

Yukon

Environment

Rationale for Yukon Governments' transitional conservation measures to protect the Porcupine Caribou Herd

YUKON GOVERNMENT
Department of Environment

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Where does the Yukon receive its Management Direction?

1. Conservation Obligations in the land claim agreements
2. Concerns from First Nations and Inuvialuit
3. Concerns from co management boards
4. PCMB resolution (2006)
5. Community feedback
6. Legislative obligations
7. Cabinet Directives

What is the Yukon Government's Management Goal?

- The Yukon Government's management goal for the Porcupine Caribou Herd is to respect conservation principles, ensure sustainability and productivity, stop the decline and promote recovery of the herd.
- We believe that eliminating the cow harvest assist in achieving this goal.

Yukon Guiding Principles

- guiding principles we used in developing the transition measures
 - Conservation
 - Precautionary Principle

What is the Definition of Conservation?

- PCMA - “Conservation” means the management and use of Porcupine Caribou and its habitat which best ensures the long term productivity and usefulness of the Herd for present and future generations.
- International Union for the Conservation of Nature’s (IUCN)– “The management of human use of nature so that it may yield the greatest sustainable benefit to current generations while maintaining its potential to meet the needs and aspirations of future generations.”
- YG believes that continuing to harvest this herd at the existing levels is not consistent with the modern day treaty definition of conservation.

What is the Definition of the Precautionary Principle?

- It is a moral and political principle which states that one must act to avoid serious or irreversible potential harm, despite lack of scientific certainty as to the likelihood, magnitude, or cause of that harm.

What are the transitional conservation measures?

- A mandatory bull-only harvest for all hunters
- A mandatory harvest reporting for all hunters
- Where a FN and Inuvialuit government has the capacity and the legislative and regulatory tools in place to effectively implement these measures, YG will work with self governing bodies to address implementation of these limitations including the application of their legislative or management authority.
- In addition, YG will be discussing these measures with the general public, as well as a harvest limit of one (1) bull-only for resident and non-resident licensed hunters.
- The limit of one (1) bull is NOT applicable to FN and Inuvialuit subsistence harvesting.
- This proposal does not limit the number of caribou subsistence harvesters can take, only the sex.

Transitional Conservation measures

- Applies to all Yukon land used by the PCH.
- Applies to all hunters who are engaged in hunting activity in the Yukon on land used by the PCH.
- The transition proposals are meant to address conservation obligations until an approved harvest management plan and the necessary legislative instruments are in place.
- The purpose of these measures is to address conservation in a timely and effective manner.
- The purpose is not to take over other parties responsibilities, or limiting aboriginal rights.
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Transitional Conservation measures

- Why mandatory and not voluntary measures?
 - Overall, Yukon experience with voluntary measures has not been positive
 - Eliminating the cow harvest voluntarily will be difficult. Currently it is about 60% cows.
 - Population has been declining for about 17 years, and it continues to decline.
 - Need to turn things around quickly; there isn't time to experiment with voluntary measures
 - Different groups with different perspectives regarding voluntary measures
 - Perception by some that there are still a lot of caribou
- Where it has worked in Yukon was on the Carcross Caribou. However voluntary measures were not accepted until there were practically no caribou left; then it took just under two decades of no hunting to see an increase in the herd; it was a total closure for everyone; in a small geographical area, with a massive education program.
- A 15 year closure on the Porcupine Caribou Herd would be devastating to the user communities.

What has been the Management Response Timeline to date?

- 1992 the beginning of the decline was documented
- 2003 the PCMB identified the need for a HMP – by then the population had declined by 55,000 animals
- 2004 a scoping document was produced
- 2007 protocol signed and Working Group started meeting
- 2009 the Working Group submitted its recommendations to the PCMB.
- 2009 PCMB has submitted its recommendations to the Parties.

What has been the Management Response Timeline to date?

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It has been a 17 year response time from the start of the decline to now; a 5 year response from developing a scoping document to now; and a 2 year response since signing the protocol.

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These management response timelines do not reflect the YG concerns and responsibilities for conservation.

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Out of the 30 years we have been collecting population information on this herd, over half that time it has been in decline.

- Yukon Government has proceeded with transition measures, partially in response to these significant timelines that did not result in any concrete measures.

Management Response Process

- Future:

- The Parties will now discuss the PCMB recommendations.
- Yukon Government will need to consult with affected First Nations and Inuvialuit where harvest limitations are involved.
- Yukon Government will need to consult with the other co-management bodies with responsibilities for the PCH in Yukon, i.e. PCMB, WMAC(NS) and YFWMB.
- Native user agreements must be completed.
- There is still much work to do before there is an agreed upon approach to managing this herd

Is this an emergency?

- No.
- Conservation is the main reason.
 - The size of the decline, the length of the decline, and the forecast for a continuing decline of the herd is a serious concern but it is not the sole reason for these measures.
- Other reasons:
 - the lack of an agreed HMP
 - the lack of necessary instruments by most Parties to implement conservation measures
 - the cumulative effects of other pressures on the herd
 - the declining trend in most other North American barren ground caribou herds.

What Agreements does Yukon Consult Under?

- Porcupine Caribou Management Agreement
- Gwich'in Comprehensive Land Claim Agreement
- Tr'ondëk Hwëch'in, Na-cho Nyak Dun and Vuntut Gwitchin Final Agreements
- Inuvialuit Final Agreement

- Consultation started with the written notice of the proposed interim regulations (March 27, 2009) with a deadline of May 29, 2009.
- Consultation was extended first to June 30, 2009 and then again to July 31, 2009.
- Yukon government has completed Consultation.

Who is being Consulted?

- Government to Government

- Gwich'in Tribal Council
- Inuvialuit Game Council
- First Nation of Na'cho Ny'ak Dun
- Tr'ondëk Hwëch'in
- Vuntut Gwitchin First Nation

- Co management Bodies

- WMAC(NS)
- PCMB
- YFWMB

Paramountcy of the *Porcupine Caribou Management Agreement*

- First Nation and Inuvialuit harvesting rights on the PCH are described under the PCMA, and all other agreements are subject to the PCMA, with respect to areas of disagreement.
- The PCMA (1985) preceded all other agreements, except the IFA (1984) which had the PCMA imbedded in it.
- *References:*
- *Tr'ondëk Hwëch'in, Na-cho Nyak Dun and Vuntut Gwitchin Final Agreements 16.3.11*
- *Gwich'in Comprehensive Land Claim Agreement Main Agreement 12.6.4*
- *Inuvialuit Final Agreement 12(24)a*

Paramountcy of the *Porcupine Caribou Management Agreement*

- The YG does not believe the transition conservation measures trigger Total Allowable Harvest provisions in any of the land claims agreements based on the PCMA. (not limiting numbers, only sex)
- PCMA. “Allowable harvest” means the level of harvest of the Porcupine Caribou Herd.
- Therefore, we are not invoking an allowable harvest or a TAH. Limiting by sex is less stringent than a TAH
- PCMA does state that limitation on the sex of the caribou harvested can be set within the terms of the agreement as follows:
 - ***Section J. Allocations of Annual Allowable Harvest in Canada***
 - ***2.(b) The report of the Board may include, but is not restricted to, recommendations related to the following:***
 - ***(vii) age and sex of Porcupine Caribou to be harvested***

What are the Harvesting Rights in Yukon?

- Harvesting of Porcupine Caribou on land in the Yukon, including the primary and secondary use areas, is a preferential right not an exclusive right.

Sharing

- All the land claims agreements in the Yukon establish the principle of sharing the resource with non-aboriginal people.
- PCMA: B. Objectives of the Parties . To recognize and protect certain priority harvesting rights in the Porcupine Caribou Herd for native users, while acknowledging that other users may also share the harvest;

What are the Communities saying?

- **Public:**
 - Working Group consultation with nine communities(14 meetings) in Yukon and the NWT: message was to stop the decline of the herd and restore it to higher numbers. Many thought that more is needed to be done, sooner, including stopping cow hunting now.
- **Governments:**
 - First Nation and Inuvialuit have expressed concern over the decline in the herd.
- **Co management Boards:**
 - PCMB resolution to take immediate steps to ensure the conservation of the PCH now.
 - The WMAC(NS) has expressed the need to advance conservation measures.
- Values expressed by the public, governments and co management bodies are all consistent with the land claims definition of conservation.
- Ultimately it's the social values that determine the need for management actions, how they will be implemented, and if they will be respected.
- The YG transition measures reflect these values.

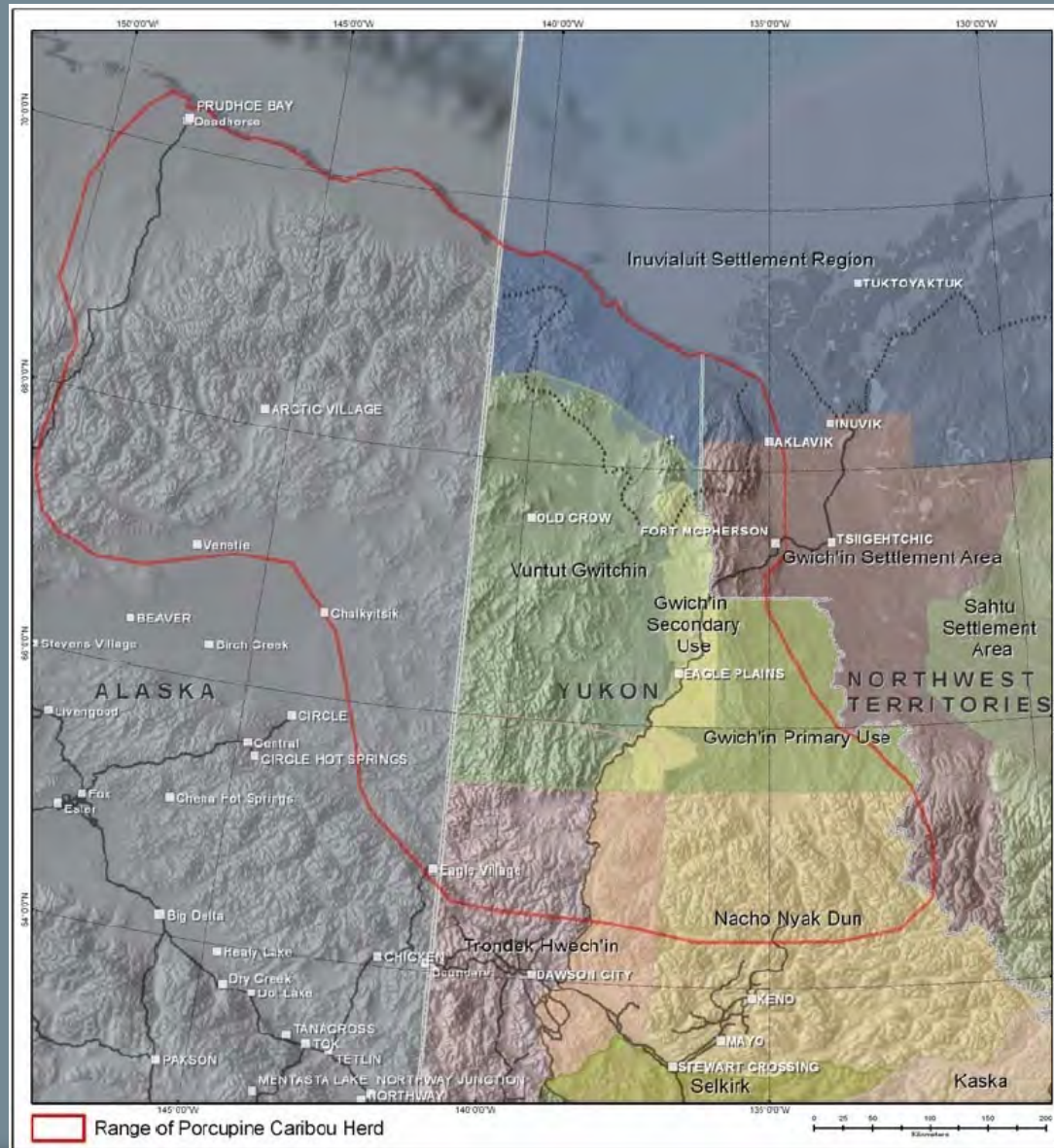
What is the relationship of the transition measures to the Harvest Management Plan?

- Yukon Government's transition measures are not intended to preempt the recommendations from the PCMB.
- Those recommendations were given full and fair consideration, but they must provide for conservation of the herd.
- The hope was that the transition measures would be complimentary.
- The transition measures are meant to be proactive.
- Fill a void until there is an agreed upon HMP and implementation.
- In order to implement these measures by the fall 2009 and fulfill its obligations to consult with First Nations and Inuvialuit, the process had to start in the spring 2009.

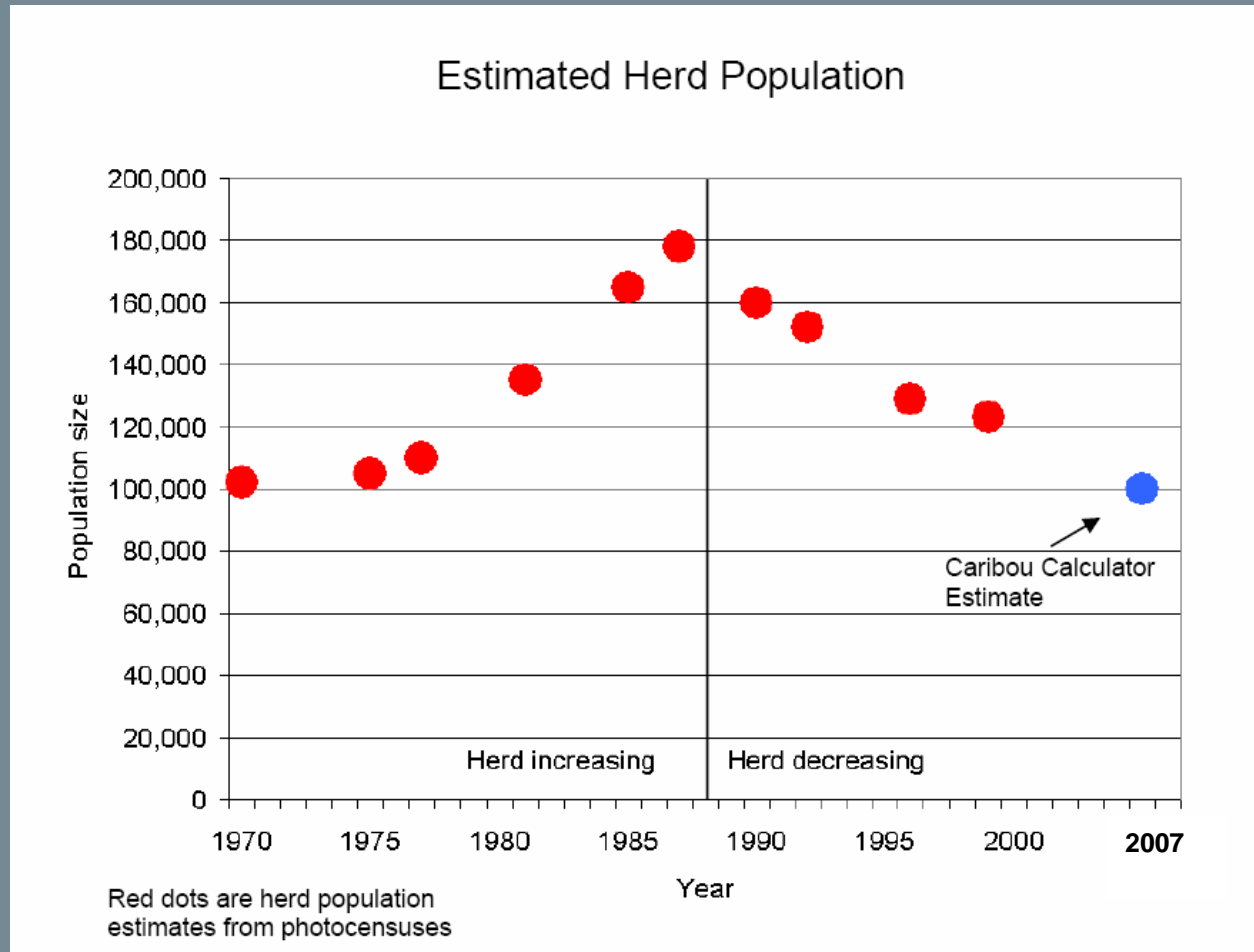
What is the Scientific Rationale for Conservation Measures?

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Herd Distribution



Population Estimates from 1972 to 2007

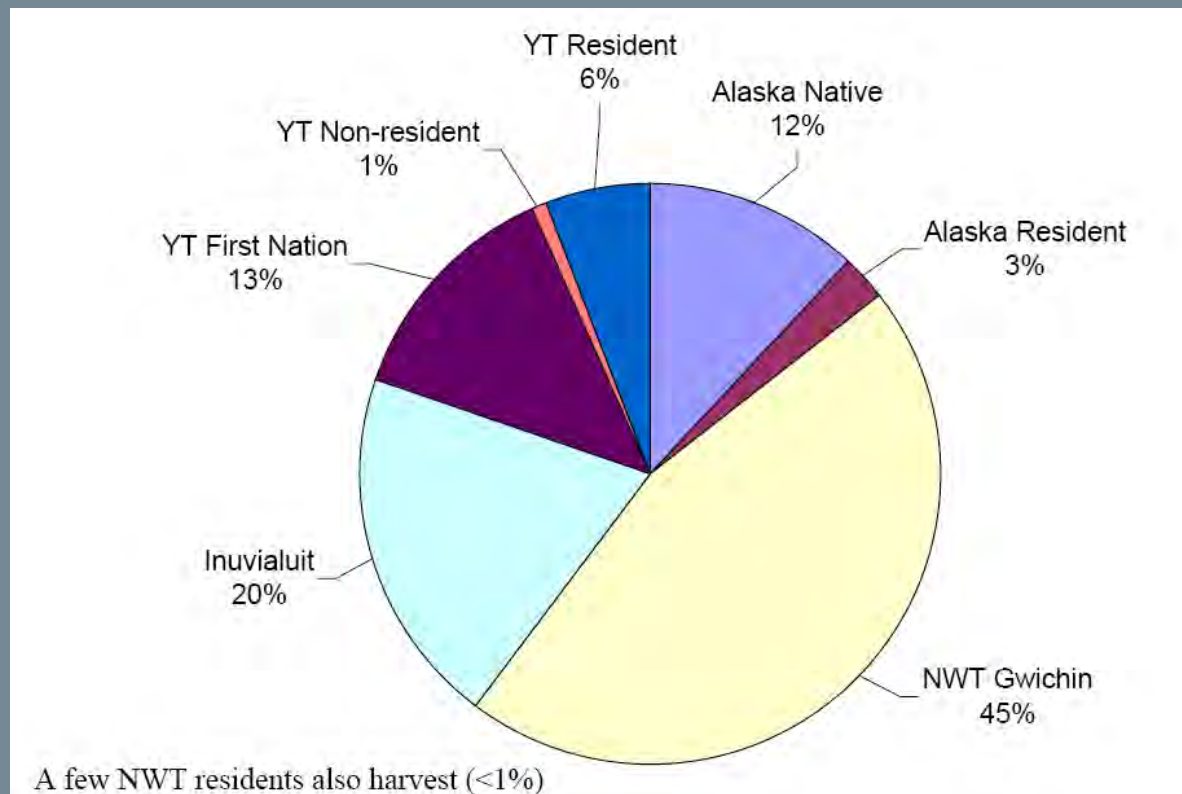


Source: HMP draft

What is the reason for the decline?

- The last time the herd was counted was in 2001 when there were 123,000 animals; 3% of the population had been lost every year since 1989.
- 55,000 caribou lost from peak to 2001 – a 30% decline.
- The cause of the decline is likely a combination of factors.
- Population cycles are thought to be about 40 years
- Climate change is likely a significant factor. For the past 4 years the herd has not calved on the Alaskan portion of it's tradition calving grounds
- Studies have shown that calf survival (productivity) can be negatively affected (10%) by dispersed calving away from the preferred Alaskan calving grounds.
- Harvesting, especially of adult females, has contributed to the decline.
- Predation from wolves, bears and eagles is likely a significant factor

Who's Harvesting the PCH?



Source: HMP

Who's Harvesting the PCH?

Harvest data has not been readily available from aboriginal harvesters

Our harvest data is based on old (1992, 1993, 1994) information.

There has not been a comprehensive count of the harvest since the early 1990's

The biggest harvest reported was about 6,000 caribou but, in general, we assume that an average of 4,000 caribou is taken each year.

What is the impact of harvesting on the PCH?

-
- Harvest can change the rate of decline and the rate of recovery even within natural cycles.
- The effects of hunting increases as the herd declines if hunting stays the same
- Uncontrolled harvest, especially taking cows, during a decline in the population, regardless of the cause of the decline, is inconsistent with the definition of conservation, the precautionary principle and YG management objective for this herd

Don't caribou cycle normally so won't the herd just recover naturally?

- If the PCH herd follows the historic cycle pattern, it should reach the low point in the cycle around 2010-2015.
- We cannot count on the herd bottoming out in the near future and then pull itself out of the decline, because many things have changed:
 - Dempster Highway since 1979
 - Increased access for hunting
 - Increased disturbance on highway
 - About half of Eagle Plains burnt in the past 5 years
 - Hunters have better and faster equipment
 - More development projects within the range of the herd
 - Climate change may be negatively affecting calf survival (productivity) by dispersed calving away from the preferred Alaskan calving grounds.
 - Increased hunting diverted from adjacent depressed caribou populations.
 - Assuming these factors will have no effect on the cycles is risky and inconsistent with the precautionary principle.

What is the sustainable harvest of the PCH?

- The effects of hunting on any wildlife population is negative unless only the growth component of the population is harvested
- If the herd is not growing there is no sustainable yield.

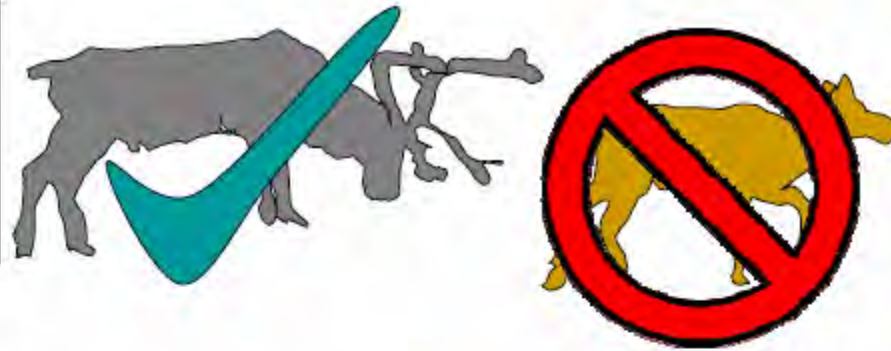
What is the sustainable harvest of the PCH?

- Applying the concept of sustainable harvest to a population that cycles over 40 years is a challenge.
- The sustainable harvest at the bottom of the cycle is less than at the top.
- Continuing to harvest at the bottom of the cycle will likely drive the herd lower and slow the recovery.
- Relying on natural ecological forces to turn the population around is risky and not consistent with the precautionary principle.
- Uncontrolled harvest at the bottom of the cycle is inconsistent with the definition of conservation and the YG goal
 - “Hope is not a strategy”

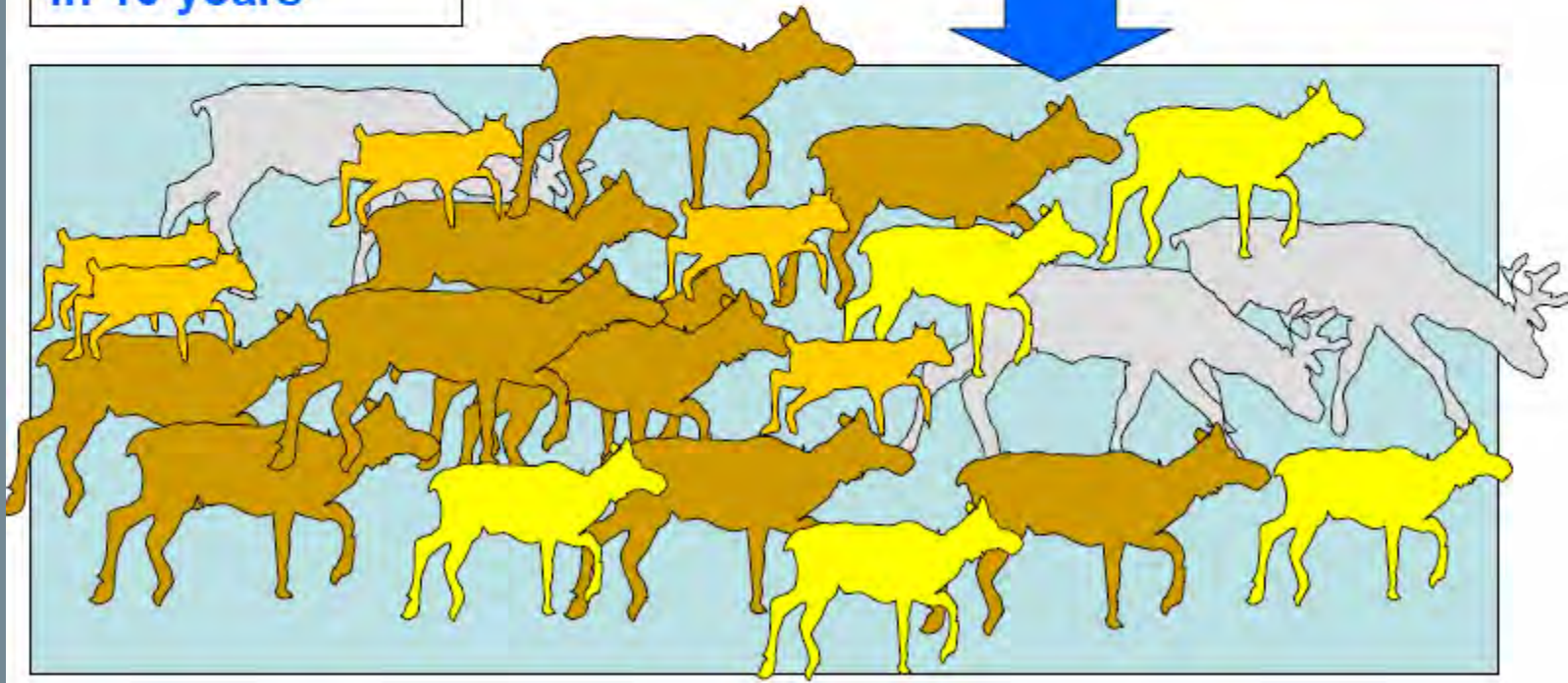
How important is the female segment of the PCH?

- Cows are the “engine” that drives population numbers
- Increasing the mortality rate of adult females through hunting, especially during a decline, we may accelerate the rate of decline beyond the range of natural variability.
- Example: by totally eliminating all cow harvest we could have 50,000 more caribou by 2020 and still maintain a 4,000 bulls a year.

If you shoot 1 bull
instead of 1 cow each
year for 10 years it
will mean...



23 more caribou
in 10 years



Source: HMP

How productive is the herd?

- The definition of conservation in the land claim agreements is based on “long term optimum productivity”.
- The PCH is the least productive of the large migratory caribou herds in North America.
- Studies have shown that calf survival (productivity) can be negatively affected (10%) by dispersed calving away from the preferred Alaskan calving grounds. In the past 4 years the majority of herd has not calved in Alaska.
- Given that the PCH has the lowest productivity rate of all the herds in NA , and that productivity has likely been negatively affected in recent years, we need to reduce harvesting , especially on cows, during a prolonged decline.
- This is consistent with the definition of conservation, the precautionary principle, and the YG management goal.

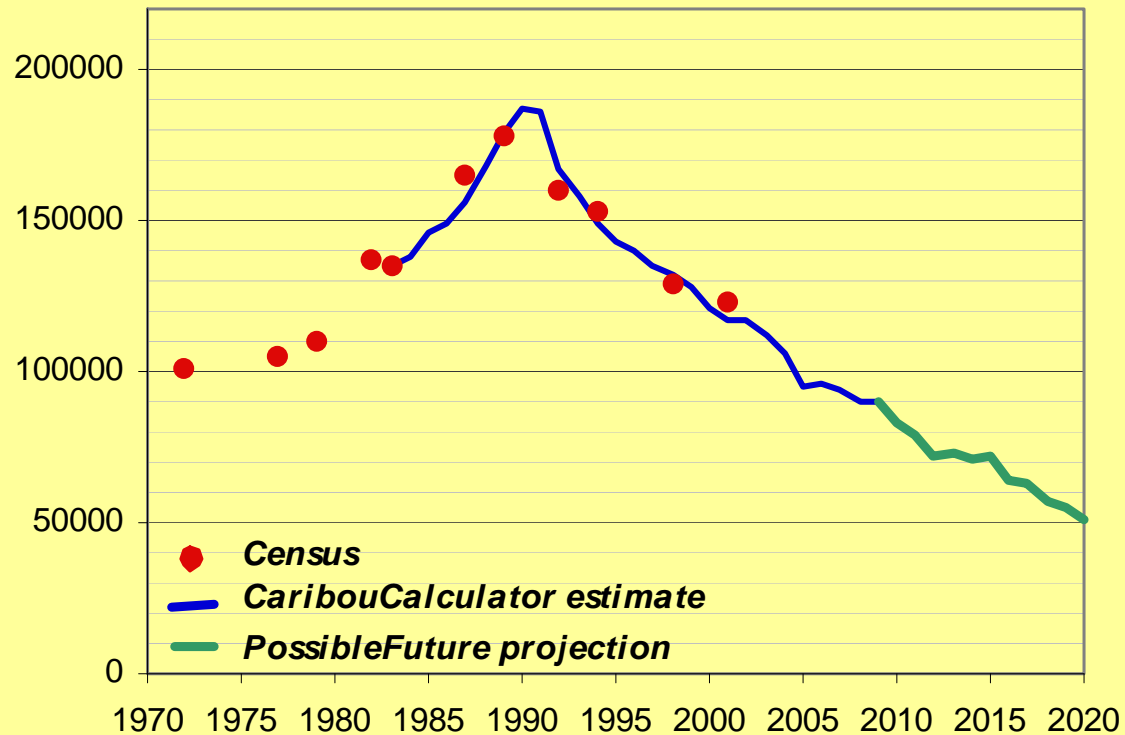
Protecting the Habitat

- If we assume that the herd range will shrink as the herd declines, there will be fewer caribou using the landscape.
- It will become more difficult to protect important habitats such as the calving areas.

What do future population projections look like?

- Population Model (caribou calculator) is a tool to try and figure out what the future looks like.
- Based on population information measured in the past and applying it into the future.
- Based on reasonable assumptions.
- “The model was intended to be used as an information/discussion tool , not as a decision-making tool.”

Porcupine Caribou Herd Size (Calculator and Census)



Status Quo for harvest (4,000 and 60% cows). Assumes future 19% adult cow natural mortality

If harvesting continues at the same rate and the same composition of cows, the Model predicts there will be about 50,000 caribou by 2020 (11 years).

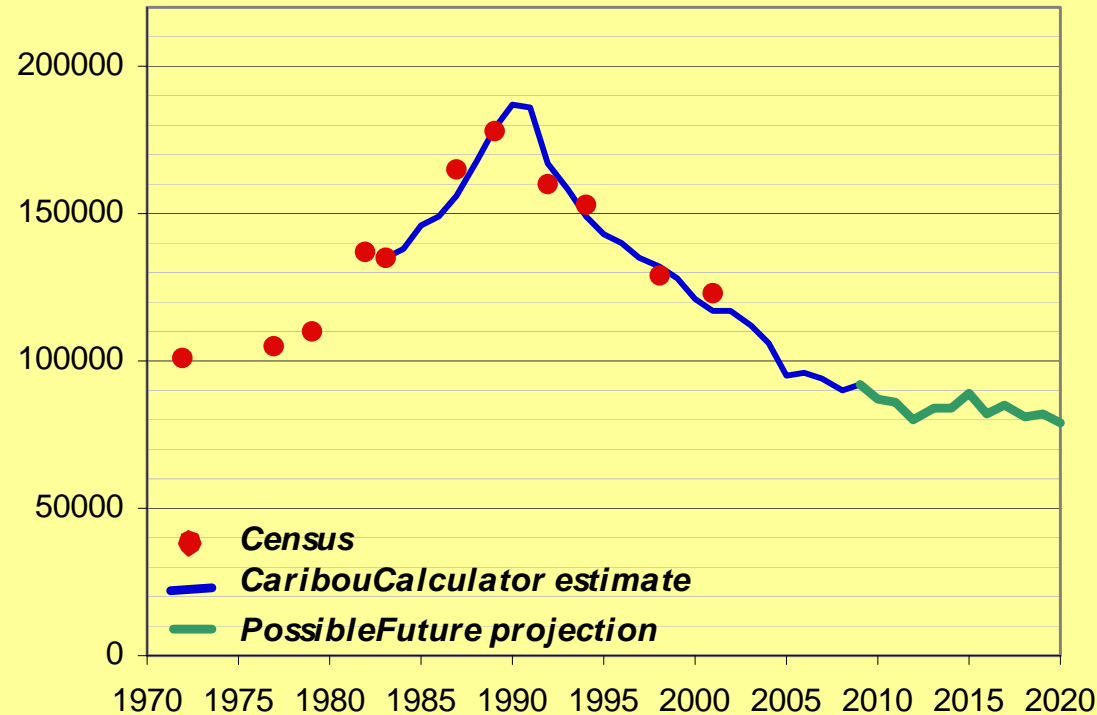
Doing nothing, or continuing with the status quo, is inconsistent with the definition of conservation, the precautionary principle and the Yukon Government's management goal for the Porcupine Caribou Herd (PCH).

Management Scenarios considered

- We looked at 3 management scenarios:
 1. reduce the harvest to 2,000 caribou, with no change in the existing composition of 60% cows
 2. reduce the harvest of 2,000 caribou and change the composition of the harvest to 5% cows (mandatory bulls only)
 3. maintain the existing harvest of 4,000 caribou but change the composition of the harvest to 5% cows (Yukon Government transition measures)

Scenarios 1 and 2 would trigger the TAH provision in the agreements which would take more time to develop and implement compared to the transitional measures where there is no limit on the numbers. Both scenarios would put more restrictions on aboriginal harvesters.

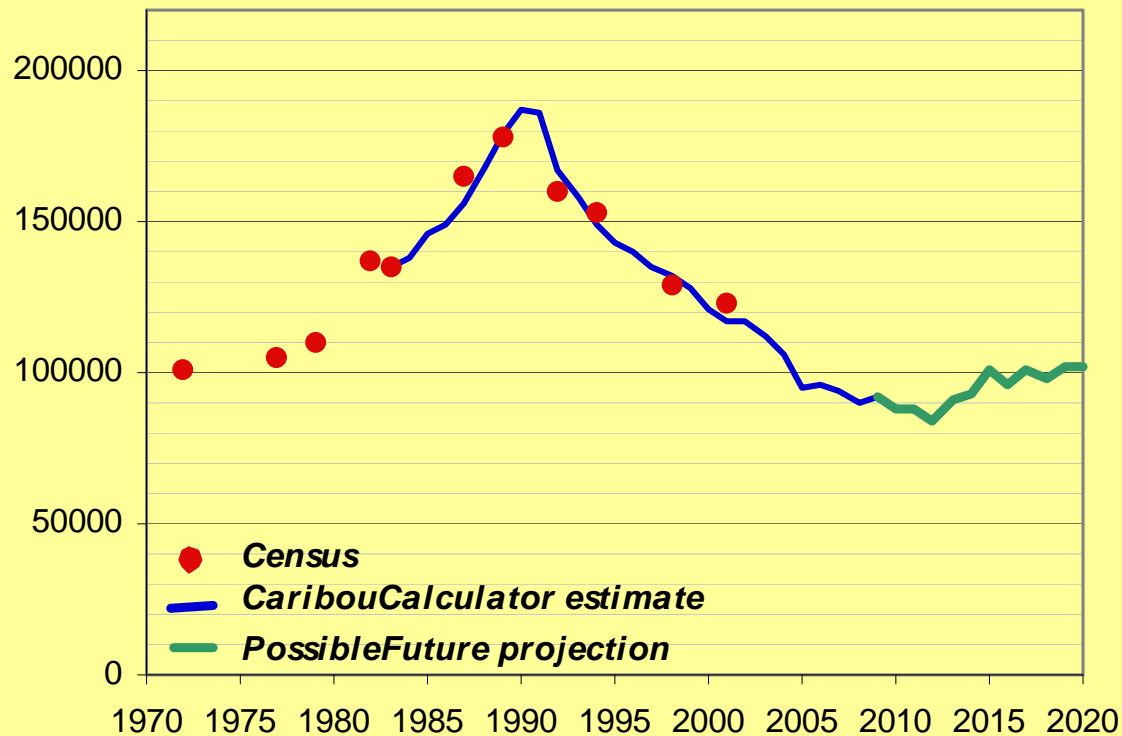
Porcupine Caribou Herd Size (Calculator and Census)



Scenario one: 50% reduction in harvest (2,000) with 60% cows. (assumes future 19% adult cow natural mortality).

- the herd will still decline into the future.
- Yukon can't advocate managing for a decline.
- inconsistent with the definition of conservation, long term optimum productivity, the precautionary principle and the Yukon Government's management goal

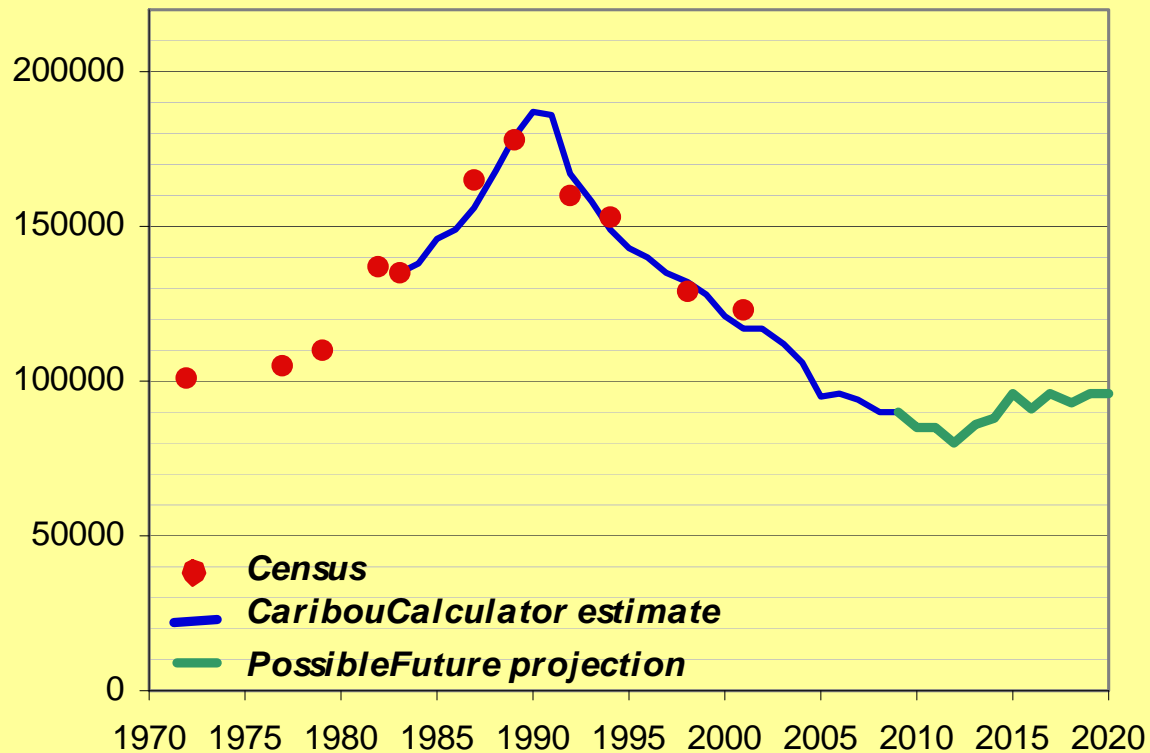
Porcupine Caribou Herd Size (Calculator and Census)



Scenario two: 50% reduction in harvest (2,000) with 5% cows (mandatory bulls only)

- the decline stops and the population increases.
- consistent with the definition of conservation, long term optimum productivity, the precautionary principle and the Yukon Government's management goal.

Porcupine Caribou Herd Size (Calculator and Census)



YG
transition
measures

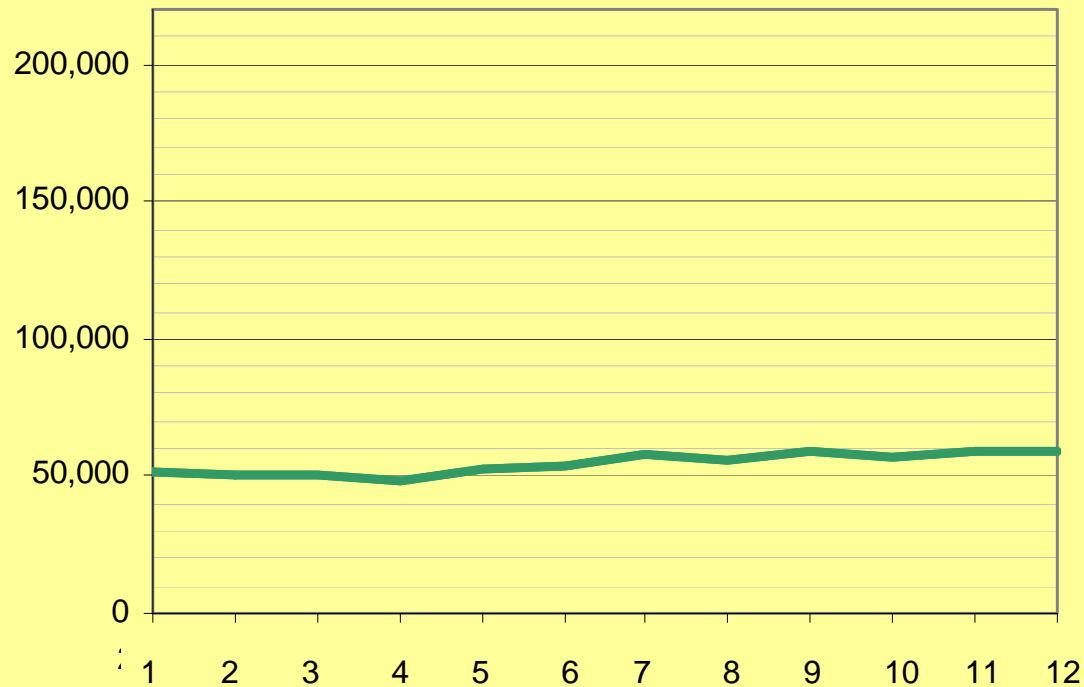
Scenario three: Current harvest (4,000) but no more than 5% cows (mandatory bulls only). (assumes future 19% adult cow natural mortality).

- the decline stops and the population increases..
- consistent with the definition of conservation, long term optimum productivity, the precautionary principle and the Yukon Government's management goal.

Worst Case/Recovery Scenarios

- If no action is taken and harvest continues as usual, and if the above model predictions are correct, the herd would drop down to 50,000 animals in 11 years.
- The ability for a herd to rebound from these low numbers is compromised because the “engine “ behind the growth (Cows) has been reduced in numbers.
- This is inconsistent with optimum productivity for future generations and overall sustainability.

Porcupine Caribou Herd Size



Assumes:

- 50,000 caribou and no harvest (assumes future 19% adult cow natural mortality).
- The herd remains stable at this low number then begins to grow very slowly. It would take decades to bring the herd back to 100,000 caribou



Few?



Many?

The Choice is
ours!