



**Independent Environmental
Monitoring Agency**

Wildlife Effects Monitoring Program

**Review of Ekati's 2006 Environmental Monitoring And
Management Programs**

14 November 2007

What is the WEMP?

- It monitors and documents impacts on wildlife and habitat of greatest importance and concern, and assesses the effectiveness of the mitigation and management efforts
- Monitoring is conducted through aerial and land-based techniques
- Traditional knowledge plays a role in the WEMP; e.g., wolverine track counts

WEMP study area

10th year of
WEMP

Main area
1,600 km²

Caribou area
6,300 km²

Figure from 2006
WEMP

BHPB tracks the following effects on Wildlife

- Vehicle and Aircraft Collisions – rare; 9 in 2006
- Habitat losses from mine development – 20.3 km²
- Landfill and waste management problems, to reduce attractiveness to wildlife – fewer wolverine incidences
- Wildlife deaths and accidents at the mine – 9 in 2006
- Number of animals around the site during specific time periods

How are impacts reduced?

- Wildlife awareness training is given
- Animals have right-of-way on roads
- Roads have speed limits
- All sightings of wildlife are reported
- Roads are closed when there are lots of caribou around
- Caribou are removed from airstrip (Inokhok, electric fence)
- Improved waste management practices

Waste management practices

- Great effort to reduce wildlife attractants at the landfill since 2004
- Considerable decrease in wildlife observations at landfills
- Large reduction of wolverine incidents at the mine
- We commend BHPB for these efforts

What animals are monitored?

- Caribou
- Grizzly bear
- Wolves
- Wolverine
- Upland Breeding Birds and Falcons
- And their habitats

Caribou surveys

Caribou
survey area
expanded in
2006

37,000
caribou
counted in
2006

Diavik not
participating

Figure from
2006 WEMP

Caribou and the mine



Photo: K. Poole

- Several studies have shown that caribou tend to avoid mine development
- Groups with young tend to show greatest avoidance
- Previous research suggests some influence may be seen out to ~20 km

Other Caribou Research

- Behaviour – Activity Budgets (no influence of the mine) and Response to Stressors (response increased with closer distance, nursery groups, and larger stressors)
- Distribution relative to roads – vehicle encounters (roads used more than adjacent areas)
- Road permeability (how easily caribou move across a road – physical, behavioural barriers)

Caribou and roads

- Higher traffic levels and higher road snow bank height decrease the chance that a caribou group will cross a road



Photo: W. Ross



Photo: S. Kollee

Grizzly bear

- 63 observations; 8 required deterrents
- Main monitoring is through bear sign plots in riparian and wetland areas
- We consider this a weak assessment of influence of the mine
- We suggest that DNA inventory might provide a better handle on population trend and the influence of the mine

Photo:
K. Poole

Wolves

- 47 observations; 4 required deterrents
- Den site surveys with ENR
- 4 occupied den sites – about average

Wolverine

Photo: K. Fink

- Large reduction in wolverine incidents: 128 in 2005 vs. 23 in 2006
- Likely related to reduction in waste at landfill, and improvements under building structures
- No snow track counts conducted in 2006 – track counts of limited value in our opinion

Wolverine DNA study 2005 & 2006

Figure from
2006
WEMP

No results released to date

Birds

- Upland breeding bird counts continued – some changes observed
 - We suggest every 2nd year
- Raptor surveys (with ENR)
- Peregrine falcon nest missed in the Beartooth Pit until mid-July: 2 chicks

Photo: K. Poole

IEMA conclusions

- WEMP generally well done
 - Thorough, with examination of trends over time
- Excellent efforts at waste management
 - Reduction in wolverine incidents
- Expansion of caribou survey area

IEMA recommendations

- Need to consider Diavik in monitoring and analysis
- Why caribou are avoiding the mine should be examined (dust on vegetation?)
- Regional caribou monitoring adaptations - cumulative effects concern
- Wolverine DNA monitoring should be continued in 2008
- Pit walls should be more thoroughly searched for raptor nests