SUBMISSION TO THE

NUNAVUT WILDLIFE MANAGEMENT BOARD

FOR

Information: **Decision: X**

Issue: Dolphin and Union Caribou Harvest Management

Background:

- The Dolphin and Union (DU) caribou herd is a genetically unique and relatively small herd (historically 20,000 to 30,000 animals) that is important for the subsistence of the western Kitikmeot Communities (Kugluktuk, Cambridge Bay, Bay Chimo/Umingmaktok and Bathurst Inlet) and Northwest Territories.
- The harvest of DU caribou in Nunavut was estimated to be between 250 and 400 caribou per harvesting season between 2015 and 2017.
- The DU caribou herd underwent a decline of 34% in 8 years (4.2% annually on average), from the 2007 population estimate of 27,787 ± 7,537 (20,250-35,324, 95% CI) caribou to the 2015 population estimate of 18,413 ± 6,795 (11,664- 25,182, 95% CI) caribou (figure 1).
- Climate-related changes, timing of the sea-ice freeze-up, predation, harvest, shipping, and competition with other species are considered to be the main threats to the DU caribou herd.
- Following consultations on the results from the 2015 survey, the Government of Nunavut Department of Environment (DOE) agreed with the input from affected HTOs and co-management partners and did not recommend a Total Allowable Harvest at that time. The DOE and relevant stakeholders agreed that there should be increased focus on research efforts by increasing active collar deployment on the herd and reducing the time between surveys to ensure closer monitoring of the population status.
- In 2016 there was a Fall Compositions survey and in 2017 there was a Spring Composition survey to monitor population demographics.
- The 2015-2017 demographic indicators were consistent with a decline in the population:
    - The pregnancy rate of female collared caribou was 84% in 2015 and 88% in 2016.

- The fall 2016 composition survey results indicated a low calf:cow ratio of 25 calves/100 cows.
- The spring composition survey (2017) results indicated poor over-winter survival, with low recruitment and a calf:cow ratio of 11 calves/100 cows (0.11).
- The sex ratio was 15 bulls/100 cows, indicating very low productivity and an imbalance in the sex composition of the population.

- In November 2017, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reassessed DU caribou as Endangered.
- In 2018, the Kugluktuk and Cambridge Bay Hunters and Trappers Organizations (HTOs) supported the collaring of 50 DU caribou. 47 females and 3 male caribou were successfully collared from April 15 to 24, 2018.
- A population survey of the DU herd was carried out in fall of 2018, following the same coastline methodology that had been used for the previous 3 population surveys.

Current Status:

- The results of the 2018 population survey of the DU caribou herd and the recent Traditional Knowledge study (draft report) have indicated the herd is experiencing a drastic decline, which represents a serious conservation concern for the future recovery of this herd.
- The final report for the 2018 survey was shared with all relevant stakeholders on May 20, 2020.
- The current population estimate is 4,105 (2,931-5,759, 95% CI), which is a continued decline from the estimate of 18,413 (11,664-25,182, 95% CI) caribou in 2015 and 27,787 (20,250-35,324, 95% CI) caribou in 2007. There has been an estimated 88% decline in the population since the 1997 estimate of 34,558 (30,275-38,841, 95% CI) caribou (Figure 1).
- Traditional knowledge studies were conducted in 2003 and 2018-2020. The results from these studies indicated that there have been significant declines in DU caribou around the communities of Cambridge Bay and Kugluktuk since peaks around the 1980's to 2019.
- There has been unregulated harvest from the DU herd since the 2018 survey and some increased harvesting as a response to the declines of neighboring Bluenose East and Bathurst caribou herds.
- The current decline is not due to harvest but consistent with historical caribou cycles and related ecological factors such as range condition. However, with very few animals, the risk posed by overharvest is significant and could result in continued population decline and/or extirpation on some parts of the traditional DU caribou range. Managing the harvest at the low point in the decline could slow down the declining rate and support recovery.

- Following some external concerns with aspects of the survey methodology, as well as new genetic information being discovered in December 2019, additional survey analysis was completed to ensure that the results included all available information. This additional analysis delayed progress on the completion of the final report and coincided with the ransomware attack that caused work interruptions in late 2019.
- All collars in the 2018 deployment continued to cross to the mainland each winter in 2018 and 2019 despite the low estimated population size.
- In June 2020, the Minister of Environment sent a letter to the Nunavut Wildlife Management Board (NWMB) requesting a Ministerial Management Initiative for the DU caribou, as per s.5.3.25 of the *Nunavut Agreement.*
- In July 2020, the NWMB sent a letter to the Minister of Environment indicating that they were not able to make a decision at this time and he should move forward with an Interim decision for the DU caribou herd, as per s.5.3.24 of the *Nunavut Agreement.*
- In August 2020, Cabinet approved an interim Total Allowable Harvest (TAH) of 42 caribou for the DU herd, to be implemented immediately and to remain in place until the NWMB was able to complete a full review and make a new decision on the TAH.
    - The interim TAH of 42 represents a 1% harvesting rate based on the population estimate. This is a precautionary harvest level due to uncertainty of the status of the herd since 2018 to date and consistent with the harvest rate of neighbouring caribou herd, Bluenose East.
- A new population survey was carried out from October 23-Novemeber 2, 2020. The survey was planned through a series of meetings with representatives from all the relevant stakeholders.
    - There was consensus among stakeholders on the survey area design, which incorporated historical data and collar locations and local knowledge.
    - Local HTO and community representatives were part of the survey team on all three planes that were used to fly the survey.
- The preliminary results from the 2020 survey were not available at the time of writing of this submission but are anticipated to be available within the next few months.
- Research projects on wolf and grizzly bear have either been initiated in the Kitikmeot (e.g. wolf sample collection program) or are being planned for upcoming years (e.g. grizzly bear density survey) to address the objectives and recommendations of the NWMB approved Management Plan and feedback from communities.
- The current “Support for Active Harvesters Program”, which provides financial support for wolf hunters, has resulted in a significant increase in harvesting of wolves and other carnivores.

Consultations:

- In-person consultations were planned to take place in spring 2020 but were delayed due to the restrictions and limitations in place due to COVID-19.
- A letter was sent to all the affected HTOs and the Kitikmeot Regional Wildlife Board (KRWB) on June 8, 2020 to inform of the recommendation that would be forthcoming to establish an interim TAH of 42 caribou.
- DOE shared the survey results with Government of Northwest Territories in a letter from the Minister of Environment on June 9, 2020 and emphasized the need to work together on managing the DU herd to ensure sustainability and recovery for future generations.
- A teleconference, which included representatives from the relevant stakeholders, was held on June 18, 2020 to discuss the 2018 survey results, Traditional Knowledge Study results, Health Monitoring updates, and the DOE management recommendations.
- An in-person consultation meeting was held on October 8, 2020 in Cambridge Bay. The consultation included discussions on the 2018 survey results and the Interim TAH. Presentations were also given by representatives from the University of Calgary on the Traditional Knowledge study and Health Monitoring results.
- At the consultation, DOE representatives committed to make collaring a priority for the Dolphin and Union herd in the next year and to inform the Minister of Environment of the request for an increase in the TAH to represent a 2% harvesting rate.

Recommendations:

The management goal of the DU caribou herd should be to avoid further declines in the population and allow for a possible recovery. The rate of caribou population increase is dependent on harvest, range condition, predation and extreme weather events. By minimizing risks related to harvest we can improve the likelihood that the population will increase. The recovery period may take several years to several decades.

Until a new estimate is available from the 2020 population abundance survey, maintaining a 1% harvest of 42 caribou herd-wide is recommended as a possible sustainable harvest level. Maintaining at least a small harvest would help to preserve cultural practices and traditions. Based on the current population estimate, the risk posed by overharvest is significant and could result in continued population decline and/or extirpation from some or all the herd range. At the very least, overharvest could restrict the capacity of the caribou population to increase when range conditions improve. Once a new population estimate is generated from the survey data, the harvest level can be revisited and a new recommendation can be put forward, with a harvest limit representing the best available information.

If preliminary results available by the time of the December regular meeting (RM004-2020), we will present them to the Board and may have alternative recommendations if they are warranted, based on the observed population trend.

These management actions are recommended to reduce the risk of further significant declines and/or extirpation from some parts of the DU caribou herd range. An adaptive management approach is recommended including regular monitoring to advise changes to harvest restrictions so that actions reflect population size and trajectory. The DOE will work to ensure they replace lost collared animals due to mortalities and continue to work with the affected communities and co-management partners to continue close monitoring of this important caribou herd.

DOE believes the above noted recommendation is the best balance based on the current available scientific information and Traditional Knowledge/*Inuit Qaujimajatuqangit* to ensure harvest is set to a sustainable level and could help support a recovery of Dolphin and Union caribou.

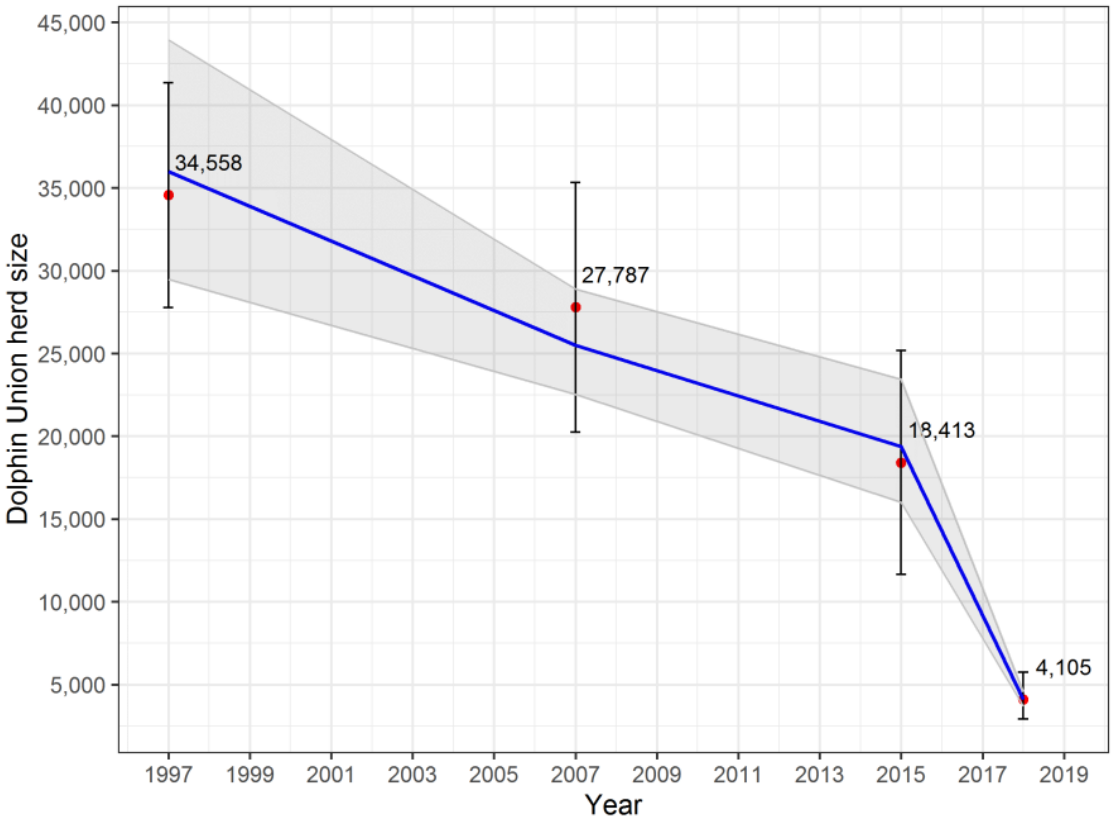

Figure1: Dolphin and Union population estimates of 1997, 2007, 2015 and 2018. Confidence intervals are depicted by shaded areas.