

September 22, 2017

Hon. Catherine McKenna
Minister of Environment and Climate Change
House of Commons
Parliament Buildings
Ottawa ON K1A 0H6

Hon. James Carr
Minister of Natural Resources
House of Commons
Parliament Buildings
Ottawa ON K1A 0H6

Re: Response from scientists to claims made by the Forest Products Association of Canada regarding the scientific underpinnings of the federal Boreal Caribou Recovery Strategy

Dear Ministers McKenna and Carr:

We the undersigned are scientists and advisers to the *Scientific Assessment to Inform the Identification of Critical Habitat for Woodland Caribou, Boreal Population, in Canada* (2011), the earlier *Scientific Review for the Identification of Critical Habitat for Woodland Caribou, Boreal Population* (2008), and/or the current *Boreal Caribou Enhanced Analysis Project*. The production of those documents was led by Environment and Climate Change Canada (ECCC)¹, but represents the collaborative efforts of many scientists from the provincial and federal governments as well as academic and non-governmental institutions. These documents provide a strong scientific foundation for the *Recovery Strategy for the Woodland Caribou, Boreal Population, in Canada* (2012) and inform its ongoing implementation, particularly the effective protection of boreal caribou critical habitat.

Our collective experience places us in a unique position to comment on the public claims that have been made by the Forest Products Association of Canada (FPAC) over the past month² regarding the veracity of the science underpinning the federal Recovery Strategy and the corresponding need to slow down and adjust the current process to “get it right”.

Few Canadian species have received as much research and regulatory attention as caribou. For an animal that requires large areas and that has a demonstrated vulnerability to human intrusions, it is a major challenge to fulfill resource development aspirations and to keep populations from declining and disappearing. It is alarming that so many boreal caribou populations are in trouble across Canada and crucial that we get on with implementing long overdue recovery plans for this Threatened species.

¹ Or its predecessor (< 2015), Environment Canada.

² “Federal government fails to see forest for the trees” – Hill Times, Aug. 21

<http://www.hilltimes.com/2017/08/21/federal-government-fails-see-forest-trees-caribou-recovery/116612>;

Caribou Facts website <http://www.cariboufacts.ca/>

To assist ECCC with the important task of leading the implementation of the federal Recovery Strategy, as well as provinces and territories that are at the front lines for management, we provide points of response to eight general claims made by FPAC.

1. The federal Recovery Strategy is being implemented too quickly.

Our response:

- The federal Recovery Strategy was published 5 years ago, following significant delays. As we write this letter, not a single range plan has been finalized in Canada.
- The process for recovery has already been subject to considerable delay. Boreal caribou was among those wildlife species legally listed when SARA came into force in 2003, having been assessed as threatened by COSEWIC in 2000. Signs of trouble were present much earlier in jurisdictions experiencing high development pressures. Four years after SARA was promulgated, Environment Canada convened a critical habitat science process that produced two reports (mentioned above; in 2008 and 2011); the second more detailed analysis (hereafter, Scientific Assessment) substantiated the conclusions drawn by the first report. We are now 17 years past the time when the problem was first identified by COSEWIC and 14 years past formal recognition under SARA.
- Much experience and empirical evidence demonstrates that delay results in a lower likelihood of recovery, typically at a greater monetary cost.
- Of 51 populations of boreal caribou recognised in the federal Recovery Strategy, 37 were identified as not self-sustaining (declining). It is crucial that government get on with implementing long overdue recovery plans for this threatened species.

2. There is considerable uncertainty in the science guiding recovery, it is incomplete, and there is recent research and experience that is not being taken into consideration, particularly as led by forestry and other industry.

Our response re. uncertainty:

- The reasons for the decline of boreal caribou are complex, yet despite that complexity and the broad geographic range of the species, scientific research has yielded clear and consistent results across the country.
- The accumulated evidence from several decades of caribou research has revealed that increases in habitat disturbance result in a greater likelihood of population decline and location extinction (extirpation) of caribou. The costs and difficulties of recovery increase as populations decline.
- There are no research results that refute the scientific foundation of the recovery strategy or point to an alternative pathway from managing disturbance levels within ranges as the best insurance against population decline and extirpation. On the contrary – there is high agreement among studies on the effects of disturbance on caribou.

- Sustainability of local populations is expressed in the Recovery Strategy as a probability, an explicit recognition of the uncertainty in predicting the future outcome for any one locale. Regardless, there is much less uncertainty in the outcome for caribou in ranges with high disturbance levels.

Our response re industry research:

- Industry has been an important research partner and has co-funded research that has contributed to the backbone of what we understand about boreal caribou.
- At the moment, industry-sponsored research is a key leader in informing our understanding of how to achieve habitat restoration following land clearing – a complex topic that was ignored for decades but is central to achieving recovery, and could also guide more sustainable resource development.
- The current situation faced by boreal caribou is substantially a legacy of past management practices within caribou ranges that did not adequately consider or address the needs of caribou.

3. The science in the Recovery Strategy is out of date.

Our response:

- As noted above, the science underlying the Recovery Strategy has been re-examined on a number of occasions. Furthermore, the Recovery Strategy is supported by >20 years of studies that have considered most aspects of the ecology, distribution and population dynamics of boreal caribou. This is one of the most well-studied species in Canada. Concerted efforts have been made to address those portions of the range, most notably Québec and northern Saskatchewan, that were underrepresented by past scientific work.
- ECCC is leading a new study (the Boreal Caribou Enhanced Analysis Project) to further explore the relationship between population decline and specific elements of range disturbance. That study includes all up-to-date data for boreal caribou across Canada.
- The 2011 Scientific Assessment and the Recovery Strategy encourage ongoing research that is conducted and applied in a rigorous framework of adaptive management. This provides an explicit mechanism for engagement and for incorporating new knowledge as it becomes available.

4. The 65/35 non-disturbance/disturbance threshold is a rigid threshold, which provinces are mandating companies to meet, with little/no flexibility.

Our response:

- The 65/35 threshold in the Recovery Strategy is a management threshold. The relationship between disturbance and recruitment that serves as the basis of the critical habitat framework in the Recovery Strategy is not a strict biological threshold. While strongly negative (i.e. more disturbance = greater likelihood of population decline), the relationship does have some variability, particularly in relatively less disturbed ranges. This “variation in

habitat and population conditions between boreal caribou local populations across their distribution” is acknowledged in section 7.1.1 of the Recovery Strategy.

- 65% undisturbed habitat equates to a 40% probability of local population extirpation (or 60% probability of persistence), on average, within caribou ranges. This management threshold reflects a policy choice by ECCC, and could be viewed as liberal relative to enabling disturbance on caribou ranges.
- The Recovery Strategy incorporates flexibility, explicitly recognizing that the management threshold may go up or down based on the specific or evolving understanding of the ecology and habitat requirements of an individual population. Adjustments to that management threshold must, however, be scientifically defensible. Hence, provinces have ample opportunity to tailor recovery actions to local range conditions if information is available to support this.
- No range plans in Canada have been finalized 5 years after the issuance of the Recovery Strategy, and in some cases many development activities have proceeded in highly disturbed ranges, which seems counter to the claim about provincial rigidity and pressure on industry to conform to a hard 65/35 threshold.

5. Forest management planning across the country is already taking care of caribou.

Our response:

- With respect to forest management, sustainability means ensuring the survival of all species and maintenance of other forest values, as well as providing timber for present and future generations. While the industry may be doing well on the latter, the former has clearly become an issue for caribou. Further, in some places it is the cumulative disturbance (i.e., footprint of all industrial activity) that is the issue, not forestry alone.
- In some areas, logging and other developments in the boreal forest have proceeded too quickly to ensure sustainability, greatly reducing the probability of persistence of boreal caribou on these landscapes.
- Forest management planning for caribou tends to focus on one aspect of habitat for caribou: the amount and arrangement of forest stands of various types and ages. Typically, forest planning does not adequately consider how disturbance related to old, existing or new roads influences caribou sustainability, nor does it recognise cumulative habitat change incurred in forests as a result of other forms of human or natural disturbances coincidental with or stimulated by forest management activities.
- It is unclear if it is a requirement for forest management planning to address the habitat needs of caribou populations in all jurisdictions. Some provinces/territories (e.g., BC, SK, AB, and YT) have no species-at-risk legislation, potentially limiting legislative or planning requirements to maintain habitat for at risk species, such as boreal caribou.

6. Boreal caribou populations in Ontario and Alberta are already recovering.

Our response:

- All populations of boreal caribou in Alberta are being monitored closely on an annual basis and there are no signs of recovery. In fact, data suggest that virtually all populations in that province continue to demonstrate ongoing population declines. Sustained investment in annual wolf population reduction in and adjacent to the Little Smoky caribou range has allowed this population to persist in low numbers, but not increase.
- In Ontario, no populations have received monitoring attention for 4-6 years, so there are no data to support FPAC's conclusion of recovery.
- In Ontario, there are some limited recent data showing that caribou use 40-year old harvested areas that have regenerated. Indeed, the Scientific Assessment and Recovery Strategy recognized that avoidance of disturbed areas may decrease after ca. 40 years. In Ontario, the renewed use of harvested areas may be attributable to the broader landscape conditions that allowed some caribou to persist in habitat refugia following harvest activities. Overall disturbance remains high in these ranges, and there is no evidence of population recovery.

7. The disturbance-recruitment relationship is challenged by evidence that caribou are declining in places where there is no industrial disturbance.

Our response:

- Cumulative disturbance within Jasper and Banff National Parks (the examples provided by FPAC, which we note are from the Central Mountain Caribou designatable unit, rather than representing boreal caribou) is still high at a range scale, with much disturbance outside the park boundaries and certainly not pristine within.
- In association with human-caused habitat loss and disturbance in the parks, both the Jasper and Banff populations lost their ability to access winter range in the foothills beyond the park boundaries. Extirpation of these populations from those wintering areas and confining animals to mountainous areas (i.e., sub-optimal winter range) year-around has undoubtedly had negative effects.
- The parks are not large enough (Banff 6,600 km²; Jasper 10,900 km²) to sustain caribou in isolation. It is the sum of disturbances in and out of the parks that have contributed to the declines of the caribou populations in these areas.
- As for "northern parts of Quebec and Labrador, where there is little or no industrial activity", we are aware of no boreal caribou populations being monitored in northern Québec that fit this description. Boreal caribou populations in Labrador are currently challenged primarily by human harvest levels, as identified in the Recovery Strategy.

8. The role of climate change as a cause of caribou decline is not considered in the science underpinning the recovery strategy and may be as or more consequential than habitat disturbance.

Our response:

- The Scientific Assessment that yielded the disturbance-recruitment relationship does not claim to explain all factors that have contributed to caribou decline. However, it is an empirically-grounded relationship with a single explanatory variable for population health (calf recruitment) exhibiting an unusually high degree of strength, considering the complexity of this ecological system.
- Climate change represents a new threat for caribou. However, this should not detract focus from past and current rapid and wide-spread industrial development across the ranges of many populations of boreal caribou.
- There is little evidence to suggest that climate change brought caribou populations to their current threatened condition, nor does climate change explain the rapid rates of decline and range recession that are continuing today in many locations.
- The vulnerability of caribou to climate change has likely been enhanced because many populations are now small and/or declining as a result of the loss and fragmentation of the older forests required by caribou.
- We are aware of current research focused on better understanding the potential future implications of climate change for boreal caribou. This includes climate-related changes in vegetation, wildfire, and other species, including predators and pathogens that may influence the survival of caribou. This is an area of need that was explicitly identified by ECCC in the recent Recovery Action Plan and is yet another example of continuous efforts to increase our understanding of boreal caribou conservation and recovery.

Finally, we observe that many FPAC statements link concerns about the scientific foundation of the Recovery Strategy with concerns about socio-economics, thereby conflating these two interests. By law, the Recovery Strategy applies the best available science to the recovery of caribou, it is not designed to evaluate or weigh the costs of recovery. A broader socioeconomic impact assessment is required to weigh trade-offs, bearing in mind our prominent national and international commitments to biodiversity conservation and sustainable forest management.

In closing, we appreciate the significant challenge of conserving caribou. Implementation of the Recovery Strategy is a key step in this process, and we stand behind the science that informed this document. Further, we highlight that provisions already exist in the Recovery Strategy to incorporate new knowledge as it becomes available. As scientists, we recognize the critical need for continued learning to support recovery, but this does not diminish the urgent need to develop and implement plans now based on the best available knowledge.

Please consider this letter an expression of our willingness to address any additional questions or provide other forms of scientific support for implementation of the Recovery Strategy.

Sincerely yours,

(in alphabetical order of signatories)

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