Intervener Response for the WRRB Hearing February 7-9, 2010

I have enclosed two CDs, both with Powerpoint Presentations. The first one explains to the WRRB exactly why the Bathurst herd has virtually disappeared. Given it's current ENR defintion, I see no reason why it should recover anytime in the near future. The last time it shifted to the east side of the Bathurst Inlet, it stayed there for nearly 20 years. The second Powerpoint Presentation gives a broader overview of ENR's work, and explains in detail the work done on the Bluenose herds, which the Sahtu Renewable Resources Board manages. The purpose of this second CD is to refute ENR's continuous statements about all the herds being down.

I have spent over two thousand hours, over the past three years, reviewing the caribou research of the Department of Environment and Natural Resources. The unfortunate conclusion that I have drawn, is that ENR is lying to the WRRB, and the SRRB before, in regards to the status of caribou in the Northwest Territories. Because of this, it is impossible for the Co-maneagement process to work properly. Members of these co-management boards are part time representatives of the people, and simply do not have the time to delve into the details of the caribou research. The only reason I did it was because my life's work was being threatened.

Calling government employees liars is a difficult thing to do. It is hard for board members, or citizens in general, to believe such an accusation about their government. It is doubly hard when it is an American making the accusation. I understand that completely, but I stand by the statement. Following are just a few examples, and come from the answers ENR provided to the Intervenors for the upcoming hearing. These answers were due December 18, 2009, but were posted January 8, 2010 on the WRRB website. The answers, in some cases, are outright lies, and in other cases, are deliberately deceitful. I will explain in each instance.

Example One

JRA Question: What is the source of the 119,600 caribou figure for the Bluenose East herd in the2000 mentioned in the ENR proposal? All the research presented at the WRRB hearing in 2007 says ENR counted 84,412 and upped that figure to aproximately 104,000?

ENR Answer: The source of the figure of 119,600 caribou in the Bluenose East herd is a summary report by John Nagy which contains revised survey estimates for the Bluenose West, Bluenose East, and Cape Bathurst herds.

JRA Commentary: Documents such as this, put out by the goverment, have names and numbers. How, exactly, is one supposed to review this document, when it is not identified?The fact is, Brent Patterson counted 84,412 caribou in the Bluenose East herd in the year 2000.

Here is the abstract from the document:

Population Estimate for the Bluenose-East Caribou Herd

Using Post-Calving Photography

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ABSTRACT. Genetic and spatial analyses suggest that what was previously described as the Bluenose herd of barren-groundsc aribou (Rangifer tarandus groenlandicus) comprises three separate populations. Of these, the Bluenose-East caribou herd (BECH) has received little coverage in past surveys. Existing estimates of abundance suggested that current harvest rates of Bluenose-East caribou (~5000 animals/year) might be excessive. We used post-calving photography in June–July 2000 to estimate the size of the BECH. A maximum of 33 radio-collared caribou were available for location in June 2000. We located 30 of these caribou and photographed distinct groups containing 23 collared individuals. Excluding caribou assumed to belong to the neighboring Bluenose-West herd, we photographed a minimum of 84 412 adult and 4193 calf caribou. Using a simple markrecapturemodel to account for caribou associated with collared individuals not photographed, we calculated an estimate of 104 000 ± 22 100 (95% CI 84 412–126 100) non-calf caribou. A recently published stochastic model produced a considerablyhigher and more variable estimate of 208 700 (95% CI 112 600–474 700). n March 2001, we deployed seven more radio collars in anticipation of repeating the census in 2001, but poor weather conditions precluded the formation of large aggregations. Present densities of Bluenose-East caribou seem high, and we recommend regular monitoring of body condition to assess the potentialfor a forage-induced population crash.

JRA further comment: ENR is certainly aware of this document; it is found on their website. Below is a direct “cut and paste” from that website.

The Bluenose-East herd was first censused as a distinct herd in 2000. A photocensus was completed in early July 2000. Caribou that occupied the range of the Bluenose-East herd prior to 2000 were not censused effectively and, as a result, there are not data to determine population trend.

In 2000 the Bluenose-East herd was estimated at approximately 104,000 (range 84,412 - 126,100) non-calf caribou. Another photocensus was completed during the summer of 2005. The results of this census showed the Bluenose-East herd had declined to 66,600 animals. A photocensus survey, completed in July 2006, confirmed herd size at an estimated 66,200.

Year	Population Estimate (non calf)	Range (95% CI)
2000	104,000	84,410 - 126,100
2005	66,600	62,200 - 70,970
2006	66,186	62,625 - 69,747

JRA further comment. Please note that Brent Patterson counted 84,412 caribou on this survey. To compare this number with previous surveys, where actual counts are used, that would be the number presented. However, Brent hypothesized that he missed some caribou, and hence the estimate of 104,000 caribou. There is no problem with this methodology, and, after speaking with Brent, I attach no stigma to it. However, the same methodology must be used on future surveys’ i.e. the 2005 and 2006 surveys. In those surveys, ENR does not add any caribou for missed caribou on the surveys. Additionally, on the 2006 survey, ENR forgot to add to their count the

“”observer bias”, which was 73% in the 2005 survey, and 67% in the 2006 survey. If it had been added, the caribou counts would have looked like this:

Bluenose East Population Trend-actual counts

2000 84,412
2005 74,796
2006 69,919

Brent Patterson (see abstract) had predicted that caribou densities in 2000 were at an unprecedented number, and a forage induced reduction might occur. A drop of caribou from 84,412 to 69,919, a drop of 17%, is certainly reason for concern. **The question is, why wasn’t the SRRB presented with the information in this fashion?** Would drastic management actions have occurred? I don’t believe they would have.

Today, in 2010, the WRRB is told, (page 1, of the ENR proposal), that the Bluenose East herd has dropped from 119,600 to 66,700. WRRB members don’t know the actual numbers. They simply see a roughly 50% in the Bluenose Herd, not the actual 17% drop in actual numbers.

How is the WRRB supposed to make an informed decision based on misinformation?

Example Two

JRA Question: IRNumber 2.67 Please Explain how the Ahiak herd, censused in 1995 at 31,556, increased to 200,000 the following year?

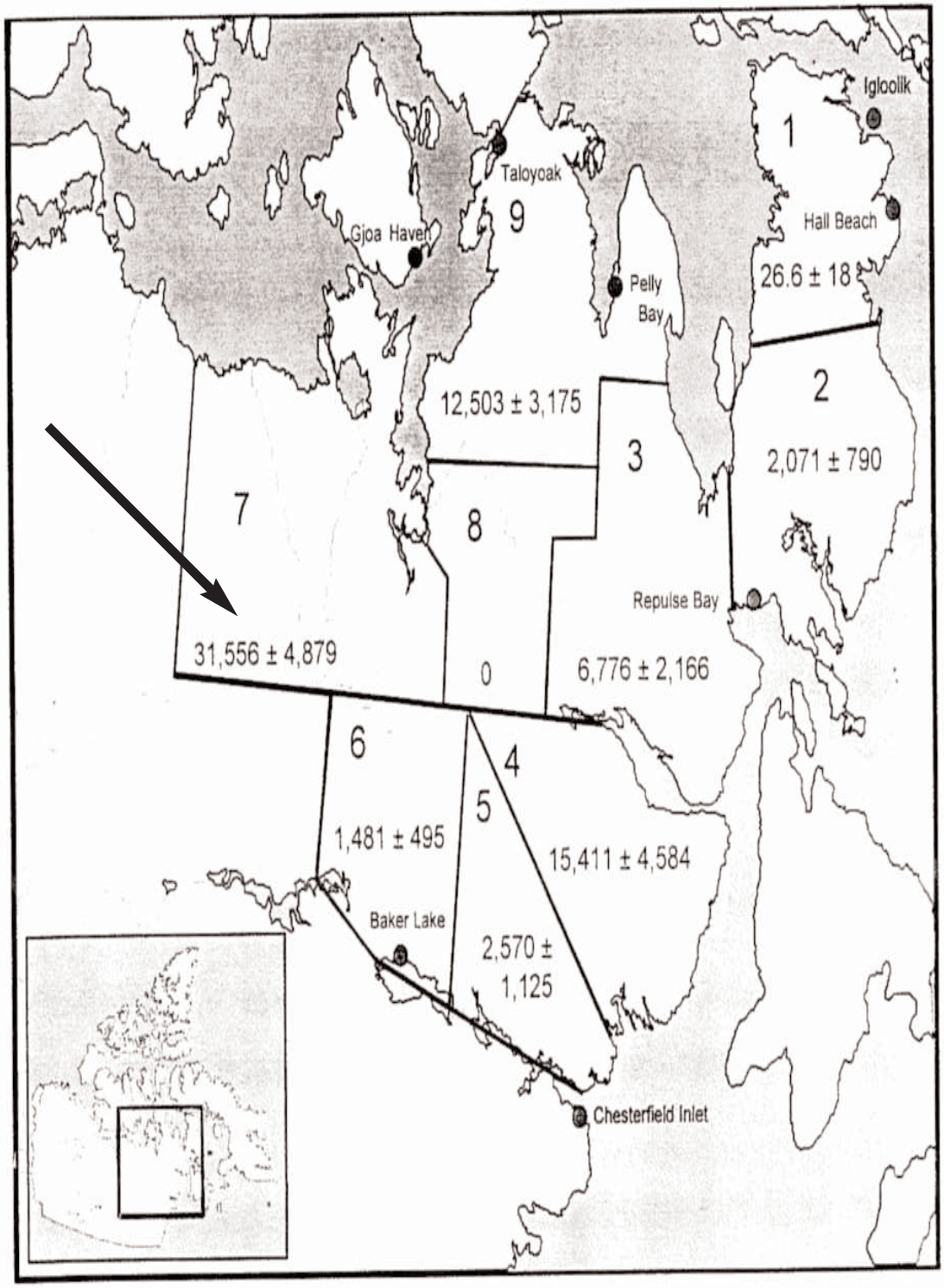
ENR Answer: The Ahiak hed was not censused in 1995. A calving reconnaissance survey in 1996 was used to derive the estimate of 200,000. We reiterate that this was intended as a ball-park estimate of population size only, and has since been taken out of that context.

JRA commentary: This is an outright lie. In 1995, Laurie Buckland censused the entire North-eastern Mainland herd. It is all written up in ENR Manuscript Report #125. On the following page is a map of the survey. Note the population estimate for the Ahiak (Queen Maud Gulf) herd of 31,556 caribou. This was a pre-calving survey, which could be done for that herd because of their non-migratory nature. The 31,556 caribou was very similar to the number Doug Heard found in 1983, File Report #71.

This document exists, plain and simple, and it is clear it was designed to count the caribou in the area of the Queen Maud Gulf caribou. To deny its existence is ludicrous.

31,556 caribou in 1995, to 200,000 caribou in 1996. A biological impossibilty. Please note that Anne Gunn is listed as co-author of the 1995 document. She was certainly aware of the survey, and how impossible her estimate of 200,000 caribou was. In fact, on the 1996 survey, she only counted 4,453 caribou.

It is also apparent, after recently discovering File Report #121, that the so-called Ahiak Herd calving ground survey in 1996, was, in fact, a muskox survey for the Queen Maud Gulf area. Please see the chart on page 6 of that document. This explains the elongated shape of the so-called Queen Maud Gulf Calving Ground of 1996. They were, actually, flying the coast, counting Muskoxen.


Igloolik
1
Taloyoak
9
Hall Beach
Gjoa Haven
26.6 ± 18
Pelly
Bay
12,503 ± 3,175
2
3
2,071 ± 790
7
8
Repulse Bay
31,556 ± 4,879
0
6,776 ± 2,166
6
4
5
1,481 ± 495
15,411 ± 4,584
Baker Lake
2,570 ±
1,125
Chesterfield Inlet

Example 3

IR Number 2.69
JRA Question: According to ENR, between the Ahiak herd and the Bathurst herd, about 250,000 caribou have died in the past year. How man carcasses of diseased animals has ENR documented?

ENR Response: The figure of 250,000 dead caribou did not originate from ENR. There are many mortalities in every caribou herd annually. It is not uncommon for 60-70% if cakves ti due befire reaching one year of age. Varying percentages of every herd's cows and bulls die every year.

If this mortality is distributed over a large landscape and over multiple seasons, hunters and predators like wolves will consume much of the animals they kill, and scavengers will quickly dispose of the rest.

There are known cases of localized winter die-offs where large numbers of caribou died over a short time so that predators and scavengers were unable to keep up with the carcasses. Outside of these events, carcasses are usually disposed of within a few days by predators and scavengers.

JRA comments: This is a classic ENR non-answer. In paragraph 3, ENR asserts there have been **"localized winter die-offs where large numbers of caribou died over a short time."**

How many caribou died, when, where, and what did the autopsies show? Since my question said "in the past year", I assume these multiple events alluded to were this past winter. When and where did these events happen?

ENR asserts that the 250,000 dead caribou in the past year is not their number. It most certainly is there number. Here is the simple math.

In 2008, ENR told the outfitters the Ahiak herd was steady or increasing from the 1996 estimate of 200,000. Since small increases are hard to see, but keeping it conservative, let's say the number was up 10%, or 220,000 caribou.

In 2009, ENR says the Ahiak herd is down 60% from the 1996 estimate, or down to 80,000 caribou.

Calf Survival for 2009 was 50 calves per 100 cows. If the bull to cow ratio was 50/100, that means 73,362 calves reached adulthood. Since the overall population went from 220,000 to 80,000, then 140,000 plus 73,362 died, or a total of 213,362 caribou died between 2008 and 2009 in the Ahiak herd.

Similar math for the Bathurst herd produces a total adult mortality of 35,735 adult caribou.

213,362 Ahiak caribou plus 35,735 Bathurst caribou equals 249,097, which I rounded off to "about 250,000 caribou."

According to ENR, over hunting is the problem, despite its drop from about 20,000 in 1996 (1996 Bathurst Caribou Management Plan) to about 7000 today. The question is, what killed the other 242,097 adult caribou in the past 12 months?

Example #4.

IR Number 2.69
JRA Question: If 250,000 caribou are dying a year, this is about 4800 dying per week, or nearly 700 per day., every day. Does ENR have personnel on the ground, following the caribou, waiting for them to die, so that they can be autopsied?

ENR Response: As noted in the previous response, the figure of 250,000 dead caribou does not originate from ENR. Every barren-ground caribou herd ENR studies has annual mortilities of cows, bulls, and calves.

The estimated number of breeding cows in the Bathurst herd in 1996 was 210,000, and the estimated mortality rate at that time was 14%. This would mean that about 29,400 cows died that year.

JRA comments: Mortality rate, along with the creation of the Ahiak herd, is one of the key issues in this wildlife debate. ENR can't seem to make up its mind exactly what the mortaility rate of the Bathurst herd actually is. It states above that, in 1996, it was 14%. Below, from the 1996 Bathurst Caribou Management Plan, is the mortality rate from 1996:

"Natural Mortality
Estimates annual mortality require several years of data from a large sample of radio-collared animals. Such data do not exist for the Bathurst herd. However, recent data from studies on barren-ground caribou in Alaska (whidch like the Bathurst, are subject to both wolf predation and human harvbest), indicate that natural mortality was 8% for adult females and 16% for adult males, for an overall mean of 11% for the entire herd. "

Exacty where the 14% comes from is unclear. In 2005, Dr. Anne Gunn, in Manuscript Report #163, decided the Bathurst cow mortality rate was 21% per year, every year since 1986, based on mortality of collared cows. The average number of collars she had on the Bathurst herd was 10.4, so the sample size was extremely small. (The government has refused the outiftters access to the document).

Now the government is claiming adult mortality rates of 32-33% for the past three years. The herd is dropping at a rate of 37% a year, so the 32-33 % a year is clearly wrong. Counting recruitment, we are losing about 50% of our adult cows a year. These are absolutely unheard of numbers, and the age data and other information does not support these claims.

If half the caribou are dying every year, the vast majority are only living two years. Most caribou cows do not become pregnant until their third year (Ray Case, 1996 Bathurst Caribou Management Plan.)

The data, presented in the Technical Report, regarding age structure of the caribou and pregnancy rates, does not support a 50% annual adult mortality rate. If caribou cows were only living to two years of age, the pregnancy rate would be near zero, not the 91% rate being reported.

Example #5.

ENRs mathematical calculations are simply incorrect in many instances. Whether this is deliberate or the result of incompetance is not for me to say. However, they have an obligation to the WRRB to do mathematical calculations correctly, which they have not.

Example. Page 36 of the Intervener Questions states, in ENRs response:

“As described in the Bathurst technical report, the estimated cow survival rate from 2006 to 2009 has been 67% -68%. This means the mortality rate has been 32-33%. This math is clearly incorrect, as the Bathurst Herd has dropped 37% for the past three years, and that figure includes recruitment.

Here is the Math: 128,000 caribou in 2006 declines by 37% the first year.
128,000 times .63 (1-.37) equals 80,640 caribou in 2007.
In 2007 it drops another 37%, or 80,640 times .63, or 50,803 in 2008.
From 2008 to 2009, it drops another 37%, or 50,803 times .63 equals
32,000 caribou in 2009.

This is simple math.

The above figures reflect the drop in population from 2006 to 2009, at a rate of 37% a year, for the total population. However, it does not account for the recruitment into the herd, which averaged 45 calves per 100 cows for three years.

If we use ENR’s bull to cow ratio of 35 bulls per 100 cows, then in 2006 there were
94,720 cows in the herd, and 33,280 bulls.
In 2007, the herd was down to 80,640 total caribou, 59674 of which were cows, with 20,966 bulls.
The 59,674 cows, x.45 calf survival, adds another 26,853 adults to the herd.
The number of caribou that died equals 128,000 plus recruitment of 26,853 equals 154853. The herd total declined to 80,640, which means 154,853 minus 80640 equals 74,213 adult caribou died between 2006 and 2007.

That is an adult mortality rate of 48% and an adult survival rate of 52%.

There has never been a recorded mortality rate in a major caribou herd anywhere in the world of this magnitude, not even close.

There is either something catastrophically wrong with the Bathurst Caribou Herd (which ENR can’t identify), or, the creation of the Ahiak herd was an error, and the Bathurst herd is simply returning to its traditional Bathurst Calving Ground, east of the Bathurst Inlet.

Conclusions

The Department of Environment and Natural Resources caribou numbers and statements defy all standards of reasonableness, accuracy, and common sense.

1. On Page 3 of the Technical Report, it states: "High pregnancy rates, good body condition in Bathurst cows 2007-2009, and higher spring calf:cow ratios than in the early 2000s suggest that environmental conditions for Bathurst caribou in 2007-2009 were improved over the early 2000s.

And yet, in those three years, with excellent everything, the Bathurst herd has declined 37% a year, or 75% in just three years. That makes zero sense.

2. Caribou do not just fall over dead. Mammals become ill, or malnourished, and then, eventually, die. If, as demonstrated, nearly 250,000 caribou have died between the Ahiak and Bathurst herds in just the past year, where are, not just the dead, but the dying, caribou?

3. If, in 1996 there were four acknowledged migratory caribou herds in the Northwest Territories, and today, we have eight such herds, how can one reasonably compare these herds, named the same, but with different calving ground definitions?

4. As we have seen, 250,000 adult caribou have perished in the NWT in the past year, not including the Bluenose East mortality, if the WRRB accepts ENR's numbers. Hunting has been responsible for about 7,000 of that mortality. That leaves 243,000 dead caribou, for no discernible reason, according to ENR, and yet they, clearly, blame over-hunting.

5. The outfitters shot 223 caribou last season, all bulls. The same outfitters shot 13 wolves. Those wolves would have eaten 390 520 caribou, many of them cows, in the next year. That is a overall gain for the caribou, not a net loss. Most of the meat from the 223 caribou was donated to Tlicho elders. Is destroying the outfitting industry going to fix this caribou problem?

6. In the late 1940s, biologist Frank Banfield determined the First Nations of the NWT were harvesting about 100,000 caribou annually. In 1996, Ray Case and Mark Williams determined the Bathurst herd had a harvest level of about 20,000. Today this harvest has dropped to about 7,000.

If a caribou problem exists, (and I don't believe it does), the problem is clearly not overhunting.

7. The gist of the Alberta Research Council Report is that, until ENR gets better data, that the caribou should be managed conservatively. This is already being done. Now, ENR must acquire the proper data, with proper numbers of collars, proper, simultaneous surveys, proper sample sizes, and management of these barrenground caribou as meta-populations.

As pointed out in the enclosed Powerpoint Presentations, the "science" of the ENR department is driven by the classic environmentalist agendas of "no-hunting" and "no-development."

The WRRB is an institution of public government and must act in the public interest
Is it in the public interest to end hunting in the Northwest Territories, for the most numerous species in all of Canada?