



Caribou Position Paper

April 2021

End Goal: All Caribou populations and herds in the Yukon are secure and thriving and their ranges are intact and protected

Positions and Solutions

YCS will intervene to protect caribou and their habitat wherever they are threatened. We shall support management plans and recovery efforts that benefit Caribou and their habitat.

We shall continue to celebrate Caribou and advocate for them in all communities in the Yukon. YCS will advocate for the formal promotion of Caribou to the status of Conservation Flagship Species.¹

YCS will advocate for and partner in science to support a threshold approach to caribou habitat disturbance.

YCS will offer to partner with First Nations in the creation of IPCAs that will protect caribou ranges.

Introduction

Caribou conservation will be a defining point for measuring conservation success in Canada in the 21st century²

Caribou, as has been conclusively demonstrated time and again across the Northern Hemisphere, are exquisitely sensitive to disturbance. (McKay, 2021)

However, governments everywhere prioritize short term and dubious benefits from development over the health of caribou, with predictable results³.

The Yukon includes habitat for migratory, woodland and boreal caribou. All these types of caribou, while having different habitat requirements, are affected by anthropogenic disturbances- i.e., by roads, trails and industry.

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https://en.wikipedia.org/wiki/Flagship_species#:~:text=In%20conservation%20biology%2C%20a%20flagship,given%20place%20or%20social%20context.

² <https://news.ok.ubc.ca/2021/03/18/declining-caribou-population-victim-of-ecological-chain-reaction/>

³ <https://www.policyalternatives.ca/caribou-decline>



The Yukon is lucky enough to have some herds that are thriving (Porcupine Caribou Herd, Bonnet Plume Caribou Herd); these herds have little or no habitat disturbance. We also have herds that are declining (Finlayson Caribou Herd), or have suffered a collapse in the past. (Southern Lakes and 40 Mile Herds). We also have herds that while apparently secure right now, are facing imminent development pressures that threaten to destabilize and diminish them (Klaza Caribou Herd).

Healthy Caribou numbers indicate that the habitat is also healthy- they are an *indicator species*.⁴

Caribou are also a vitally important *Cultural Keystone Species*⁵: Entire Yukon societies are dependent on the ability to harvest Caribou. (Vuntut Gwitchin) This was once true across the entire Yukon.

For the Yukon to have healthy caribou herds, it means that the Yukon also has to have healthy caribou habitat, i.e., habitat that is mostly free from disturbance. Therefore, if YCS can help protect Yukon Caribou, it will also be protecting Yukon landscapes, habitat and peoples, and fulfilling our mandate.

Therefore, this position paper argues that YCS should always advocate for Caribou and their habitat, and YCS should generally oppose development in the range of Caribou herds.

Conclusions and Suggested Actions:

There is ample evidence that anthropogenic disturbance is driving the decline of most caribou populations. 68% of the range of woodland caribou in areas impacted by primarily anthropogenic disturbance has to remain undisturbed for the caribou to be able to persist⁶

However, application of this knowledge is not straightforward and questions remain. To complicate matters, natural disturbances- primarily fire- also play a role, although caribou tolerate natural disturbance much better than human caused disturbances⁷. In areas that are fire disturbance dominated, as little as 8% of additional disturbance from anthropogenic causes can be enough to tip a herd into decline⁸. This is importance, because the Yukon boreal forest is fire dominated region, which helps explain why Yukon caribou herds with little apparent disturbance can be declining.

⁴ <https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=2FEAAC82-1>

⁵ <https://www.sciencedirect.com/science/article/abs/pii/S0006320715001160>

⁶ <https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=2FEAAC82-1>

⁷ Ibid

⁸ <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.13637>



Further complicating things, calculating the area of disturbance is not simple. For example, a disturbance such as a highway has effects beyond its physical footprint and, mediated by factors such as vegetation type, terrain, aspect, viewscape, season etc., there is a zone of influence (ZOI) that can extend as far as 14km where caribou behaviour is changed⁹.

All this means, in real time practical terms, that it is a real possibility that, taking into account that the range of the Finlayson Caribou Herd (FCH)¹⁰ is fire dominated, and assuming a large ZOI from the Robert Campbell highway, that the highway alone exceeds the disturbance threshold for the long-term persistence of this herd. This possibility, this hypothesis, is reinforced empirically by the difficulty the Yukon has had in maintaining the FCH since the Robert Campbell highway was completed and started to see increased traffic related to mines such as the Faro operation. Arguably, there is zero (or negative) disturbance left 'in the bank' in the FCH range, *but we do not know for sure*.

Not knowing for sure means that it is difficult for intervenors such as YCS, and even harder for assessors, to argue convincingly against projects such as the KZK mine. The consequences of such a determination are sufficiently important that the quality of knowledge needs to be similarly rigorous.

Therefore, this suggests a course of action for YCS- get this knowledge!

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https://www.researchgate.net/publication/269646504_Estimating_the_zone_of_influence_of_industrial_developments_on_wildlife_A_migratory_caribou_Rangifer_tarandus_groenlandicus_and_diamond_mine_case_study

¹⁰ ADAMCZEWSKI, J., R. FLORKIEWICZ, R. FARNELL, C. FOSTER, AND K. EGLI. 2010. Finlayson caribou herd late-winter population survey, 2007. Yukon Fish and Wildlife Branch Report SR-10-01. Whitehorse, Yukon, Canada.