

Telkwa Caribou Activities Summary 2003-2008
(Prepared for April 20, 2009 VRAMG meeting)

Budgets 2003 -2008

Year of Project	HCTF Budget	Total HCTF Spent	Total \$ Other sources	Total \$ Spent
2003	13,250	13,097	1,200	14,297
2004	0*	0	3,942	3,942
2005	48750	37,178	400	37,578
2006	43,000	38,117	500	38,617
2007	52,750	31,394	0	31,394
2008	0*	0	4,830	4,830
Totals	157,750	119,786	10,872	130,658

* funds applied for but not approved

Activities specific 2003-2008 fiscal years:

- ☒ In 2003 - 2004 there were 7 telemetry surveys completed, 3 GPS collars were recovered and 3 new caribou were captured and collared. This increased the number of collared animals to meet the objective of maintaining a significant number of collared animals for monitoring purposes.
- ☒ In 2004-2005 there were 2 fixed wing flights for telemetry surveys. Two helicopter flights were also completed; 1 rut survey flight in October and 1 in March to complete a calf count.
- ☒ Year 2005-2006 of the continuing project resulted in 12 fixed wing telemetry flights, one fall helicopter rut count, 1 March helicopter yearling recruitment count, and 13 additional cows were fitted with VHF radio transmitter collars. In addition to collaring, blood samples were taken to test progesterone levels.
- ☒ In year 2006-2007 regular telemetry flights to locate Telkwa caribou were started in July. In total 20 fixed wing telemetry flights were conducted for the season.
Two helicopter surveys (an October rut survey and a March recruitment survey) were conducted.
- ☒ In year 2007-2008 there were 15 fixed wing telemetry flights, 1 March helicopter calf count was conducted and 5 more VHF collars were deployed (blood samples were taken for progesterone levels). Signage was replaced at Goathorn, Hunter's Basin. A fall rut survey was not completed because a boom in local mining activities created competition

for available helicopter time. As a result, a flight on a day with suitable visibility could not be arranged.

- In year 2008-2009 no HCTF funding was available, 1 helicopter rut survey was conducted in the fall 2008; 1 March helicopter calf count was conducted in 2009; no new collars were deployed.

Summary of Results 2003-2008

2003-2004

- 7 fixed wing flights
- 1 June helicopter calf count, 1 October helicopter rut survey, 1 March helicopter calf count
- fall 2003 rut population estimate 75 animals
- 62 calf: 100 cow ratio in March recruitment survey
- 15 animals with functioning collars

2004-2005

- 2 fixed wing flights
- 1 helicopter rut survey flight in October and 1 in March to complete a calf count
- fall 2004 rut population estimate 95 animals
- 29 calf: 100 cow ratio in March recruitment survey
- 13 animals with functioning collars

2005-2006

- 12 fixed wing flights
- 1 helicopter rut survey flight in October and 1 in March to complete a calf count
- fall 2005 rut population estimate 95 animals
- 52 calf: 100 cow ratio in March recruitment survey
- 19 animals with functioning collars

2006-2007

- 20 fixed wing flights
- 1 helicopter rut survey flight in October and 1 in March to complete a calf count
- fall 2006 rut population estimate 100 animals
- 37 calf: 100 cow ratio in March recruitment survey
- 17 animals with functioning collars

2007-2008

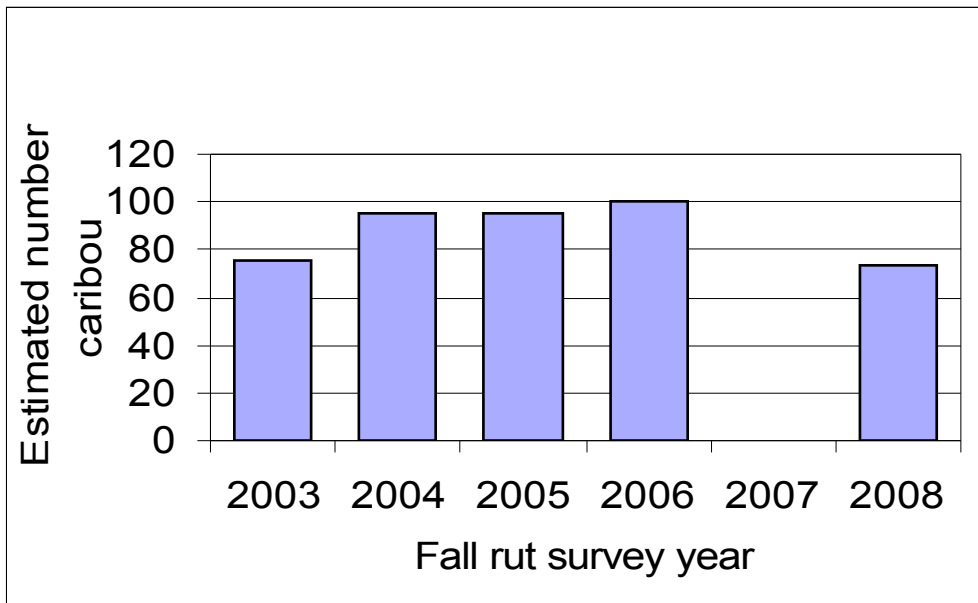
- 15 fixed wing flights
- 1 helicopter survey in March to complete a calf count
- fall population estimate 90 animals (based on anecdotal evidence of poor recruitment supported by low March 2008 yearling: cow ratio)
- 15 calf: 100 cow ratio in March recruitment survey
- 19 animals with functioning collars

2008-2009

- 1 helicopter Fall survey flight in November and 1 in March to complete a calf count
- Fall population estimate of 73 animals total with an adult component of 67
- 14 calf: 100 cow ratio in March recruitment survey (second year of low recruitment)

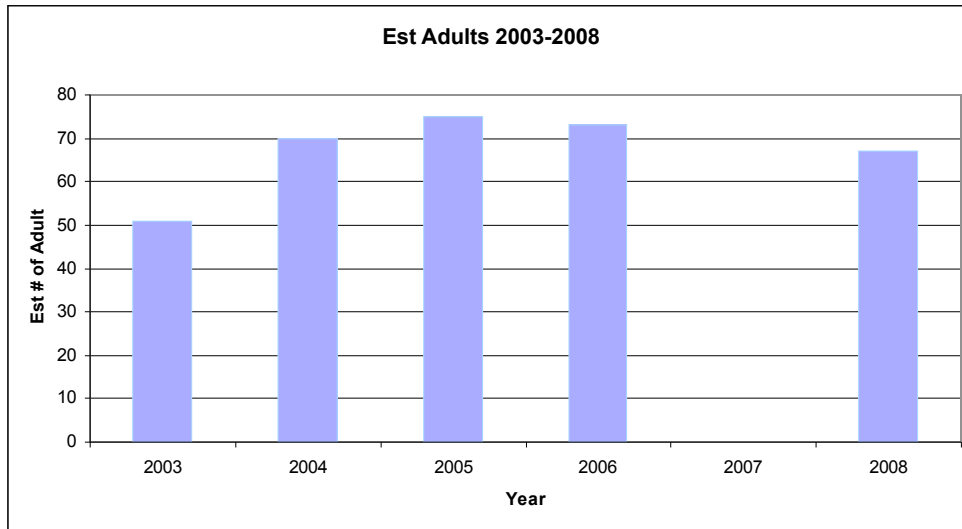
Some of the data collected from 2003 through 2009 is summarized in the following graphs.

Graph 1. Telkwa caribou fall rut population estimates (2003 – 2008).



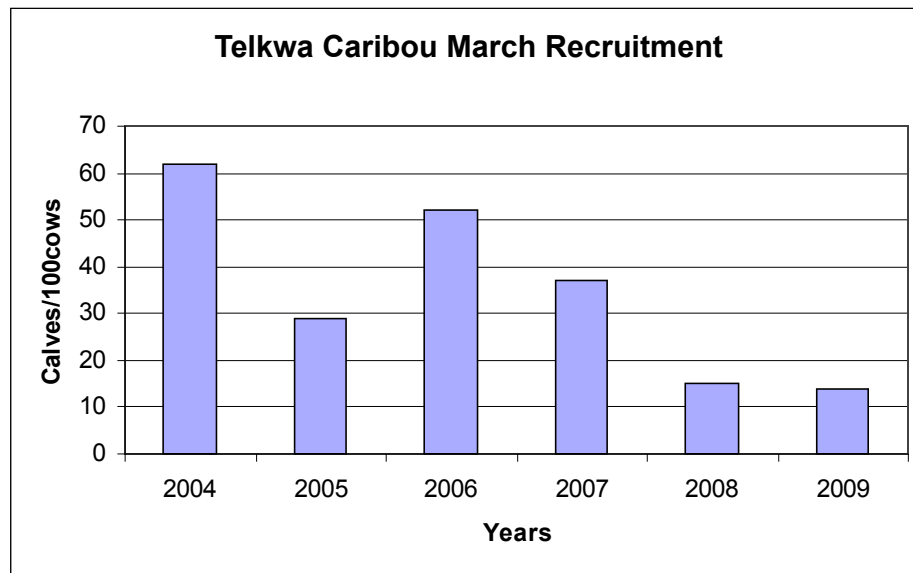
The estimated mature animal component of the population also reflects a similar pattern

Graph 2. Telkwa caribou Fall mature animal estimate (2003-2008)



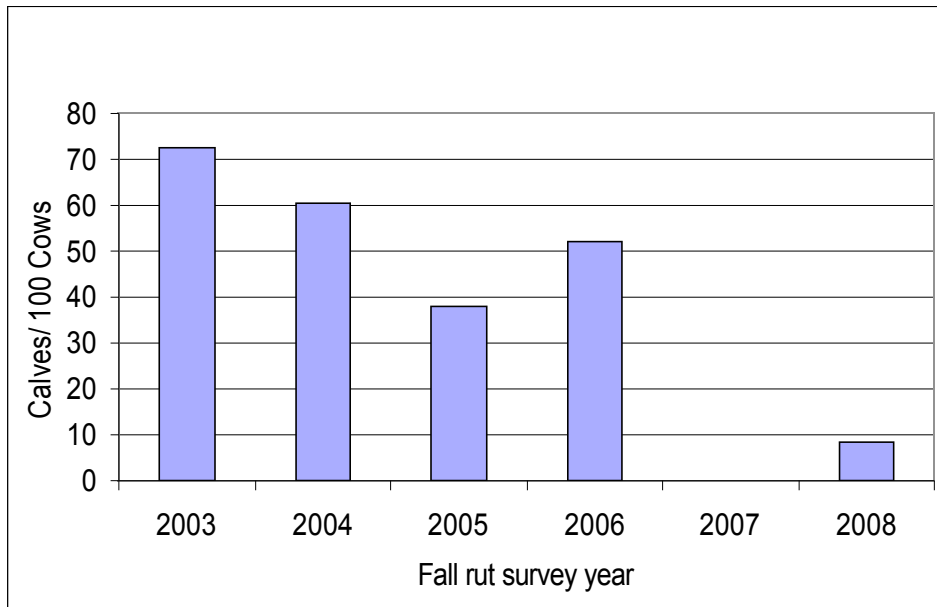
Continued annual fall monitoring is necessary to understand whether the drop from 2006 (100) to 2008 (73) represents a decreasing population trend. While a long term trend in calf recruitment is not yet evident (Graph 3). The last two years of recruitment are likely below what is required to offset mortalities.

Graph 3. Telkwa Caribou March recruitment estimates (2004 – 2008).



Calf survival, monitored in the fall, does seem to indicate a decreasing rate of calf survival (Graph 4). Particularly low calf numbers in 2008 merits further annual monitoring to establish whether this was a bad year or the start of a downward trend.

Graph 4. Fall calf survival rates (2003 – 2008)



Detailed caribou distribution analysis for this project is on-going; comparing the results of each years data to better understand priority habitats and patterns of use is expected to be completed this year. Using the kernel method of pattern analysis, the data can be assessed for long-term trends.

As of fall 2006, the population estimate for the herd was 100 animals with a maximum adult estimate of 75 in 2005. The goal of preventing the herd from becoming extirpated has been achieved in the short term. The objective of increasing the herd to a sustaining population of > 100 adults has not yet been achieved though progress has been positive. Over the last 2 years of the study the population trend appears to be decreasing. Long term viability of the herd is still unknown; the challenge now becomes maintaining herd numbers.

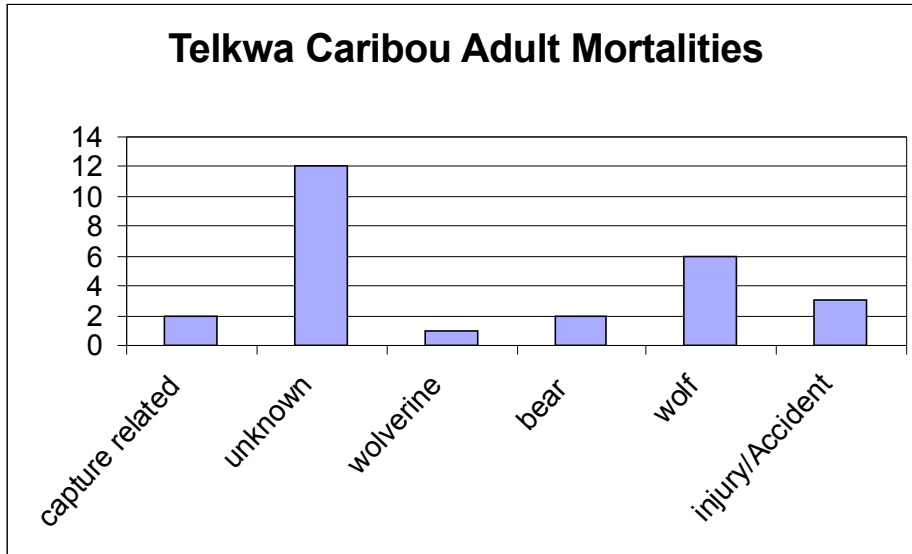
Based on the pregnancy rates determined from the June surveys (discontinued in 2003), there was no indication that there was a problem with breeding. This was supported by the results of the progesterone tests done for 13 animals collared in 2005/06 where 11 (85%) were confirmed pregnant (Table 1). An anomaly appeared in the test results in 2007/08 where only 2 of five animals were confirmed pregnant. Further testing or completions of June surveys are required to determine if this anomaly is a concern.

Table 1. Results of progesterone tests for the Telkwa caribou 2005/06 and 2007/08

Year	# of females sampled	# confirmed pregnant	% confirmed pregnant
05/06	13	11	85
07/08	5	2	40

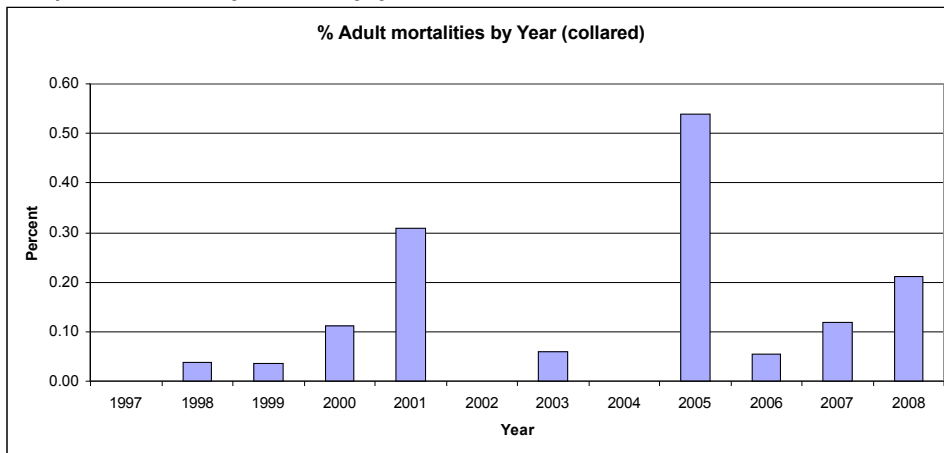
There have been 26 documented mortalities of collared animals since the start of the project. Half (13) of those mortalities occurred between 2003-2008. Suspected causes of mortality were identified for 3 of those 13 mortalities. Overall, suspected causes of mortalities have been determined for 12 of the 26 total adult collar mortalities (Graph 5). Wolves appear to be the main cause of known adult mortality.

Graph 5 Suspected cause of collared adult mortalities



The numbers of collared adult mortalities fluctuate by year (Graph 6). Generally, it appears that annual mortalities of collared adults is < 10%. There were apparent spikes in adult mortalities in 2001 and 2005. Adult mortalities as well appear to be increasing over the last few years.

Graph 6 Mortality rates by year for collared Telkwa caribou.



Voluntary Recreational Access Management Group

The Voluntary Recreational Access Management Group (VRAMG) has met less frequently since the distribution of information to group members was done

electronically. All tracking flight and caribou survey information was emailed to the group members almost immediately after the completion of the flight or survey. The VRAMG has met 5 times over the last 6 fiscal years.

VRAMG Meetings 2003-2008 fiscal years.

Fiscal Year	Meeting date
2003	August 5, 2003
	December 10, 2003
2004	August 11, 2004
2005	February 1, 2006
2006	September 20, 2006

Miscellaneous Reports, Sightings and Comments Since Last VRAMG meeting.
(Sept 20, 2006- present)

Date	Item
March 9, 2007	Caribou tracks reported South of Robin Creek, Quick
March 12, 2007	Request for key access to gate at 18 Mile Bridge (MOTSA)
June 15, 2007	BVORS note regarding changing user use patterns in Starr Cr.
July 21, 2007	Reports of intensive Mineral Exploration Helicopter Surveys
Aug 19, 2007	Caribou Observed above Hunter's Basin
August 2007	Call form the College regarding training for assessment and rehabilitation of mine properties in Hunter's Basin
August 2007	Reports of a couple of mineral drilling camps in the recovery area
August 2007	Reports of hikers taking dogs into the Hunter's Basin Area
May 5, 2008	Caribou Observed near Quick Bridge
August 14, 2008	15 caribou seen in Hunters's Basin area
August 26, 2008	Caribou sighted on Gizzly Plateau
August 2008	Dead (tagged) caribou reported on Grizzly Plateau
January 16, 2009	Dead caribou reported on Grizzly Plateau
February 15, 2009	Caribou sighted on Skillhorn Rd, Telkwa
March 1, 2009	Caribou Sighting Raymond Rd, Smithers-Telkwa