



## RESOURCES, WILDLIFE & ECONOMIC DEVELOPMENT

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### **RE: Seasonal Range Use and Movement Patterns of Boreal Caribou in the Dehcho Program**

As part of a program investigating seasonal range use and movement patterns of boreal caribou in the Dehcho, RWED conducted a caribou capture and deployment of satellite radio collars on 13 female boreal caribou during early March. RWED contracted a professional animal capture team that captured caribou by netting them from a helicopter, equipped each caribou with a satellite radio collar, and collected blood and fecal samples from each captured caribou. Aerial fixed-wing reconnaissance flights were conducted immediately prior to the capture in order to locate caribou and/or recent caribou activity.

On March 1, RWED staff met with community representatives in Trout Lake, to finalize search areas for the caribou capture operation. On 2 March, two aircraft conducted fixed-wing aerial reconnaissance flights in the Trout Lake and widely surrounding area to search for caribou. The Smbaa K'e Dene Band Chief and one local elder participated in the reconnaissance. Maps indicating where caribou and/or fresh caribou sign had been observed were produced and made available for the capture crew. On 3 March the capture crew flew in to Trout Lake and proceeded to capture 7 female boreal caribou and equip them with satellite radio collars. The animals were all captured in areas where both local residents and RWED staff had hoped to find and collar caribou. On 3 March an aerial reconnaissance flight was flown over the Ebbutt Hills and surrounding area to the north of Fort Simpson. The reconnaissance area had been delineated at a previous meeting with RWED and members of Liidlii Kue First Nation and the Fort Simpson Métis Local. A representative of Liidlii Kue First Nation participated in the reconnaissance flight. Due to other commitments, the Fort Simpson Métis Local was unable to provide a representative for the flight. Maps indicating where caribou and/or fresh caribou sign had been observed were produced and made available for the capture crew. On 4 March inclement weather grounded all air travel until late in the afternoon when the capture crew was escorted to an area where caribou had been spotted by the

fixed-wing aircraft on the previous day. The capture crew proceeded to capture and deploy collars on 5 caribou before darkness. The final collar was deployed on a caribou in the Trout Lake area on 5 March during the crew's return trip to their base of operations.

A brief report of the capture operation, including maps indicating where animals were collared, was provided to Sambaa K'e Dene Band, Liidlii Kue First Nation, Fort Simpson Métis Local, and Dehcho First Nations immediately following the capture operation. The observations of all other wildlife observed during the reconnaissance flights, mostly moose, were recorded. Snow and weather conditions were ideal for capture operations in early March. Once caribou had been located by the reconnaissance teams the capture crew had little trouble in locating them. The deeper snow curtailed caribou movements which resulted in shortened chase and handling times. The locations where caribou were collared were ideal, in relation to the proposed and existing pipeline right-of-ways and in relation to where the local residents had wanted to see caribou collared (see attached maps). For the Trout Lake area, there are now a total of 16 collared animals which are located to the southwest, north, and east of Trout Lake. RWED is planning post-capture aerial reconnaissance flights to relocate all collared animals in early April. However, an apparent malfunction of one of the redeployed collars created a need to conduct two post-capture aerial reconnaissance flights for the caribou in the Ebbutt Hills area in March. All collared caribou were successfully relocated on the first flight. On the second flight we discovered one of the collared animals had been recently killed by a pack of wolves. RWED chartered a helicopter to investigate the sight, retrieve as many biological samples as possible and successfully retrieved the collar.

All satellite collars are programmed with a duty cycle that provides daily locations during 1 May to 15 June of each year, and locations once every 3 days for the remainder of the year. Daily locations are provided over the time when we suspect boreal caribou females are calving and this information will allow us to better pin point when and where boreal caribou calve. This duty cycle should allow the collars to provide satellite locations over a 4-year period. All of the collars purchased this year are also equipped with a remote release mechanism, which is programmed to release the collars in early March 2009. All of these collars are also equipped with a VHF beacon, which permits us to locate the collared animals from the ground or from the air. RWED has planned for 2 relocation flights annually, one in early summer and another in fall, to determine whether collared caribou had calves and if they did calve whether the calves survived into the fall. The VHF has a 6-year lifespan, which will permit the opportunity to retrieve the collars once they have been released.

Financial expenses for the Boreal Caribou Capture and Satellite Collar Deployment Program are provided in the following breakdown:

**CIMP funds** (\$50,000) were applied toward the following expenses:

\$34,500: The purchase of 11 ST-20 Satellite collars.

\$500: The cost of shipping collars and biological samples.

\$5,750: The cost of pre-capture aerial fixed-wing reconnaissance and local observers.

\$1,750: The cost of crew meals/accommodations.

\$5,750: The cost of aircraft fuels and various airport plug-ins.

\$1,750: The cost of post-capture aerial relocation, and helicopter charter.

Additional program costs include the following:

Cost of the capture crew helicopter time and operation ,  
local ground transportation for the capture crew,  
some of the fuel costs,  
some of the costs for the helicopter flight to retrieve a collar,  
the costs of satellite data retrieval from ARGOS,  
the costs of relocation flights to monitor calf production/survival,  
and other miscellaneous expenses

These expenses have been covered by funds from the RWED Fort Simpson and the RWED Biophysical Program.

Sincerely,

Nic Larter

Maps showing the locations of caribou that were collared during the March 2005 program and the locations of those animals collared during the 2004 deployment follow.