



SUBMISSION TO THE

NUNAVUT WILDLIFE MANAGEMENT BOARD

FOR

Information:

Decision: X

Issue: Baffin Island Caribou Total Allowable Harvest

Background:

- The first island-wide survey of Baffin Island caribou occurred in March 2014, and the results indicated there were very few caribou on Baffin Island. The population was estimated to be 4,652 caribou (3,462–6,250). The current total allowable harvest (TAH) is 250 caribou, including up to 25 females.
- To balance harvesting pressure, the GN has recommended that the Qikiqtaaluk Wildlife Board (QWB) allocate tags in proportion to the number of caribou in an area based on the 2014 abundance estimate and composition survey findings.
- In the absence of telemetry data, the next abundance survey for Baffin is a large undertaking and significant funds are required to complete such a survey making such a survey difficult to schedule with competing wildlife research priorities across Nunavut.
- The Government of Nunavut (GN) Department of Environment (DOE) has been working with Hunters and Trapper Organizations (HTOs) to identify methods to reduce the overall survey area required for the next Baffin survey and to understand Baffin caribou regional movements. During these discussions, the use of collaring was identified as an effective method in which the distribution of caribou and their movements between different regions across Baffin could be observed and used to reduce survey study area size and cost.
- A regional approach to abundance surveys, based on telemetry (collaring), is a more cost-effective, precise, and sustainable approach requiring the monitoring of caribou movements up to and during regional survey efforts.
 - The existence of spatially separated and geographically distinct subpopulations of caribou on Baffin Island is suggested by both Inuit Qaujimagatuqangit (IQ) and past scientific analyses. We have yet to find clear genetic differences in caribou across Baffin Island.
 - A regional survey area (example: North Baffin, South Baffin, Central Baffin, etc.) will allow more frequent abundance surveys due to substantially reduced costs and lower risk of incompleteness than an island-wide survey.
- The DOE planned to expand the GPS satellite telemetry caribou collaring program in the spring of 2022. The DOE received an email from the QWB a few days before the program was set to begin requesting the program be cancelled expressing unanimous opposition from Baffin Island HTOs based on perceived risks of spreading COVID-19 to caribou.

- The DOE has completed caribou composition surveys each year since 2015, excluding 2020, and reports have been distributed to co-management partners.
- Communities have expressed concern over illegal harvesting of caribou on Baffin Island resulting in a harvest greater than the Total Allowable Harvest (TAH). This has an unknown impact on the recovery of Baffin caribou. The extent of illegal harvesting could greatly impact the determination of the sustainable harvest level, possibly prolonging herd recovery. All illegal harvesting is investigated when reported to the DOE Operations Section.

Current Status:

- Results from 2015-2021 composition surveys suggest good productivity and a potentially increasing population trend in some areas, particularly in regions of South Baffin (Figures 1-5). Hall Peninsula and Meta Incognita Peninsula (Figures 1 and 2) showed indices of high productivity and increasing minimum counts, suggesting an increasing trend.
- Composition surveys were completed between March 19, 2022 and April 8, 2022 in South Baffin. Approximately 70 hours of helicopter flights were completed during this period. Results are currently being analyzed and the final report will be distributed to all co-management partners in summer 2022. Preliminary minimum counts have been included in this submission and suggest a continued increasing trend in some parts of Baffin Island (Figures 1 and 2).
- Increase in productivity and minimum counts were recorded within the Meta Incognita Peninsula strata, and Hall Peninsula within South Baffin regional strata.
- Similar positive indicators of increasing abundance of South Baffin caribou have been reported by hunters from South Baffin, who are starting to see more caribou closer to communities.
- There have been minimal reports of wolves on Baffin Island and no observation of wolves during composition surveys since a single wolf was observed in North Baffin in 2017. This low number of predators on Baffin Island is likely aiding in the observed increases in abundance due to reduced calf and adult mortality.
- Without a current abundance survey the DOE is unable to quantify any changes in island-wide abundance that may be occurring, but the DOE notes that there are positive signs of population growth being identified by composition surveys and observations of increased caribou numbers by communities, particularly in South Baffin.
- The DOE believes that based on these positive signs a conservative increase to the TAH represents a low risk to Baffin Island caribou population sustainability.
- There are risks associated with increasing the harvest including unquantified illegal harvest, unconfirmed movement patterns between regional areas (composition survey areas), seasonal variation in productivity, disease, and unknown adult survival rates. However, with appropriate management tools including abundance surveys and associated telemetry program, and continued composition surveys, the GN believes the risk of a small harvest increase may be sustainable.

Consultation:

- DOE planned in-person consultations for September 2021. At the request of the co-management partners due to lack of available accommodations these consultations were postponed. Consultations were also planned for early January 2022 but were postponed due to travel restrictions associated with COVID-19.

- The DOE planned consultations by teleconference on February 1 and 2, 2022 to receive feedback from HTOs prior to the NWMB February 2022 submission deadline. The DOE received a request from QWB on January 28, 2022, to postpone the teleconference consultations until later in February; the DOE agreed to the QWB request for a delay.
- The Baffin Regional Biologist and Technician completed consultations by teleconference with members of North Baffin HTOs on February 15, 2022, and South Baffin HTOs on February 16, 2022. Nunavut Tunngavik Incorporated (NTI), Qikiqtaaluk Wildlife Board (QWB) and Nunavut Wildlife Management Board (NWMB) were invited to the meetings as observers and given an opportunity to address concerns at the end of the meetings after HTOs had completed providing input and asking questions.
- A consultation summary report has been provided to the NWMB for their regular meeting (RM002-2022) in June 2022.

Recommendations:

- The GN advises a cautionary approach to increasing the harvest as any increase may negatively impact recovery of Baffin Island caribou in some regions.
- Based on the observed increase in abundance by communities, positive trends in productivity identified through calf:cow ratios between 2015 and 2021, and positive increases in minimum counts in some areas over the same period, and low numbers of predators, the Department of Environment is recommending a conservative increase to the TAH.
- Based on current scientific information, a conservative increase of 30 male only caribou (representing a new Total Allowable Harvest of 280 caribou, and up to 25 females) would represent an acceptable low risk to this herd's sustainability.
- The GN has taken into consideration the technical advice and all available IQ. In the interests of our collaborative efforts in wildlife co-management, we recognize, support and recommend that the NWMB accept the proposal made by the QWB during the February 2022 Consultation, of an annual TAH increase of 50 tags per year whereby each year the increase is reconsidered based on new IQ and scientific information.
- The GN further recommends that the QWB allocate these proposed increases to areas showing demonstrated positive trends in abundance indices.
- The GN recommends the additional 50 tags be made up of 25 male and 25 female caribou.
- Due to the risks associated with these increases, the GN commits to meeting face to face with Baffin communities annually and as required, to develop a strategic research plan to quantitatively assess regional abundance of Baffin Island caribou to ensure that any negative impacts to Baffin Island caribou recovery can be identified and actioned quickly.
- These recommendations are being proposed with a known higher level of risk that could negatively impact and prolong recovery. The GN would like to request the unanimous support of the Board and co-management partners for increased research and increased harvest monitoring during the herd recovery.

- The GN also requests the QWB and HTOs to work with our Conservation Officers to address concerns of illegal harvesting to support the long-term sustainability of this caribou herd.

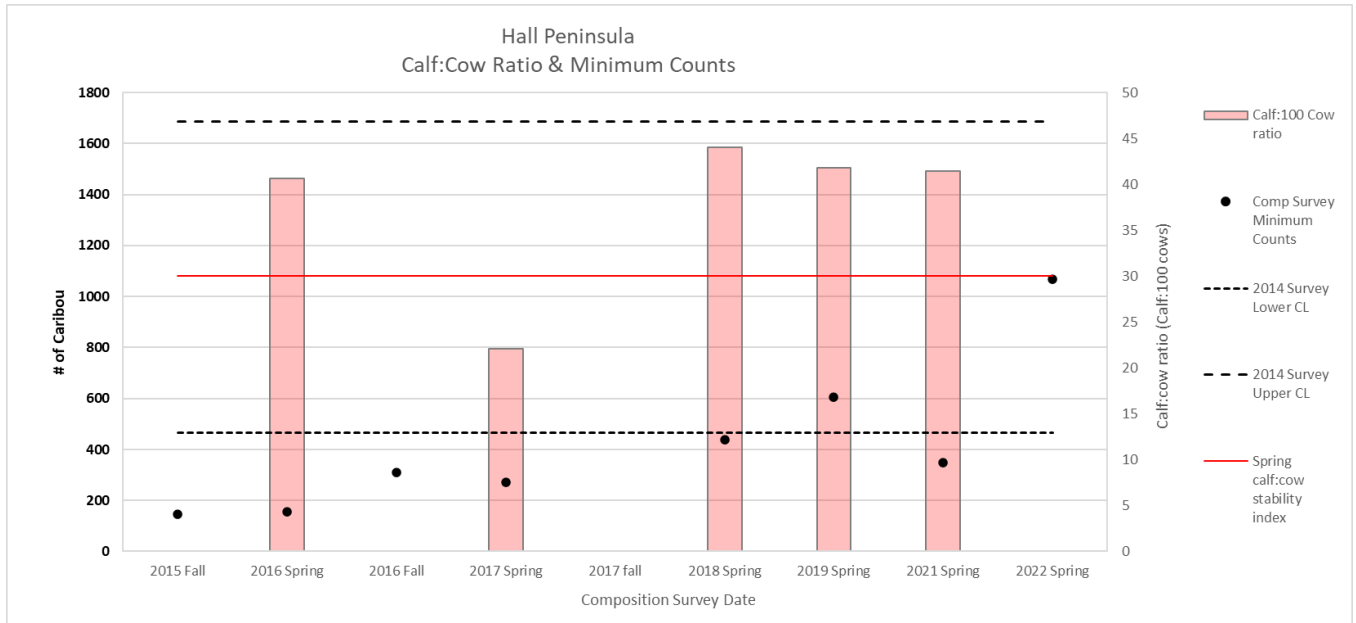


Figure 1. Hall Peninsula, as stratified in the 2014 Baffin Island abundance survey, spring calf:100 cow ratio 2015-2021 (right vertical axis, grey fill) and composition survey minimum counts (left vertical axis, black fill). *2022 spring minimum counts are preliminary.

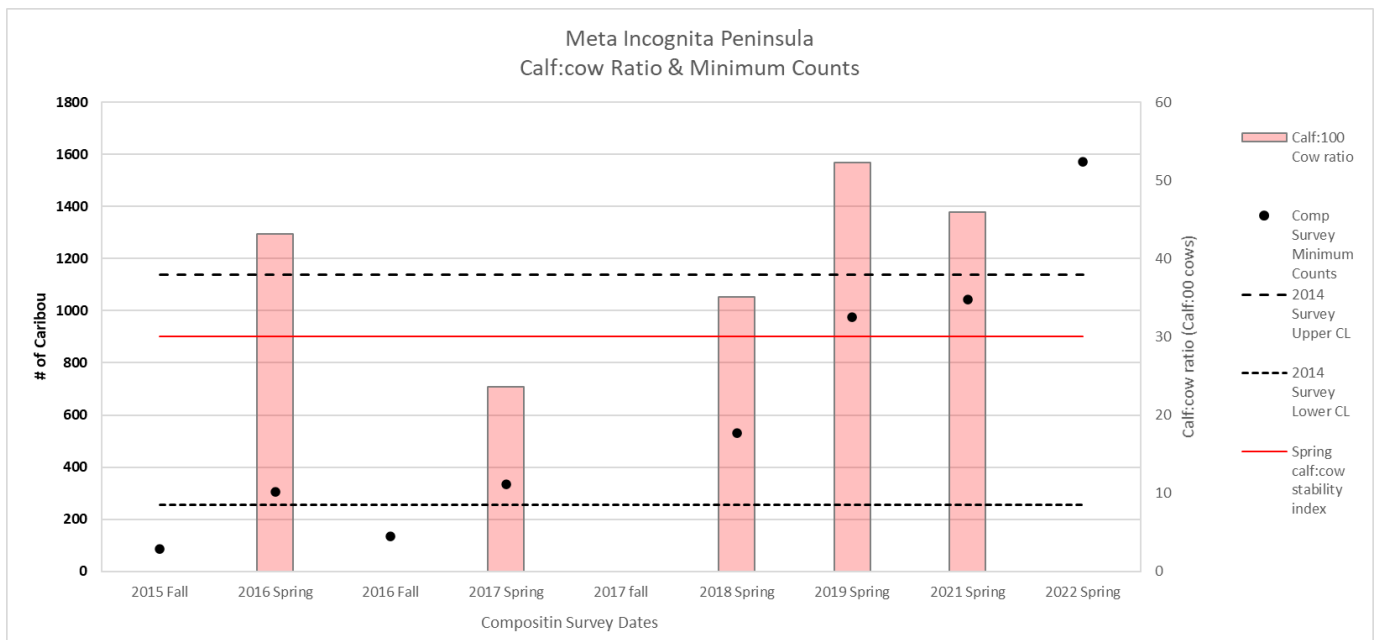


Figure 2 Meta Incognita Peninsula, as stratified in the 2014 Baffin Island abundance survey, spring calf:100 cow ratio 2015-2021 (right vertical axis, grey fill) and composition survey minimum counts (left vertical axis, black fill). *2022 spring minimum counts are preliminary.

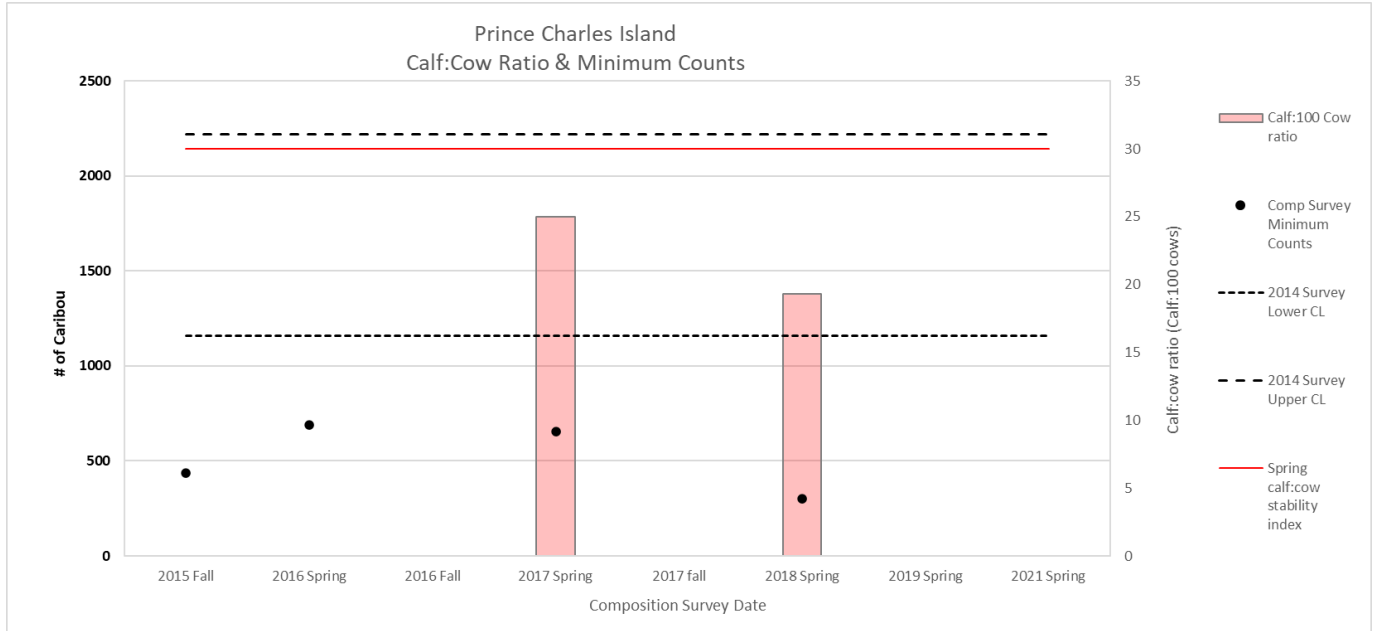


Figure 3 Prince Charles Island, as stratified in the 2014 Baffin Island abundance survey, spring calf:100 cow ratio 2015-2021 (right vertical axis, grey fill) and composition survey minimum counts (left vertical axis, black fill).

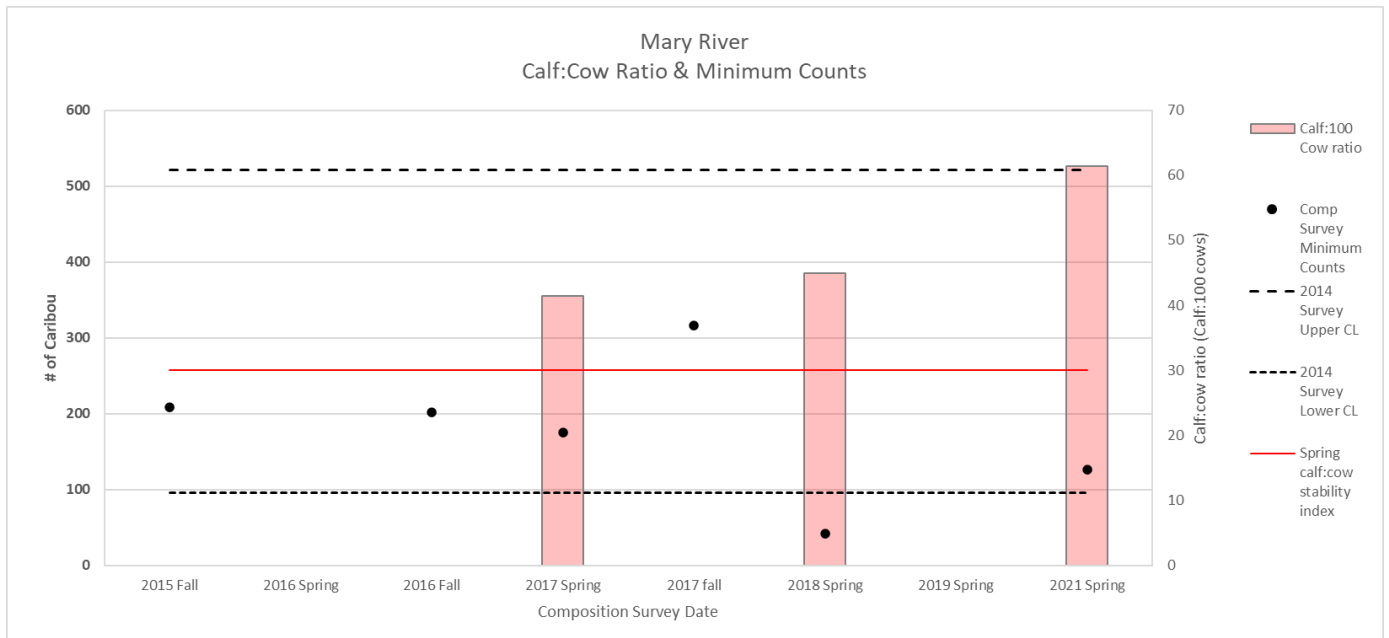


Figure 4 Mary River, as stratified in the 2014 Baffin Island abundance survey, spring calf:100 cow ratio 2015-2021 (right vertical axis, grey fill) and composition survey minimum counts (left vertical axis, black fill).

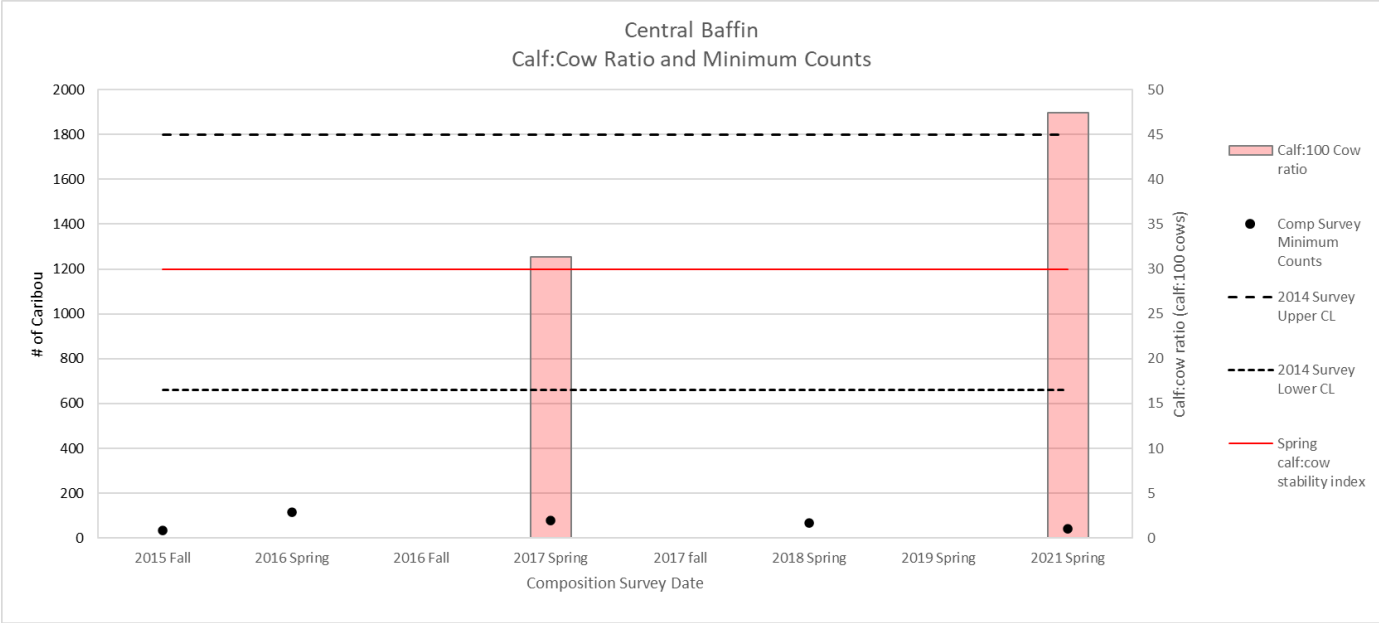


Figure 5 Central Baffin, as stratified in the 2014 Baffin Island abundance survey, spring calf:100 cow ratio 2015-2021 (right vertical axis, grey fill) and composition survey minimum counts (left vertical axis, black fill).