

APPENDIX 13D

JACOS Bear Management Plan

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APPENDIX 13D JACOS BEAR MANAGEMENT PLAN

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13D.1 Introduction

Bears are wild animals with unpredictable behaviour patterns and are potentially dangerous. Most bears avoid encounters with humans if the humans are detected in time; however, if cornered, threatened or surprised, bears can be aggressive, which can result in bear-human conflicts. These conflicts can pose a hazard to human safety, property, and bears. Bear-human conflicts occur most frequently in areas where human development overlaps bear habitat.

There are a number of factors that can initiate a bear-human conflict. Bears may be attracted to project facilities because of food or garbage odours, or they may simply be curious. Bears can become habituated to human developments, especially if non-natural foods are available (Pelchat and Ruff 1986). This appendix provides a number of bear management strategies to minimize bear-human conflict in and surrounding the Expansion Project by targeting:

- the safety of JACOS employees and contractors
- the protection of property
- bear conservation

13D.2 Bear Management Plan

To reduce the likelihood of bear-human encounters at the Expansion Project, JACOS will develop a bear management plan within the confines of the larger Environmental Management Plan. Two major components include:

1. bear awareness and avoidance
2. facility area management

The plan is intended to:

- prevent risk of injury to humans or bears
- decrease property damage resulting from bears
- decrease the number of bears relocated from the facility area
- prevent the disturbance of hibernating bears
- prevent bears from seeking refuge around buildings or other infrastructure
- decrease resources expended in dealing with bear-human conflicts

13D.2.1 Bear Awareness and Avoidance

13D.2.1.1 Staff Training

The Bear Awareness and Avoidance program (Alberta Safety Council 2009) was created to provide the most up-to-date information on bear avoidance to members of the public and industry alike. The training consists of 4 to 6 hours of educational materials designed to reduce bear-human conflicts. Employees who work in roles with the potential for bear encounters will receive Bear Awareness and Avoidance training from certified instructors. Training will include a review of the following videos:

- Staying Safe in Bear Country: A Behavioural-Based Approach to Reducing Risk (IBA 2001a)
- Working in Bear Country: For Industrial Managers, Supervisors and Workers (IBA 2001b)

It is the responsibility of supervisors to ensure time is provided for employees to attend training. It is the responsibility of each employee to attend safety training programs and to be alert for situations such as defective garbage storage equipment, poor food storage, bear sightings around developed areas, and other problems potentially leading to bear-human conflicts.

13D.2.1.2 Personal Management Procedures

JACOS will implement bear management procedures to be followed by all JACOS employees and contractors working on the Expansion Project. These procedures are outlined as follows:

- Field staff will have communications procedures in place to stay in touch with each other when in the field, and to be able to call for assistance in the event of an emergency.
- If working alone in remote areas of the Expansion Project, staff will be equipped with appropriate bear deterrent devices (i.e., pepper spray, air horn, bangers) and will have training on how to use these devices (Section 13D.2.1.1).
- Make food or food waste unavailable to bears by storing all garbage and waste water in designated areas or enclosed in approved bear proof containers.
- Post and adhere to bear warning signs where problem bears have been reported.
- Never approach a bear. Their behaviour is unpredictable and they can attack if surprised or threatened or are defending territory, kills or cubs.
- If a bear is observed within the Expansion Project area, staff will ensure the safety of themselves and others by notifying others, moving to a safe location, and observing the bear as appropriate. Staff will also report the sighting to the EHS coordinator and record the sighting on JACOS's Wildlife Sighting Card.
- All JACOS staff will be aware of bear sighting and reporting procedures that outline initial responses to bear encounters involving human injury.

13D.2.2 Facility Area Management

Permanent camp locations will incorporate the following mitigations to minimize the potential for human/bear interactions:

- Visibility will be improved where humans are most likely to surprise bears, such as outside of kitchens and storage areas (e.g. line of sight management). Areas such as blind corners, storage drums, dumpsters or clumps of vegetation may conceal bears.
- Skirting will be attached to buildings and elevated walkways to prevent bears from taking refuge under them.
- Proper lighting will be provided at building exits, along pathways and in outside work areas so people can move about the facility safely at night.

Waste, including food waste, garbage, and recycling from camps will be dealt with as follows:

- Garbage will be stored in bear-resistant containers and transported on a regular basis to a disposal facility. Containers will meet the USDA Forest Service minimum design and structural standards (USDA 1989).
- Dumpsters and recycle containers will be kept covered and fastened closed at all times. Excess garbage and recyclable waste will be securely bagged and stored inside a closed, hard-sided building until space in the containers is available.
- All bear-proof garbage containers will be marked with "Bear Proof" signage to reinforce employee education.
- Employees collecting garbage will report any repairs necessary to maintain containers in a bear proof condition. Daily garbage pickup will be required in areas of known bear hazards to ensure containers are not filled beyond capacity.
- All waste disposal contracts will ensure bear-proof food storage, preparation and garbage handling requirements are included and that these requirements are followed by the contractor.

Petroleum odours and grey water may also be produced by camps or facilities. JACOS will incorporate the following mitigations to reduce the potential hazards associated with petroleum odours and grey water:

- store chemicals and petroleum products properly to minimize odours and prevent access for bears
- inspect storage drums for leaks and clean up spills immediately
- add grease traps to grey water discharge, allowing for the recovery of food particles and cooking grease (IBA 2001b)
- sprinkle chlorinated lime in sumps to mask grey water odours
- ensure that long-term facilities treat grey water along with sewage in an approved waste treatment system

13D.3 References

13D.3.1 Literature Cited

International Association for Bear Research and Management (IBA). 2001a. *Staying Safe in Bear Country: a Behavioural-based Approach to Reducing Risk* video. Produced by Wild Eye Productions, Atlin, British Columbia.

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USDA Forest Service (USDA). 1989. *Bear Resistant Containers – Minimum Design and Structural Standards: Inspection and Testing Methodology*. Interagency Grizzly Bear Committee.