada, the latter was enacted by the Government of the Northwest Territories (GNWT) and applies only to wild animals and plants managed by the GNWT (ECC 2010). For example, species managed by the *Migratory Birds Convention Act* and Migratory Birds Regulations are not covered by the *NWT Species at Risk Act* (SARA (NWT)). For the purposes of this WMMP, species may be of concern because of either their national, territorial or Committee on Status of Endangered Wildlife in Canada (COSEWIC) status.

Table 1 below lists the wildlife species at risk that could potentially interact with the Project.

**Table 1: Wildlife Species At Risk in the Project Area**

Species	Territorial Status			Federal Status		
	NWT Species at Risk Committee Status	NWT List of Species at Risk	NWT Recovery Strategy or Management Plan Available	Committee on the Status of Endangered Wildlife in Canada Status	Federal Species at Risk Act Schedule 1 Status (Legal)	Federal Recovery Strategy or Management Plan Available?
Barren-ground Caribou ( <i>Rangifer tarandus</i> )	Threatened	Threatened	Yes	Threatened	Under consideration	Yes
Little Brown Myotis ( <i>Myotis lucifugus</i> )	Special Concern	Special Concern	Yes	Endangered	Endangered	Yes
Grizzly Bear (Western population) ( <i>Ursus arctos</i> )	Special Concern	No status	No	Special concern	Special concern	No
Wolverine ( <i>Gulo gulo</i> )	Not at risk	No status	No	Special concern	Special concern	No
Short-eared owl ( <i>Asio flammeus</i> )	Not assessed	No status	No	Threatened	Special concern	Yes
Bank swallow ( <i>Riparia riparia</i> )	Not applicable	Not applicable	No	Threatened	Threatened	Yes
Barn swallow ( <i>Hirundo rustica</i> )	Not applicable	Not applicable	No	Special concern	Threatened	No
Common Nighthawk ( <i>Chordeiles minor</i> )	Not applicable	Not applicable	No	Special concern	Threatened	Yes
Evening Grosbeak ( <i>Coccothraustes vespertinus</i> )	Not applicable	Not Applicable	No	Special concern	Special concern	Yes
Harris's Sparrow ( <i>Zonotrichia querula</i> )	Not applicable	Not applicable	No	Special concern	Under consideration	No



**Table 1: Wildlife Species At Risk in the Project Area**

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	NWT Species at Risk Committee Status	NWT List of Species at Risk	NWT Recovery Strategy or Management Plan Available	Committee on the Status of Endangered Wildlife in Canada Status	Federal Species at Risk Act Schedule 1 Status (Legal)	Federal Recovery Strategy or Management Plan Available?
Horned Grebe (Western population) ( <i>Podiceps auritus</i> )	Not applicable	Not applicable	No	Special concern	Special concern	Yes
Olive-sided flycatcher ( <i>Contopus cooperi</i> )	Not applicable	Not applicable	No	Special concern	Threatened	Yes
Peregrine Falcon ( <i>Falco peregrinus tundrius</i> )	Not assessed	No status	No	Not at risk	Special concern	Yes
Rusty Blackbird ( <i>Euphagus carolinus</i> )	Not assessed	No status	No	Special concern	Special concern	Yes
Red-necked Phalarope ( <i>Phalaropus lobatus</i> )	Not applicable	Not applicable	No	Special concern	Special concern	Yes
Lesser Yellowlegs ( <i>Tringa flavipes</i> )	Not applicable	Not applicable	No	Threatened	Under consideration	No

## 4 Wildlife and Wildlife Habitat Mitigation

This section lists the mitigation measures, design features, policies, procedures, or guidelines that will be followed to avoid, minimize, or compensate for potential impacts of the Project.

### 4.1 Employee Wildlife Awareness and Training

Prior to starting work, all Project employees will be made aware of this document.

### 4.2 Infrastructure Design and Camp Layout for Bear Safety and to Prevent Denning, Nesting and Roosting

The Project will use existing camps infrastructure for summer programs. Mobile camps anticipated for winter will follow guidelines listed in Safety in Grizzly and Black Bear Country Pamphlet (Appendix B), the Bear Occurrence Procedures Manual (Appendix C), and Camp Waste & Wildlife Attraction Manual (Appendix D). Winter camps will be mobilized after the denning season and demobilized before the nesting season.

## 4.3 Management of Camp Waste and Other Wildlife Attractants

All wildlife attractants will be segregated and secured in animal-proof containers until it can be incinerated on-site or transported back to Yellowknife for disposal, as per the Waste Management Plan. Food will be stored in a secure location. Cooking, eating and food disposal areas will be kept clean. Fishing and hunting by Project staff is prohibited. Further suggestions for attractant management are outlined in the Camp Waste & Wildlife Attraction Manual (Appendix D).

## 4.4 Timing Restrictions and Set Back Distances

The following sensitive times of year are identified for the Project:

- Vegetation clearing should be avoided during the migratory bird nesting season, early May to mid-August in the C8 zone (Government of Canada 2018).
- The Project should avoid raptor nests during their critical breeding period, as early as first week of April to third week of July for Gyrfalcon, and as late as third week of May to second week of September for Osprey in the Low Subarctic Ecozone (Shank and Poole, 2016).
- Bathurst caribou fall migration may pass through the Project area between early September and late November, when summer operations may still be underway. Winter operations will be complete before the spring migration (mid-April to early June).

## 4.5 Direct Habitat Loss

Mitigation to reduce the direct loss of wildlife habitat include the following.

- The Project will preferentially use existing winter roads (including the Tibbit to Contwoyto Winter Road) and trails, reducing creation of new access and need for vegetation removal.
- Vegetation removal will be limited to that required for access trails, drill and excavation sites, and camps.
- Access roads will be no more than 10 metres wide on land.
- Disturbance at granular deposits (including eskers) will be limited to boreholes and test pits with drills and augers.
- Vegetation clearing should be avoided during the migratory bird nesting season, early May to mid-August in the C8 zone (Government of Canada 2018).

## 4.6 Indirect Habitat Loss

Mitigation to reduce the indirect loss of wildlife habitat include the following.

- A Spill Contingency Plan will be developed and implemented.
- Land Use Permit will contain conditions to avoid rutting and erosion.
- All equipment will be cleaned prior to arriving on site and will be free of dirt and potential weed propagules (e.g., seeds).
- No discharge of altered water to the receiving environment.
- All mitigation employed to reduce disturbance to wildlife on the Tibbitt to Contwoyto Winter Road will be implemented, both on this road and on any spur roads constructed for the Project.
- Dust emissions will be limited as Project will only use winter roads for overland access.
- Disturbance due to noise will only occur during operational activities and is reversible once these activities stop.
- Helicopter flights associated with drilling activities will consider the minimum altitude guidelines outlined in the brochure Flying Low? Think Again (Appendix E), where safety permits.
- If caribou, moose or other wildlife are observed during helicopter flights, they will not be approached, followed, hovered above, or circled around.
- Pilots will increase altitude and veer away from caribou, moose, or other wildlife if the animals are observed running, panicking, or exhibiting other startled response.

## 4.7 Wildlife Injury and Mortality

Mitigation to reduce the chance of wildlife injury and mortality include the following.

- All Site staff and contractors are required to report relevant observations of wildlife.
- Food waste is to be securely stored on camp until disposal.
- Wildlife sightings are reported to the Project and documented on the Wildlife Sightings Log to manage and minimize risks to wildlife and workers.
- The Project intends to use existing camps for summer field programs, and temporary mobile camps for winter programs, reducing the possibility that nest or dens will be disturbed. In the event that an active mammal den, bird nest (active or inactive) or young are discovered, disruptive activities will be halted and GNWT-ECC and ECCC (for migratory birds) will be consulted to determine an appropriate strategy to avoid or minimize disturbance.
- Harassment, feeding or approaching wildlife by staff and contractors is prohibited.
- Staff and contractors are routinely warned of wildlife presence through radio contact or signage.
- GNWT-ECC is contacted if wildlife incidents or issues arise to receive additional direction, permits or approvals.

- Proper lighting will be used by all vehicles when moving, and movement speed will be limited in certain areas with low visibility.
- All mitigation employed to reduce risk of vehicle collisions on the Tibbitt to Contwoyto Winter Road will be implemented, both on this road and on any spur roads constructed for the Project.
- Workers will be prohibited from hunting.
- Hazardous waste products will be stored in secured containers and transported to licensed facilities to eliminate access by wildlife, as described in the Waste Management Plan.
- If caribou are visible within 500 m of Project drilling, operations will be suspended to allow wildlife to move away from the area on their own.
- In the case of wildlife injury and/or mortality, call the GNWT-ECC Wildlife Emergency number at 867-873-7181. In case of issues regarding migratory birds, email the Canadian Wildlife Service at [cwsnorth-scfnd@ec.gc.ca](mailto:cwsnorth-scfnd@ec.gc.ca).
- As per Section 58 of the *Wildlife Act*, and sub-section 8(1) of the Wildlife General Regulations, any person who accidentally kills or seriously wounds big game or other prescribed wildlife with a motorized vehicle on a highway must report the event to an officer within 24 hours after the incident.

## 4.8 Management of Hazards to Wildlife

As the Project does not include construction of any permanent structures or infrastructure, no hazards to wildlife are anticipated beyond what is already described above.

## 4.9 Wildlife Deterrence Procedures

For more info on bear deterrence reference the Safety in Grizzly and Black Bear Country Pamphlet (Appendix B), the Bear Occurrence Procedures Manual (Appendix C) and the Camp Waste & Wildlife Attraction Manual (Appendix D).

## 4.10 Description of the Role of Community Wildlife Monitors

Community wildlife monitors will work with the Contractor to monitor the Project area for presence of wildlife, which will be recorded in the wildlife sighting log. This includes incidental observations, assisting with pre-clearing or pre-blasting surveys, and wildlife deterrence actions when required.

# 5 Monitoring

This section describes the monitoring that will take place to determine if the mitigations implemented are functioning as intended, to provide advance warning of wildlife issues that may require mitigation, and to identify opportunities to improve mitigation through adaptive management.

## 5.1 Wildlife Sightings

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

All staff will be encouraged to add observations to the Wildlife Sighting Log (Appendix F), including the species, number, location, and date of the observation. The logs will be checked by the camp manager daily for evidence of problem wildlife or problem areas that may pose a risk to wildlife.

The wildlife sighting data will be provided to ECC's Wildlife Management Information System (WMIS) annually.

## 5.2 Wildlife Incidents

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

- Human-wildlife interactions that present a risk to either people or animals
- Wildlife-caused damage to property or delay in operations
- Wildlife deterrent actions (including audible or chemical deterrents, see Appendix B)
- Wildlife injury or mortality
- Wildlife found dead, even if from natural causes
- Birds nesting on project infrastructure or equipment

Wildlife incidents will be documented using the Wildlife Incident Form (Appendix F) and reported immediately to the GNWT-ECC Wildlife Emergency number at 867-873-7181. Issues regarding migratory birds will be emailed to the Canadian Wildlife Service at [cwsnorth-scfnorth@ec.gc.ca](mailto:cwsnorth-scfnorth@ec.gc.ca).

Encounters with bears (grizzly bears and black bears) will follow the guidance provided in the Safety in Grizzly Bear and Black Bear Country brochure in Appendix B. All incidents will require follow-up to determine what can be done to prevent a similar incident from occurring in the future.

## 6 Project Footprint

Project winter spur road routes and geotechnical investigation sites will be provided in shapefile format at the completion of the Project.

## 7 Reporting

Wildlife Incidents will be reported immediately to the Regional ECC office.

The Annual Wildlife Mitigation and Monitoring Plan Report will, but not be limited to, the following information:

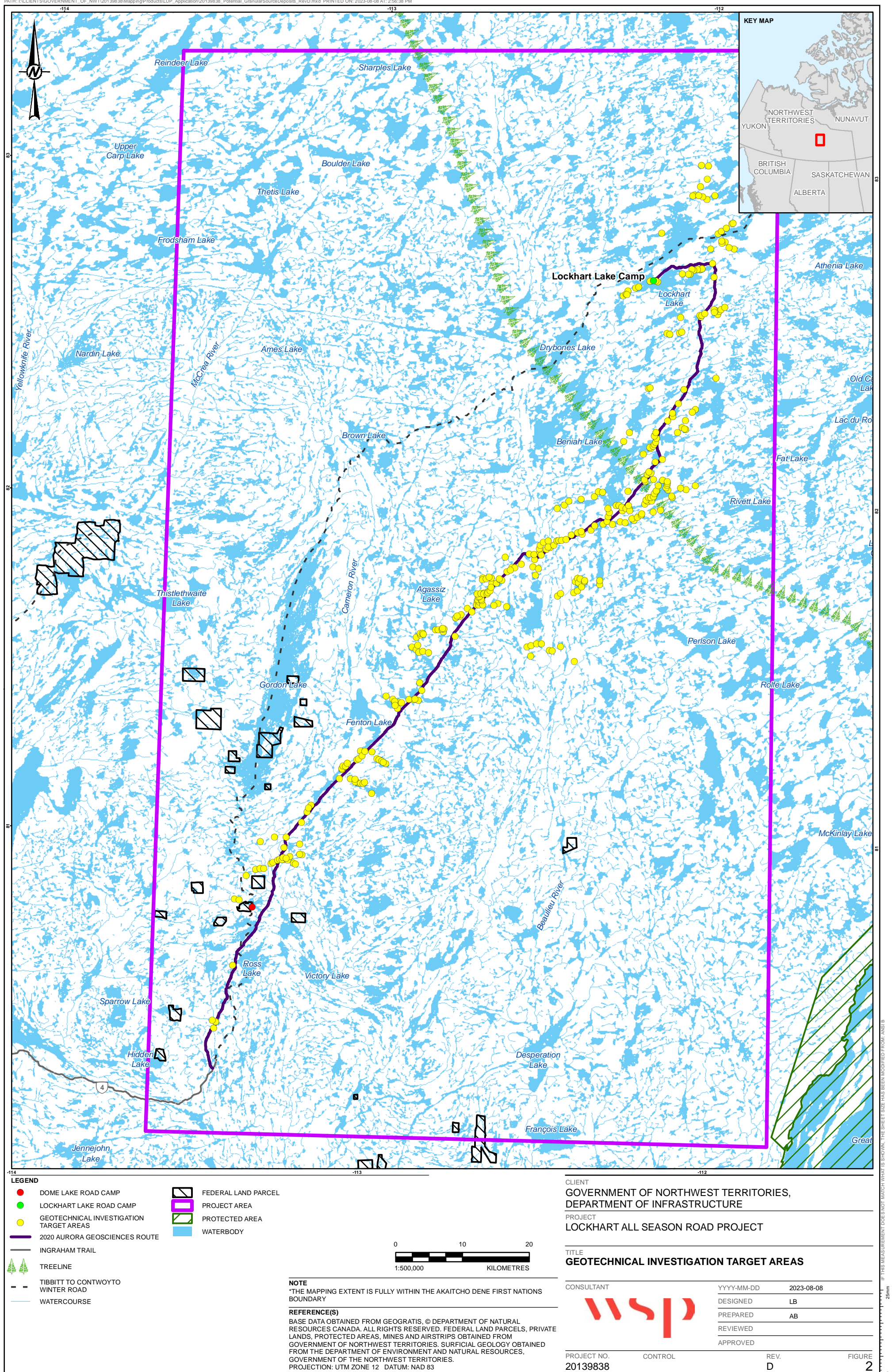
- An updated version of the WMMP if any changes are required.
- Digital copies of the Wildlife Sightings Record.
- Details of all Wildlife Incidents.
- Records of disturbances to wildlife or wildlife habitat that were not predicted.
- A discussion of the effectiveness of the mitigation outlined in the WMMP.
- A copy of the Project footprint in a digital spatial file, upon completion of the Project.
- The Annual Report will be submitted by 31 March in each year of the Land Use Permit or until the Project is completed and submitted to GNWT-ECC.

## 8 References

- Government of Canada. 1994. *Migratory Birds Convention Act*. S.C. 1994, c. 22. Current to February 8, 2023. Last amended on December 12, 2017. Minister of Justice. Ottawa, ON.
- Government of Canada. 1998a. *Mackenzie Valley Resource Management Act*. S.C. 1998, c. 25. Current to February 8, 2023. Last amended on August 28, 2019. Minister of Justice. Ottawa, ON.
- Government of Canada. 1998b. *Mackenzie Valley Land Use Regulations*. SOR/98-429. Current to February 8, 2023. Last amended on June 20, 2017. Minister of Justice. Ottawa, ON.
- Government of Canada. 2002. *Species at Risk Act*. S.C. 2002, c. 29. Current to February 8, 2023. Last amended on February 3, 2023. Minister of Justice. Ottawa, ON.
- Government of Canada. 2018. General Nesting Periods of Migratory Birds. Website <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html>.
- Government of Canada. 2022. *Migratory Birds Regulations*. SOR/2022-105. Current to February 8, 2023. Last amended on July 31, 2022. Minister of Justice. Ottawa, ON.
- GNWT (Government of Northwest Territories). 2009. *Species at Risk (NWT) Act*. S.N.W.T. 2009, c. 16. Last amended 2017. Department of Justice. Yellowknife, NT.
- GNWT. 2013. *Wildlife Act*. S.N.W.T. 2013, c.30. Last amended 2017. Department of Justice. Yellowknife, NT.
- GNWT-ECC (Environment and Climate Change). 2021. Wildlife Management and Monitoring Plan (WMMP) Process and Content Guidelines. Yellowknife, NT. Retrieved September 2021 from: <https://www.enr.gov.nt.ca/en/node/18861/>.
- Shank, C.C. and Poole, K.G. 2016. Critical Breeding Periods for Raptor Species of the Northwest Territories. File Report No. 147. [https://www.enr.gov.nt.ca/sites/enr/files/raptor\\_species\\_breeding\\_periods.pdf](https://www.enr.gov.nt.ca/sites/enr/files/raptor_species_breeding_periods.pdf).

# APPENDIX A: Project Maps





# APPENDIX B: Safety in Grizzly and Black Bear Country Pamphlet



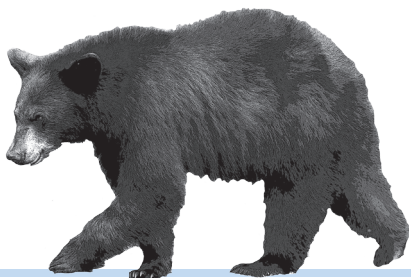
## Deterrents...

- Include 12 gauge cracker shells, air horns, flares and chemical repellents such as pepper spray.
- Are not completely effective against every bear in every situation.
- Should not make you less careful to avoid bear conflicts.
- Are potentially dangerous so use with extreme caution.
- If you are using a chemical repellent, try to stay upwind of the bear before using.

## If a Bear Charges...

- Many charges are bluffs. The bear will often veer to the side at the last minute.
- Use a chemical repellent only at close range.
- If you have a firearm and contact appears unavoidable, shoot to kill.
- If you play dead during a bear attack, lie on your side, curl into a ball with your legs tight to your chest and hands clasped behind your neck.

If you must shoot a bear in self-defence, report the kill to a Renewable Resource Officer as soon as possible and provide an explanation of the incident, the date and location of the incident, and any other information requested by an Officer. You may not keep any part of a bear killed in self-defence.



**For more information, contact the  
Environment and Natural Resources  
regional office nearest you:**

Fort Simpson.....	867-695-7450
Fort Smith.....	867-872-6400
Inuvik .....	867-678-6650
Norman Wells .....	867-587-3506
Yellowknife .....	867-767-9238 ext. 53461
Sahtú Wildlife Emergencies.....	867-587-2422
Dehcho Wildlife Emergencies (May – Sept) .....	867-695-7433
Fort Smith Wildlife Emergencies (May – Sept) .....	867-872-0400
Hay River Wildlife Emergencies (May – Sept) .....	867-875-7640
Inuvik Wildlife Emergencies (May – Oct).....	867-678-0289
North Slave Wildlife Emergencies .....	867-873-7181
Wildlife Collisions/ Report a Poacher .....	866-762-2437

[www.enr.gov.nt.ca](http://www.enr.gov.nt.ca)

May 2017



# Safety in Grizzly and Black Bear Country



Government of  
Northwest Territories

# Welcome to Bear Country

Grizzly and black bears can be found throughout the Northwest Territories. They are an important part of the northern ecosystem. Northerners are committed to maintaining healthy populations of all wildlife, including grizzly and black bears. Treat bears with respect. Remember, you are in a bear's territory.

## What's the Difference Between...?

### Grizzly Bear

- 1. Long, light claws
- 2. Dishd face profile
- 3. Short, rounded ears
- 4. Shoulder hump

Front claw  
2 - 4" long

Front track

### Black Bear

- 1. Short, dark claws
- 2. Straight face profile
- 3. Taller ears
- 4. No shoulder hump

Front claw  
1.5" long

Front track

## While You are Travelling...

- Always be alert.
- Travel in groups.
- Travel only during daylight.
- Avoid carrying strong smelling foods.
- Make noise where visibility is limited.
- Avoid bear feeding areas such as flood plains, berry patches and areas rich in horsetails and other grasses.
- Avoid bear travel areas, including shorelines, trails or near berry patches.
- Watch for fresh bear droppings and tracks.
- Carry bear deterrents.

## If You are Camping...

- Avoid camping in areas frequented by bears.
- Always sleep inside a shelter (tent, cabin, etc.).
- Don't keep food in tents or areas of your camp other than the cook tent or kitchen/cooking area.
- Keep a clean camp. Wash all dishes and utensils after every meal.

- Avoid cooking greasy foods.
- Burn all garbage every day or take it to a bearproof disposal site. **Burying garbage does not eliminate odours.**
- If you are going to leave your campsite:
  - Bearproof your camp. Store food and other attractants (dish detergent, toothpaste, dog food, etc.) in an inaccessible place.
  - Let someone know where you are going.
  - Take a partner and bear deterrents with you.

## If You Are Fishing...

- Be cautious near streams or lakes. Bears frequent these areas.
- Clean fish and dispose of guts away from camp.
- Keep and take home fish you catch on your last day only, to minimize bacterial growth in fish, and fish smells in camp.
- Don't wear clothes to bed that smell like fish.

## If You are Hunting...

- Avoid hunting late in the day and returning to your camp in the dark.
- Stay alert when dressing game or handling meat and make sure you are away from your camp.
- Avoid shooting more than your party can pack out in a single load.
- If you must leave meat in the field, protect it from disturbance by other animals or the natural environment. Clearly mark the cache as yours before leaving it. Make sure you have a clear approach route when returning, and retrieve the meat as soon as possible to prevent wastage. Mark the meat to identify the harvester.
- Don't keep bloodied clothes in your tent.

## If You Encounter a Bear...

- Remember the 3 S's... Stop, Stand still, Stay calm.
- Make sure others know a bear is in the vicinity.
- Do not run.
- Leave the bear an open avenue of escape.

## ...at a DISTANCE

- Alert the bear to your presence by speaking in low tones and slowly waving your arms.
- Quietly walk backwards the way you came or make a wide detour.
- Keep an eye on the bear.
- Stay downwind.
- Consider using warning shots, noisemakers.

## ...that is NEARBY

- Do not shout or make sudden movements.
- Avoid direct eye contact.
- Back away slowly.

# APPENDIX C: Bear Occurrence Procedures Manual

# 2014

## Bear Occurrence Procedures Manual



*Photo by Dean Cluff/ENR*

Environment & Natural Resources



## **Bear Occurrence Procedures Manual**

Implementation of these procedures will allow ENR a greater ability to provide advice and assistance in preventing harm to humans, bear(s) or property. In addition, it will provide guidance on safely deterring bears that find themselves in areas of development, tourism camps or cabins with the aim of preventing habituation and unnecessary destruction.

Report any incidents such as sightings, encounters, injuries and/or mortalities to the ENR. The GNWT Phone Directory can be found at <http://rdirectory.gov.nt.ca/rDirectory.aspx> Regional contacts are listed below:

### **North Slave Region**

Wildlife Emergency	(867) 873 - 9238 (24 Hours)
Yellowknife	(867) 873 - 9238
Fax:	(867) 873 - 6230

### **South Slave Region**

Wildlife Emergency	(867) 872 - 0400 (24 Hours)
Fort Smith	(867) 872 - 6400
Fax:	(867) 872 - 4250

### **Inuvik Region**

Wildlife Emergency	(867) 678 - 0289 (24 Hours)
Inuvik	(867) 678 - 6650
Fax:	(867) 678 - 6659

### **Sahtu Region**

Wildlife Emergency	(867) 587 - 2422 (24 Hours)
Norman Wells	(867) 587 - 3500
Fax:	(867) 587 - 3516

### **Deh Cho Region**

Wildlife Emergency	(867) 695 - 7433 (24 Hours)
Fort Simpson	(867) 695 - 7450
Fax:	(867) 695 - 2381

## **BEAR AWARENESS TRAINING**

ENR supports the NWT Mine Health and Safety Regulations (s.15.05), which requires that all field personnel involved in mineral exploration undertake bear-safety training. However, human/wildlife incident prevention is a key component to the training.

Training of personnel in preventing and responding to wildlife incidents can reduce the likelihood of injury to personnel and wildlife. Therefore, all field personnel working on the project must receive bear awareness training, preferably from a professional trainer.

The training should include:

1. Recognizing the causes of human/wildlife conflicts;
2. How to prevent and respond to bear incidents;
3. Proper storage, transfer and disposal of camp waste; and
4. Proper use and safe application of deterrents.

## **INCIDENT PREVENTION**

Refer to the ***Camp Waste and Wildlife Attraction Guideline***. This resource provides guidance on how to minimize or prevent attraction from bears to your camp, cabin or work site.

## **OCCURRENCE RESPONSE**

Small scale exploration and tourism camps should develop and implement Bear Incident Standard Operating Procedures (SOPs) that can be used in the field. The SOPs will allow all members on site to have knowledge of how to minimize or prevent any loss of life or property if there is a bear within the vicinity of your camp area or work site. SOPs may include such things as:

- a) Response team
- b) Equipment
- c) Action level
- d) Emergencies
- e) Reporting Requirement

### **1. *SIGHTING - Bear in the general vicinity (>1km)***

1. If it is within sight of your camp/cabin and it is safe to do so, use a ***Wildlife Sightings Log*** to record and report information regarding your observations.
2. Continue to monitor, if necessary.

### **2. *ENCOUNTER - Bear In Camp (<1km)***

1. If safe to do so; take a quick note of the location, direction of travel and general behaviour of the bear(s).
2. Sound the bear alarm.
3. If necessary, phone the ENR Regional contacts listed above for guidance on necessary next steps to ensure human/wildlife safety and protection of property.
4. If necessary, stay indoors or in your vehicle. **DO NOT APPROACH THE BEAR.**
5. Keep all doors and windows closed.



6. If necessary and safe to do so; continue to monitor the behaviour and movement until either the bear leaves on its own, deterrence is successful or response personnel arrive.
7. If possible, start deterrence procedures.
8. Report status of bear encounter to the ENR Regional contacts listed above when safe to do so.

### **3. Injury**

1. Any injuries a bear may have obtained from direct or indirect contact with the camp or persons must be reported to the appropriate ENR Regional contact listed above.

### **4. Mortality**

1. A bear may be destroyed if human life is in danger or destruction of property is imminent.
2. Under the NWT Wildlife Act, mortalities must be reported to the appropriate ENR Regional contact listed as soon as is practicable. In some cases, the responsible party may be asked to:
  - a) Skin the bear leaving the claws and head attached.
  - b) Preserve the hide by freezing and/or salting it and store it in a cool place. Turn in the hide, the skull, evidence of sex and any other biological samples requested when filing the report to the nearest ENR Regional office or to an ENR Renewable Resource Officer.

If or when possible, the attached **Bear Occurrence Checklist** should be completed prior to calling ENR. It is critical that as much information as possible be provided in order for ENR to provide appropriate advice and guidance.

## **DENNING BEARS**

- A. For exploration camps, if a bear is located in, at or near a den site, work in the area must halt. All employees should safely retreat from the area and report the incident to the Site Supervisor and/or Wildlife Monitor and the appropriate ENR Regional contact listed above for further advice and assistance.
- B. For cabin owners, if a bear is located in, at or near a den site, safely retreat from the area and report the incident to the appropriate ENR Regional contact listed above for further advice and assistance.
- C. Staff from ENR will be required to assess the den site and may implement measures to ensure both human safety and that the bear(s) remain undisturbed. This may include the establishment of a buffer zone of at least 300 meters around the den.
- D. Work inside the buffer zone may not be permitted until after den emergence.



# Environment & Natural Resources (ENR)

## Bear Occurrence Checklist

- Fill out or check all that apply

1. Complainant Details:				
Name, job title and affiliation:				
Contact information:				
Location of complainant: <i>(coordinates, lake or property name)</i>				
Other on-site contact information: <i>(wildlife monitors/site supervisors)</i>				
2. Bear Occurrence Details:				
Date/Time:		Location: <i>(coordinates, lake or property name)</i>		
Type of bear occurrence:	<input type="checkbox"/> sighting	<input type="checkbox"/> encounter	<input type="checkbox"/> injury	<input type="checkbox"/> mortality <i>Ear tag/tattoo #</i>
	<input type="checkbox"/> Other, explain:			
Number of bears:		# of cubs		
Type:	<input type="checkbox"/> black	<input type="checkbox"/> grizzly	<input type="checkbox"/> unknown	
Sex :	<input type="checkbox"/> male	<input type="checkbox"/> female	<input type="checkbox"/> unknown	
Age Class:	<input type="checkbox"/> cub (<1)	<input type="checkbox"/> juvenile	<input type="checkbox"/> adult	<input type="checkbox"/> unknown
Behaviour:	<input type="checkbox"/> fearful	<input type="checkbox"/> not fearful	<input type="checkbox"/> aggressive	<input type="checkbox"/> other
General Observations	<input type="checkbox"/> moving toward site	<input type="checkbox"/> moving away from site	<input type="checkbox"/> at site	
Other observations: <i>(i.e. walking, resting, eating, mortality, injury, den site, number of cubs, etc.)</i>				
Has bear(s) been involved in a previous incident:	<input type="checkbox"/> No <input type="checkbox"/> Yes	If yes, explain:		
Did the bear obtain a reward	<input type="checkbox"/> No <input type="checkbox"/> Yes	If yes, explain:		
Any property damage or loss of life:	<input type="checkbox"/> No <input type="checkbox"/> Yes	If yes, explain:		

### 3. Detection/Deterrent:

<b>Detection system on site:</b>	<input type="checkbox"/> Alarm	<input type="checkbox"/> Dog	<input type="checkbox"/> Motion detector	<input type="checkbox"/> Other:
<b>Deterrence on site:</b>	<input type="checkbox"/> Bear boards	<input type="checkbox"/> Auditory (Yelling/Flares/Alarm/Horn/Bell/Whistle/Cracker shells)		<input type="checkbox"/> Projectile (Rubber Bullets/Firearms)
	<input type="checkbox"/> Electric Fence	<input type="checkbox"/> Chased (Dog, vehicle)		<input type="checkbox"/> Other:
<b>Was deterrence used:</b>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<b>Explain:</b>		
<b>Was the deterrence successful:</b>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<b>Explain:</b>		
<b>Present status of bear with dates:</b>	<input type="checkbox"/> at large	<input type="checkbox"/> captured	<input type="checkbox"/> deterred	<input type="checkbox"/> other

#### 4. Additional Comments

[illegible]

# APPENDIX D: Camp Waste & Wildlife Attraction Manual

## Camp Waste & Wildlife Attraction Manual

To prevent or minimize attracting wildlife and to discourage wildlife habituation Environment & Natural Resources (ENR) strongly encourages that the recommendations listed below be implemented to ensure human safety and to protect our natural environment, including wildlife at a camp or cabin. This manual is intended for small scale campsites and recreational cabins however there are components that may be applied to larger scale operations. Examples of small scale camps include:

- Exploration camps
- Tourism outfitters & commercial companies
- Residential & recreational cabin owners

### Camp Design

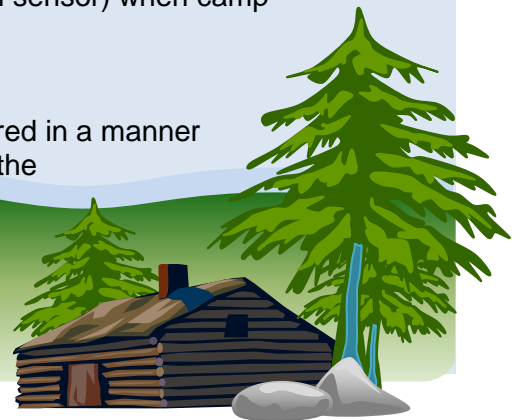
To prevent wildlife from accessing a camp/cabin and discourage habituation, a camp/cabin should be situated away from known or possible bear activity (previous camp/cabin, berry patches, dens, etc.) and designed in a manner that eliminates or minimizes the potential for human and wildlife interaction.

- Clear brush to increase visibility and eliminate blind spots.
- Kitchen, latrine, food/waste storage, incinerator, composting site and garden should be at least 50 meters from sleeping area.
- Temporary cooking areas should be located down-wind from the sleeping area.
- All structures should be well spaced and the sleep tents or trailers arranged in a line rather than circular with doors facing the kitchen.
- There should be no food or cooking in the sleeping area.
- Properly install and maintain an electric fence around the camp or at minimum around incinerator, composting site and garden.
- Install skirting around infrastructure that extends approx. 1m+ underground to prevent wildlife tunneling.
- Whenever possible, keep doors and windows closed, cover openings/crawl spaces, seal cracks, screen chimney caps and place spikes or tacky gel to prevent nesting.
- Install shutters on windows and use bear boards when camp not in operation.
- Consider installing noise deterrent (i.e. "Critter Gitter" motion sensor) when camp is not in operation.

### Food Storage

Amount of food at each camp/cabin will vary but food should be stored in a manner that will eliminate any food rewards if wildlife was to gain access to the camp/cabin.

- Store all food in the kitchen or in a central location that is at least 50 meters away from the sleeping area.
- Cooking and eating area(s) should be thoroughly cleaned



after every meal (including BBQs).

- If the camp is to become vacant for more than a week, food should be stored in sealed animal proof container.
- Do not feed wildlife including bird feeders that may also attract wildlife to the camp area.

### **Domestic Waste**

Inadequate storage, lack of onsite treatment and/or improper disposal of domestic waste (food & food contaminated waste) are the most common activities that contribute to the release of odours which may result in human/wildlife conflicts.

- Purchase bulk products to minimize amount of domestic waste produced.
- Implement a camp waste segregation system (recyclables, combustible, non-combustible and hazardous wastes) appropriate to the volume of waste produced.
- Domestic waste should not be stored in plywood boxes or in sheds as odours tend to permeate the wood and linger. Waste should be stored in a central area in a sealed animal proof container until final disposal.
- The sealed animal proof containers should be cleaned daily with bleach.
- Non-combustibles such as metal, glass and plastic should be cleaned with bleach and stored in a manner not to attract wildlife until transported back to an approved facility.
- Burying domestic waste is ineffective; the preferred method of disposal is backhauling domestic waste to an approved facility such as an approved landfill or bottle depot in a timely manner.

### **Burning/Incineration**

Burning/incineration is not recommended and should be considered only as a last resort when alternative methods of storage and removal off-site are not feasible. There are hazards associated with this method that may still result in wildlife attraction, forest fires and air contamination.

- Designate a person or trained staff member to be responsible for the daily duties involved with burning/incineration.
- For cabins and small scale exploration camps, burning in a “modified burn barrel” is strongly recommended for a more timely disposal for cabin/camp waste. Each burn barrel can accommodate ~10 people or less.
  - To ensure a high temperature and complete burn, ENR suggests that there be approx. 1/3 wet with 2/3 dry waste per bag;
  - Burn a maximum of two bags per day; and
  - Install a fine screen on the chimney for reducing sparks.
- Larger scale exploration camps require a commercially-designed forced air, fuel-fired incinerator capable of meeting the Canada-Wide Standards (CWS) for Dioxins and Furans. (CCME 2001), CWS for Mercury Emissions (CCME 2000) and the NWT Ambient Air Quality Guidelines.
- Camp waste suitable for open burning is untreated wood, paper and cardboard. A permit to burn will be required if burning during the closed season (May 1 - Sept 30).



- Ensure that the fire is being monitored and is completely out before leaving it unattended.
- Residual waste such as ash needs to be collected, stored in a sealed animal proof container and transported back to an approved facility site for disposal.

#### **Grey Water (dishes, showers, laundry, etc.)**

- Bleach should be added to dish water and/or a grease trap installed.
- Dispose of in a natural depression/sump/pit a minimum of 30 meters from the high water mark.
- Disposal site should be covered and treated with lime or crystal lye daily.

#### **Black Water (Sewage)**

- Honey bags are stored in a manner that is inaccessible to wildlife and transferred to an approved facility for disposal in a timely fashion.
- Ensure that pits have sufficient depth and are treated with lime or crystal lye daily.

#### **Animal/Fish Parts**

- As per the Government of Canada Northwest Territories Fishery Regulations fish entrails are not permitted to be disposed of on ice nor in the water.
- Clean away from camp and dispose of entrails a minimum of 3km away from camp area and on an island, if possible.
- Any surface used for cutting or cleaning should be cleaned immediately with bleach.
- Do not leave smoking/drying fish or meat unattended. It must be kept at least 50m away from the sleeping area. Hanging meat should also be at least 50m from the sleeping area.

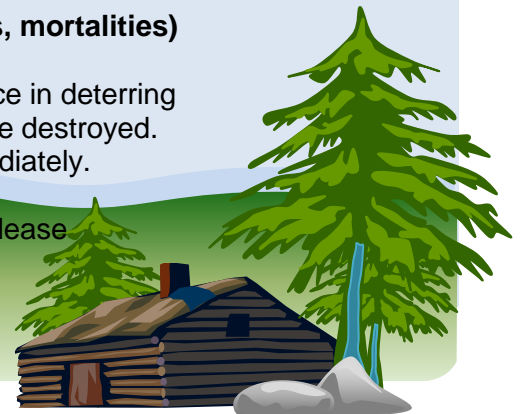
#### **Other Attractants**

- Both the cooking (kitchen, fire pits, BBQs) and eating area(s) should be thoroughly cleaned after every meal.
- Don't leave bloody hunting clothes/items that smell like fish near the sleeping area.
- Pet food should be stored indoors in a sealed animal proof container and pets should be fed indoors, if possible.
- Oils, gas or grease should be stored in a manner that is inaccessible to wildlife.

#### **Reporting Wildlife Occurrences (sightings, encounters, injuries, mortalities)**

- Occurrences should be reported at your earliest opportunity.
- Timely reporting allows ENR to provide advice and assistance in deterring nuisance wildlife before they become habituated and must be destroyed.
- Any defence of life and property kills must be reported immediately.

If you have additional questions, a report to file, or an emergency, please contact your Regional ENR office.



# APPENDIX E: Flying Low? Think Again...



## PLEASE:

- Do not fly below 1,000 feet.
- Obey Transport Canada regulations.
- Find out where outfitter camps are located and avoid them during hunting season.
- Avoid barren-ground caribou calving grounds during calving season.
- Do not take-off or land in a calving area during calving season.
- Do not chase or harass wildlife by flying too close.
- Respect our wildlife – keep to a safe altitude.

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Remember, flying close enough to an animal so that it runs away is too close!

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If aerial survey or exploration work is planned at any time, but especially during outfitting or calving seasons, please contact the regional ENR office for information before flying.

### Mackenzie Mountains and Mackenzie Valley

Sahtu Region ..... (867) 587-3500  
Dehcho Region ..... (867) 695-7433  
South Slave Region ..... (867) 872-6400

### Tundra

Inuvik Region ..... (867) 678-6650  
North Slave Region ..... (867) 767-9238  
South Slave Region ..... (867) 872-6400

Visit the Department of Environment and Natural Resources website at [www.enr.gov.nt.ca](http://www.enr.gov.nt.ca)

# Flying Low? Think Again...



Government of  
Northwest Territories





## Flying Low? Think Again...

A variety of wildlife, quality guides and outfitters, spectacular scenery and solitude that only a location away from human habitation can offer...

The Northwest Territories (NWT) is a popular destination for big game hunters and eco-tourists alike. But the experience can easily be ruined by low-flying aircraft that disturb wildlife.

Increased exploration and development throughout the NWT means increased air traffic. Increased interest in wildlife viewing and tourism also means increased air traffic. If you are a fixed wing or rotary pilot, please respect our wildlife and keep to an elevation that does not disturb them.

### **Wildlife are Protected Under NWT Law**

Section 52 of the NWT *Wildlife Act* protects wildlife by making it illegal to disturb or harass game and can result in a penalty of up to \$100,000 and/or one year in jail. Flying close enough to an animal so that it runs away is too close!

Please keep your aircraft at a safe elevation so animals are not disturbed.

### **In the Mackenzie Mountains**

Big game hunters pay sizable fees for the chance to take home a trophy animal from the Mackenzie Mountains. Much of the hunting in this area is done on foot or on horseback and it is a time consuming process. Sound is amplified by the mountains and low flyovers can frighten an animal into flight, causing hours, or even days, of stalking to be wasted.

Wildlife that are affected by low level flyovers in the Mackenzie Mountains include Dall's sheep, mountain goat, mountain caribou and moose.

During the mid-July to end of September hunting season, please be cautious and avoid outfitter areas.

### **In the Mackenzie Valley**

Boreal caribou are a threatened species found throughout the boreal forest. Unlike barren-ground caribou, during the May calving period boreal caribou can go into hiding to have their calves. Low flying is especially harmful, stressing the female, which can cause separation from calves and lead to calf death. If low-level flights are going to be conducted in April or May, please contact the regional ENR office for information.

### **On the Tundra**

#### **During calving season**

Caribou are a valuable resource to the people of the NWT. From the end of May to the end of June, female barren-ground caribou come together at herd-specific locations on the tundra to give birth to their calves. Low flyovers, take-offs and landings in these areas are especially harmful as they can stress the females, which can cause separation from calves and increased calf mortality.

Avoid barren-ground caribou calving grounds from mid-May to early July. This is especially important during times of low barren-ground caribou numbers. Please contact the regional ENR office in your area for more information.

### **Wildlife Viewing and Filming**

View wildlife from a safe distance to minimize disturbing and stressing the animal. If the animal changes its behaviour, you are too close. Limit your time in the area and avoid surprising (e.g. sneaking up on) wildlife.

For commercial activities (i.e., expeditions, safaris, or cruises) involving big game or birds of prey viewing, including filming, a permit is required.

### **Other Wildlife**

Grizzly bears, pelicans, whooping cranes, polar bears, muskoxen, black bears, eagles and other wildlife are also disturbed by low flying aircraft. Please respect our wildlife and keep to a safe altitude.



# APPENDIX F: Monitoring Forms and Data Sheets

**Wildlife Sightings Form**

Use this table or similar equivalent to documents wildlife sightings. All staff should be aware of this form, and it should be posted in an area where all can contribute to it. The form should be reviewed daily for evidence of problem wildlife or hazards to wildlife.

Date	Time	Species	Number	Location (Nearest camp or lake)	Notes (any behavioural response or reactions? Any concerns?)	Reported by

## Wildlife Incident Form

Wildlife Incidents include any human-wildlife interactions that present a risk to either people or animals, wildlife-caused damage to property or delay in operations, wildlife deterrent actions, Project-caused wildlife injury or mortality, wildlife found dead (even if from natural causes), birds nesting on project infrastructure or equipment. All wildlife incidents will be reported the GNWT-ECC Wildlife Emergency number (867-873-7181). Issues regarding migratory birds will be emailed to the Canadian Wildlife Service (cwsnorth-scfnd@ec.gc.ca).

Date:

Time:

Individuals involved:

Species:

Number, gender, age:

Location (description):

Location (UTM):

Digital photo numbers:

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

Describe any use of wildlife deterrents:

Describe any wildlife mortality:

Describe any communication with ECC for wildlife or ECCC for migratory birds:

What immediate measures were taken to reduce risk or harm?

What measures are recommended to prevent future occurrences?

Report prepared by:

Reviewed by: