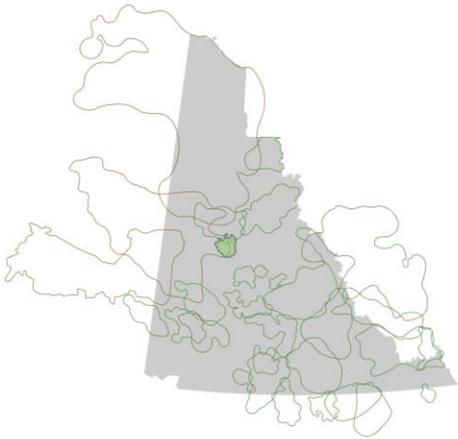




## Clear Creek Caribou Herd Population Survey – 2018

To provide an updated population estimate, a mark-resight survey was flown in fall 2018. The purpose of the survey was to estimate abundance, distribution, calf recruitment, and adult sex ratios. These measures, when monitored over time, are indicators of herd population trends.



### Summary of Results

**Date:** Sept.28 – Oct. 5, 2018

**Hours Flown:** 31.25

**Calf:Cow ratio:** 23.3:100

**Bull:Cow ratio:** 36.7:100

**Population estimate:** 792 (95% CIs 767–820)

Caribou herds of Yukon (Clear Creek Highlighted)

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### Population Trend

The Clear Creek caribou herd was first surveyed in the late 1990s in response to local residents reporting caribou occupying this area year-round, suggesting they were distinct from the neighbouring Hart River herd. This led to the deployment of VHF radio-collars starting in 1997, a stratified random block population survey in March 2001, and irregular fall composition surveys in the years 2001–2005, 2007, 2009, 2012, 2014, and 2017.

The 2001 estimate of the Clear Creek herd was 900 animals and was derived from a stratified random block survey method that accounted for missed animals by applying the average correction factor from previous surveys in the Yukon to the total number of animals observed during the survey. This approach was not typical, but was deemed necessary at the time due to unforeseen challenges with the number and location of radio-collared animals. The estimate of 900 animals does not have confidence intervals, and thus should be interpreted with caution.

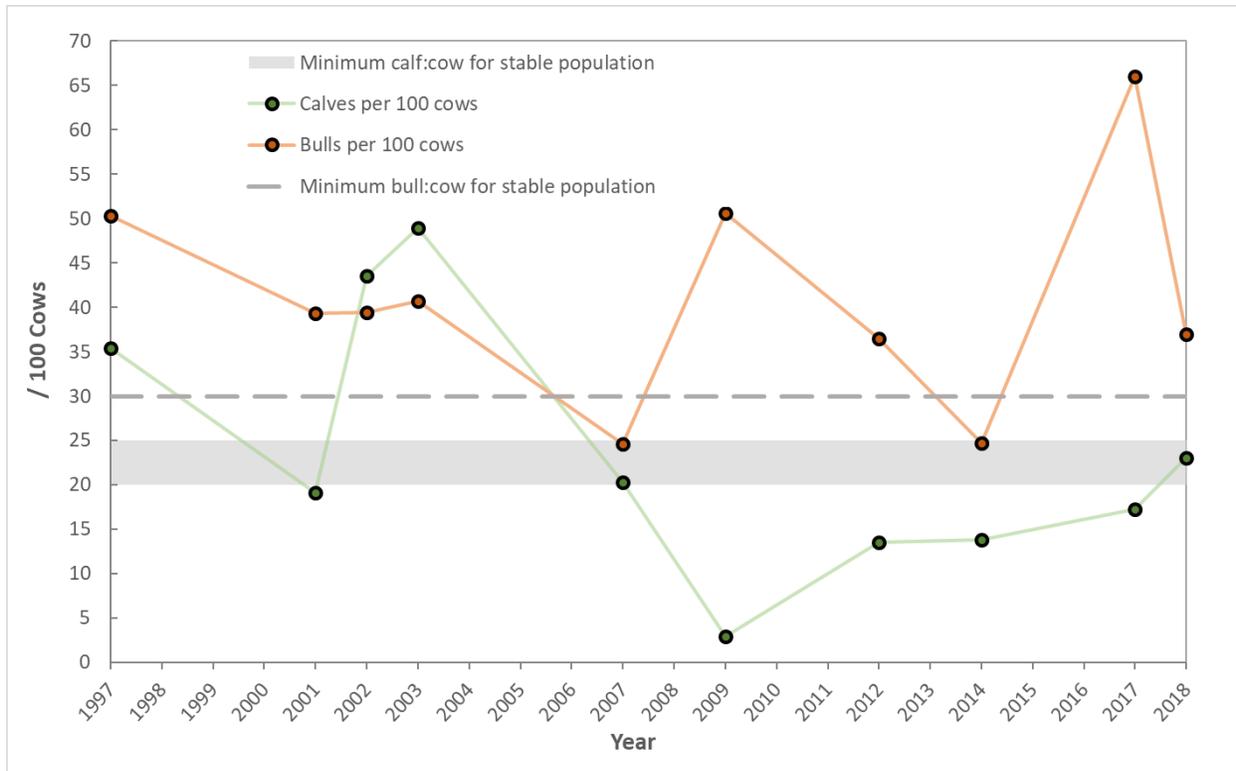
The 2018 mark-resight population estimate for Clear Creek was 792 (95% CI: 767–820) animals. Results of the composition survey indicated a fall calf recruitment ratio consistent with stable population growth (23 calves per 100 cows; Figure 1) and an adult sex ratio indicative of a productive herd (37 bulls per 100 cows; Figure 1). This is the first time since 2007 that the fall index of calf recruitment has approached the sustainable threshold; however, it is important to examine trends in recruitment over time as opposed to single year estimates, as these values may vary considerably from year to year. Based on the best available data, the herd is likely stable or decreasing at a slow rate.

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**Figure 1. Composition (number of calves and bulls per 100 cows) observed during Clear Creek caribou fall composition surveys from 1997 to 2018. Survey results from 2004 & 2005 were excluded due to low sample sizes.**

## Management

The Clear Creek herd has extensive human disturbance throughout the southern portion of its range, which also provides a high degree of access to the herd. Information is currently lacking to assess the cumulative effects of industry and the sustainability of current harvest on this herd. Based on these concerns, we consider the CCCH to have a high level of conservation concern among Northern Mountain caribou in the Yukon. Increased monitoring of the Clear Creek herd was also identified as a key caribou-related item in the Community-Based Work Plan for the First Nation of Na-Cho Nyäk Dun Traditional Territory 2014–2019.

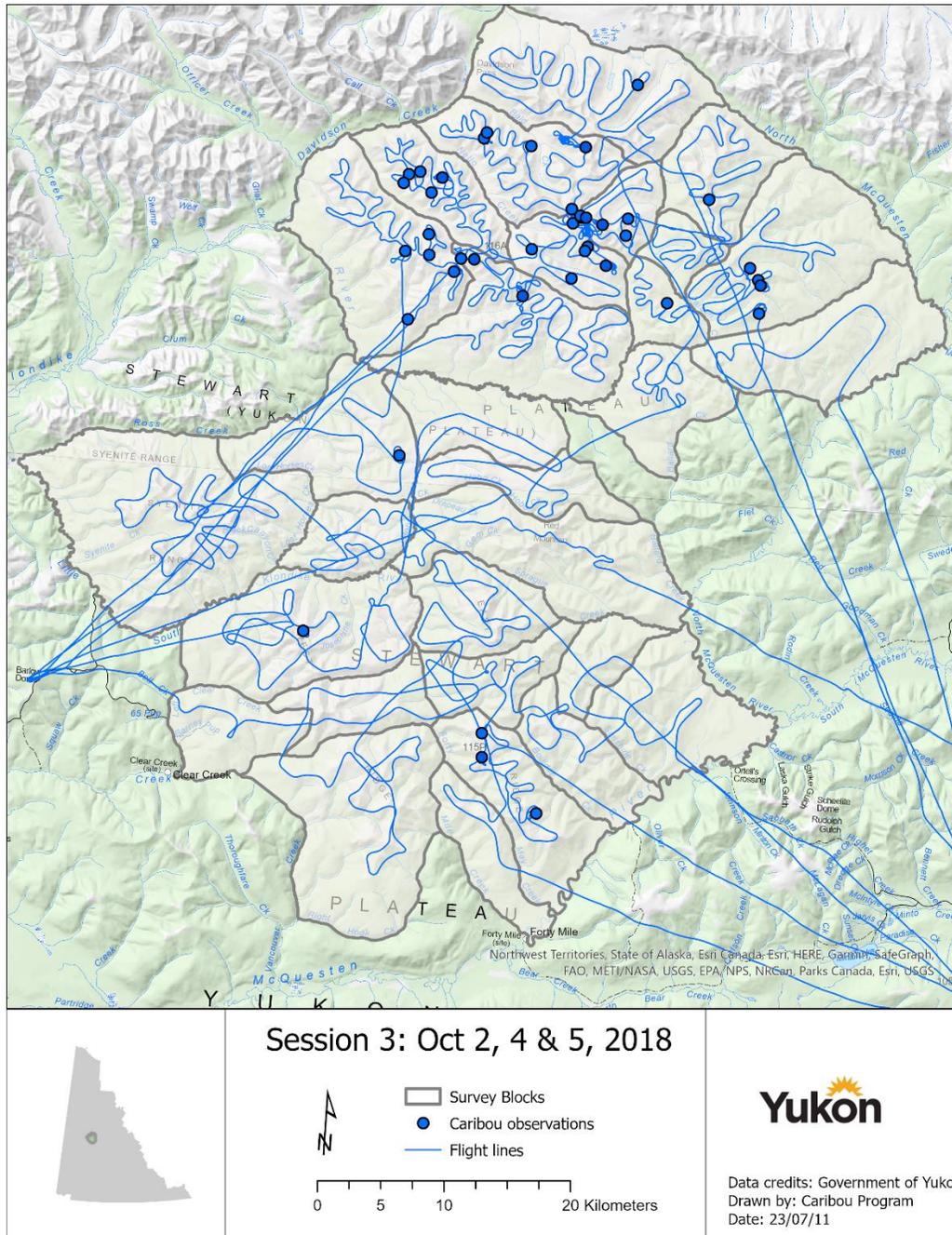
Ongoing monitoring initiatives for the Clear Creek caribou herd are planned to continue in the future. During late winter 2023-2024, an additional 30 GPS satellite collars will be deployed on caribou within the herd. This will enable managers to track their movements, gather valuable data on habitat use, and provide marks for an additional population estimate (tentatively planned for 2024). Fall rut surveys will also be conducted regularly and an updated range assessment is also being conducted on this herd, and is expected to be completed in 2023.

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**Map 1. Flight paths and caribou observations from the composition (third) session of the 2018 Clear Creek caribou population survey, conducted on October 2,4 & 5, 2018.**

### Acknowledgements

We extend our thanks to the First Nation of Na-Cho Nyäk Dun for their support during this survey. Thanks to aerial observers Lawrence McLaren (NND), Shawn Germaine (NND), and Simone MacDonald (NND) for participating in the survey and to our pilots Norman Smith (Fireweed Helicopters) and Jonathan Isenring (Heli Dynamics) for their excellent flying. YG staff who participated included Kyle Russell, Peter Knamiller, Martin Kienzler, Joël Potié, Mike Sutor, and Mark O'Donoghue.

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