

B.C. Mountain Goat Workshop, Prince George, BC 2005

Project Title: Development of a Heli-skiing and Mountain Goat Habitat Management Model

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4. Project location: Skeena Region of British Columbia

Coastal: Transition: Interior:

5. Project timeframe: Start (month/year): n/a End (month/year, or ongoing): 2005

6. Project status: Data collection Analysis Write-up Publication

7. Project objectives: (briefly describe the primary objectives of your project)

To further the discussion on mountain goat disturbance space including both visual but audio disturbance.

8. Project descriptors (select all that apply):

Research

Habitat Use:

Forestry Interactions:

Management

VHF collars:

Oil & Gas Interactions:

Inventory

GPS collars:

Mineral Exploration:

Predation:

Harvest:

Aerial Disturbance:

Habitat Modeling:

Population Dynamics:

Human Disturbance:

Other: Noise Modeling

8. Project description (provide a brief description of your project including methods and main findings or results to date):

A Habitat Management Model (HMM) was prepared to evaluate the existing management strategies for heli-skiing operations located in the vicinity of confirmed and unconfirmed mountain goat habitat in northwestern British Columbia. The model is a three dimensional analysis which incorporated a predictive habitat model, a viewshed analysis and a noise model simulation. The results of the predictive habitat model were utilized to define the confirmed and unconfirmed habitat polygons from which the visual and audio analysis could occur.

The HMM analyzed the visual and audio impact of helicopter overflights on mountain goats within 500 m, 1000 m, 1500 m and 2000 m from confirmed and unconfirmed mountain goat habitat. The HMM for 1000 m and 1500 m found there was no change with the West flight path and minimal change (0.37 % in area) for the East flight path to disturbance levels HMM 1 and HMM 2. The HMM 1 and HMM 2 disturbance levels accounts for the potential visibility and non-visibility of a helicopter to mountain goats and for helicopter audio levels greater than 70 dB. Existing management strategies

developed by the Ministry of Water, Land and Air Protection Skeena Region (MWLAP Skeena Region) and Last Frontier Heliskiing were analyzed within the context of the HMM.

9. Project documentation (provide a list of citations for all progress, final, or published reports)

Andrus, Karina J. (2005). A heli-skiing and mountain goat (*Oreamnos americanus*) habitat management model: A case study of the Skeena Region interim wildlife management objectives. Unpublished Master of Science, Royal Roads University, Victoria, B.C.