

# Valhalla Wilderness Society

---

Box 329, New Denver, British Columbia, Canada V0G 1S0  
Phone: (250) 358-2333, E-mail: [vws@vws.org](mailto:vws@vws.org), [www.vws.org](http://www.vws.org)

May 6, 2019

## **SUBMISSION TO THE GOVERNMENTS OF CANADA AND BC ON THE BILATERAL CONSERVATION AGREEMENT FOR SOUTHERN MOUNTAIN CARIBOU**

### **SUMMARY**

In December, 2017 the Valhalla Wilderness Society (VWS) was one of four parties in the Interior Wetbelt that submitted petitions based on Section 80 of the *Species at Risk Act* to the Honourable Catherine McKenna, Minister of Environment and Climate Change Canada (ECCC), asking for an emergency order to protect Mountain Caribou and their habitat. All four petitions related to the Southern Group of Southern Mountain Caribou (COSEWIC's DU 9, colloquially known as the "Deep-snow Caribou").

In May 2018 the federal Minister responded to the petitions by announcing that Southern Mountain Caribou are facing "imminent threat to recovery". So far there has been no emergency order. Instead, ECCC has negotiated two government-to-government draft agreements for public review:

1. Partnership Agreement between Canada, BC and the West Moberly and Sauteau First Nations — This concerns only the Central Group of Mountain Caribou in the South Peace Region.
2. Canada-BC Conservation Agreement for Southern Mountain Caribou — also called the "Section 11 Agreement" — covers the Northern, Central (South Peace) and Southern (Interior Wetbelt) Groups of Mountain Caribou.

### **VWS supports the Partnership Agreement with the West Moberly and Sauteau First Nations**

If the West Moberly and Sauteau First Nations approve the draft Partnership Agreement, VWS supports it. The Klinse-za herd in this area has perhaps the most devastated habitat of any herd in BC, due to oil and gas development. To date the South Peace region has had no credible plan or significant habitat protection. The draft Partnership Agreement appears to us to be strong, and the co-management prospect well-warranted. Hereafter our submission reviews the Section 11 Agreement in the context of the Section 80 petitions and the ECCC's Imminent Threat Assessment.

### **VWS supports a Section 11 Agreement, but strongly opposes the current draft.**

The Section 80 petitions provided accurate scientific information showing that the Southern Group of Mountain Caribou are under imminent threat to their survival. They said it was an emergency that required immediate action on the ground to protect the habitat — something, it was clear, that the BC government was not going to do. Environment Canada's Imminent Threat Assessment confirmed that immediate action was necessary, and ECCC disseminated this news in the press. Yet the two governments spent one whole year negotiating a compromise "Section 11 Agreement", in which BC proposes to spend another two years of "herd planning" to make "recommendations" for new habitat protection for the Southern Group of caribou. That's another two years of logging the habitat after these animals were shown to be on the brink of being unrecoverable. The federal threat assessment states that the percent of the herds' habitat that has been disturbed determines whether they can be recovered to a self-sustaining level or not. Yet the two governments have ignored the pleas of eleven environmental groups to impose a moratorium on habitat destruction while further talks continue. Ten biol-

ogists — most of them BC government caribou advisors — have actually dismissed habitat protection as a solution and advised instead “intensified” killing of predators and competitive prey.

Some aspects of the Preamble, Purpose, Goals, Principles and Commitments of the S11 Agreement are commendable: *immediate* action to protect habitat, use of the best available information, inventory of habitat destruction for each herd, achieving self-sustaining populations, and a science panel with provincial, federal and independent biologists. It is a positive step to have Environment Canada working with BC, and the panel that ran the public meetings we attended was generally very good.

However, the details of the draft S11 Agreement contradict these motherhood statements. Over-riding COSEWIC’s “Endangered” assessment for the Central and Southern Groups is not the “best available information”. Why is there no commitment to increase protection of the Southern Group from winter recreation, when the federal Imminent Threat Assessment shows the critical habitat of some herds to be riddled with overlapping recreational intrusions? And if there are real commitments, why is the Agreement not legally binding, why do the parties not commit to fund the conservation measures, and leave them at the mercy of other “priorities”?

Oddly, the Southern Group (“Deep-snow Caribou”) has received short shrift in federal-provincial interactions and in the draft Agreement. Petitioners were informed that any considerations for the Southern Group would be deferred until after affairs for the Central Group are settled. In Annex 2, the draft Agreement provides definitive commitment to increase habitat protection for the Central Group. However, for the Southern Group there is only one sentence in which the planned actions are “conduct habitat analysis” and “make recommendations for additional habitat protection” for five LPUs, but it omits the Central Kootenay LPU (mostly the Central Selkirk herd). Annex 2 provides for a review of winter recreation in the habitat of the Central Group, whereas it doesn’t for the Southern Group. Yet all four Section 80 petitions originated in the Interior Wetbelt and concerned the Southern Group, and one of them focused specifically on the Central Selkirk herd.

In all due respect to the efforts of the two governments to cooperate, given this draft, we would rather that the Minister send a recommendation to Cabinet to Order the province to protect significant additional habitat for the Southern Group, as well as expanded closures to motorized recreation.

## DETAILS AND KEY ISSUES

### **VWS strongly opposes the first clause of the draft Section 11 Agreement, which agrees that the status of Southern and Central Groups of Mountain Caribou will be “Threatened”.**

The designated authority for assessing the conservation status of species, for the purposes of the *Species at Risk Act*, is COSEWIC, which does so based on science. These two groups of caribou have been assessed as “Endangered” by COSEWIC, the BC Conservation Data Centre and the IUCN. (1)(2) Circumventing COSEWIC’s assessment by political agreement is highly irregular, and calls into question why the two governments included the far more numerous Northern Group of Southern Mountain Caribou in the first place.

1. In 2011 COSEWIC assessed the Mountain Caribou as belonging to three distinctly different “designatable units” (DUs): the Northern Group (DU 7), the Central Group of the South Peace region (DU 8); and the “Southern Group” (DU 9). (2) In 2014 the federal recovery plan accepted this division, calling three groups “Southern Mountain Caribou” (SMC) (3). To avoid confusion between “Southern Group” and “Southern Mountain Caribou”, and to highlight the unique and marked distinctions of the Southern Group, they are now commonly called “Deep-snow Caribou”.
2. In 2014 COSEWIC assessed the Central and Southern Groups as “Endangered”, “genetically distinct” and “irreplaceable”. (4) The Northern Group was assessed as being of “Special Concern”. At that time the Central Group was estimated to have 469 mature individuals; the Southern Group 1,356; and the Northern Group

43,000-48,000, dwarfing the more southerly DUs. Although its range partly overlaps the range designated for Southern Mountain Caribou, the Northern Group also extends into the Yukon and Northwest Territories.

3. The four Section 80 petitions all originated in the Interior Wetbelt, and concerned the Southern Group. The VWS petition and others cited COSEWIC's "Endangered" status. At that time an estimated 1,240-1,270 Southern Group caribou remained. The petitioners provided scientific evidence of an imminent threat to survival and pleaded for an emergency order to force BC to protect more habitat.
4. The Section 80 petitions generated an Imminent Threat Assessment by the ECCC. But it enlarged the total number of caribou by adding 470 members of the Central Group, and 1,905 members of the Northern Group that overlap the range of the Southern Mountain Caribou.
5. Adding the part of the Northern Group that overlapped the SMC range, the Imminent Threat Assessment arrived at a sum of 3,800 caribou, creating a false impression of the status of the Central and Southern Groups. Although the 2014 federal recovery plan for Southern Mountain Caribou had included all three groups, COSEWIC's latest Assessment Report was produced concurrently, and there had been no time for the ECCC to process the "Endangered" status. But by 2019 the COSEWIC assessment is five years old. Under the SARA, the ECCC should have accepted or formally contested the COSEWIC designations several years ago. Instead, to this date the Central and Southern Groups are listed as "no status".
6. The 3,800 total was part of the basis for a decision that the caribou are under threat to recovery, but not to their survival. This decision also took into account the number of LPUs with populations over 100. Out of 13, only five belong to the Southern Group.
7. Lumping the populations of the three groups together infers that they are all the same, and if southern herds are lost, there are plenty more up north. It is true that all caribou are the same species, and this has been a common industry argument against protecting the more southern herds. But saving species from extinction requires preventing the loss of varied gene pools, and preventing extirpation of peripheral subpopulations, which causes range shrinkage, both of which are a threat to the whole species. But in addition, *it is not true* that there are more Deep-snow Caribou up north. These caribou exist nowhere else in the world but in the Interior Wetbelt of BC (with a tiny extension into Alberta). No other caribou in the world are adapted to spending winters at high elevation in deep snow. Because of this, according to COSEWIC, DU 9 cannot be rescued by translocation or immigration of caribou from other DUs, and their loss would result in "extreme northward contraction of the species range."
8. When the ECCC announced an "imminent threat to recovery", four of the herds listed as being "of particular concern" had already been extirpated. Two of them were lost while we were waiting for a reply to our Section 80 petitions. How can that justify designating them as "Threatened"?

### **Imminent threat to "recovery" nevertheless requires immediate habitat protection**

1. The ECCC's "imminent threat to recovery" announcement was accompanied by a "Summary of Imminent Threat Analysis". It said that the threats are "imminent in the sense that *immediate* intervention is required to allow for eventual recovery." (Emphasis added) It also stated that significant habitat protection has been lacking:

"While population management [i.e., predator control and maternity pens] is having a positive *short-term* effect in some local population units, ***such measures are not currently complemented by the significant habitat protection or restoration measures necessary to improve the likelihood of recovery in the long term.***" (Emphases added)

The summary was a short version of the ECCC's "Imminent Threat Assessment" report, which was more explicit about the short term nature of predator control, and the need to balance it with significant habitat protection to prevent further erosion of habitat critical to survival of the herds:

"In the majority of cases where short-term trends appear to be stabilizing or increasing, the trend is recent and attributed to intensive predator management, sometimes combined with maternity pens and management of primary prey. ***In the past, the cessation of such actions in the absence of appropriate ecological conditions has resulted in a continuation of caribou declines.***" (Pg 9, Emphasis added.)

"The immediate interventions required include habitat management measures (i.e. ***no further net increase in disturbance of critical habitat and restoration of disturbed habitat***, such that cumulative effects are reversed) and population management measures (e.g. predator/alternate prey management, maternity penning)". (Pg 15, Emphasis added)

2. The basis for the urgency of the need for habitat protection: Many herds have already lost so much habitat that they are already close to or past the point where they can be recovered to a self-sustaining population. They will be dependent upon taxpayer-funded, organized predator slaughter for the foreseeable future. The federal Imminent Threat Assessment cites research showing the link between the degree of habitat disturbance and the decline of caribou herds:

"Habitat alteration is known to reduce survival of adult females as a result of apparent competition where predators are sustained by prey other than caribou, leading to a greater likelihood of population extirpation (Wittmer et al, 2007) ... Increasing/new habitat alteration, which further influences predator-prey dynamics and/or facilitates predator access, will likely increase predation risks." Pp. 4, 6

Previous reports by ECCC have stated that the probability of recovering a species to self-sustaining status is heavily dependent on the percent of habitat disturbance. According to *Scientific Assessment for Boreal Caribou* (2011), nearly 70% of calf survival to adulthood across twenty-four study areas was explained by the percent of total disturbance, meaning fires and human disturbance, of which most disturbance was caused by humans. (5)

The sense of time urgency for increased habitat protection was communicated to the media by Environment Canada, leaving no doubt as to interpretation of the Imminent Threat Assessment:

" 'Immediate intervention is required to allow for eventual recovery', says a department document ... Emergency protection orders allow Ottawa to control activity on critical habitat that is normally governed by the provinces. That would include energy development, forestry and agriculture ... 'There is a high degree of urgency. There is, at most, a few months to do the work,' said Wilkinson [parliamentary secretary to Environment Minister McKenna]."

Canadian Press, May 4, 2018 (6)

"Friday's release acknowledges Alberta and B.C. are taking some steps to help the herds, but concludes they aren't doing enough. 'Such measures are not currently complemented by the significant habitat protection or restoration measures necessary to improve the likelihood of recovery in the long term.'"

National Post, May 4, 2018 (7)

3. The real issue is the logging industry's timber supply, the allowable annual cut, and whether a wealthy country like Canada should allow a province to log so unsustainably as to wipe out species. The spring and early

winter habitat for the Deep-snow Caribou is in the Timber Harvesting Land Base (THLB). The federal Imminent Threat Assessment recognizes the problem on page 6:

“Outside of areas with legislative restrictions on forest harvesting, a variety of forestry activities are approved, ongoing or pending approval in various locations within the timber harvesting land base, which include Southern Mountain Caribou critical habitat.”

At public meetings on the Section 11 Agreement, the government panel told the public several times that the 2007 Mountain Caribou Recovery Plan (MCRIP) has already protected 2.2 million hectares of habitat for the Deep-snow Caribou. VWS reminded the panel that the current decline of the Southern Group is because the MCRIP failed, and insufficient habitat protection was a big factor in that failure.

The plan was negotiated with logging companies and its terms of reference included *“no net loss”* to the logging industry and *no significant reduction of the Allowable Annual Cut*. To achieve this, most of the protection was placed at high elevation, in late winter habitat, where little logging takes place.

- Only 380,000 of the 2.2 million hectares were new protection; the rest was set up years previously, and consisted in great part of “Modified Harvest Zones”, some of which required only 30-40% of the forest to be left as mature.
- Only 76,904 ha of the new protection was critical habitat in the Timber Harvesting Land Base (THLB); that’s only 0.67% of the THLB and 20% of the new protection. Even forest outside the THLB was not allowed to impact the AAC.
- Slopes too steep for caribou, burned areas and clearcut areas unusable by caribou were included in the protected THLB.
- Forest was traded to logging companies to compensate for THLB that was set aside for caribou: old-growth management areas were declassified and visual management guidelines lifted. (8)

Telling the public that caribou can be saved without cutting back on logging and other resource extraction, and that killing predators is a magic key to this, is a biological fiction. *If BC isn’t willing to reduce its AAC, the whole Section 11 Agreement can be thrown away.* Preserving old-growth forest is not just for caribou. Unsustainable development is dooming society and future generations to increasing consequences. For instance, scientists say that saving old-growth forest is crucial to mitigating climate change.

## LOG-AND-SHOOT: PREDATOR CONTROL AS A SUBSTITUTE FOR HABITAT PROTECTION

VWS opposes broad-scale wolf killing as a standard practice of recovery for every herd. One of the reasons is that it fails to take into account other causes of caribou mortality.

VWS knows good wildlife biologists who support killing wolves to protect caribou — and others who do not. But discouraging habitat protection for an endangered species is not scientifically credible, and when wolf killing is promoted at the same time that the value of increased habitat protection is dismissed or denied, that suggests a political endeavor to use predator control as a substitute for habitat protection. The Section 11 Agreement is far too weak and non-specific to prevent this from continuing to happen in BC.

On March 11, 2019 — only three weeks before the beginning of public meetings for the Section 11 Agreement — a scientific journal published a paper by ten biologists, most of whom have been associated with the BC caribou recovery effort. They highlighted the urgency of the emergency situation, and called for intensified wolf culls and maternity pens. Although they stated that habitat protection would ultimately be needed, the ten authors also stated:

“[T]he classic solution of protecting remaining critical habitat will not save most caribou populations because of the time needed to recover old forests and the continental scale of dis-

turbance. In such cases, population management is needed until protection and recovery of habitat overcome the legacy of industrial development.” (Emphasis added) (10)

Our provincial Mountain Caribou advisors either weren’t in on, or else objected to, the draft Agreement stating that habitat protection was a key to recovery. They missed or didn’t agree with the Imminent Threat Assessment that immediate action should include habitat protection, or at least cessation of habitat disturbance activities.

This statement omits that the negative impacts of logging the habitat will have immediate effects on caribou, that these impacts are relentlessly spreading and can only be stopped by some form of protection. What’s more, The “remaining” critical habitat doesn’t need to be recovered, it is already intact. Protecting habitat is not proposed to immediately increase caribou numbers, it’s to prevent further decline past the point of feasible recovery, and of course the habitat will then be there for the future.

The research paper was not something confined to a scientific journal. On the same day that the journal article was published, articles on the study hit news outlets across Canada with headlines such as: “*Study Finds Ways To Reverse Caribou Decline*” (*Canadian Press*); “*It’s that black or white’: Wolves must die to save Canada’s caribou*” (*Calgary Herald, March 12, 2019*); “*Increase Wolf Culls, Pen Pregnant Cows To Save Endangered Species*” (*CBC, National Observer, Vancouver Sun, March 11, 2019*). These articles contained no disclaimer that habitat would be necessary someday.

When public meetings began (in a very inflammatory tone, in part sparked by misinformation spread by a BC government Liberal MLA) the comment from the journal article was reported in the *Vancouver Sun* (11):

“But recent research suggests that habitat protection is not likely to be all that effective in reversing the decline of caribou populations in the area. ‘The classic solution of protecting habitat will not save most caribou populations because of the time needed to recover old forests and the continental scale of disturbance, concluded a team of researchers headed by Robert Serrouya of the University of Alberta and including Dale Seip from the BC Environment Ministry.’” — Vaughn Palmer, *Vancouver Sun*, April 15

The authors’ various statements infer that, while habitat protection is needed, it can safely be deferred to some indeterminate time in the future when we “overcome the legacy of industrial development”. They omit that the government keeps signing permits to log caribou habitat, and large blocks of it can be destroyed for the purposes of caribou very quickly.

The effect of this on the public mind is to give the impression that predator control and habitat protection are interchangeable; that to recover caribou we have a choice of whether to kill wolves or protect habitat, and that killing wolves can offset the caribou decline caused by logging the habitat. The fact is that a strong coterie of BC caribou biologists has gone on record disputing the federal claim that immediate action on habitat protection is needed. Their journal article has flown widely in the environmental community, making it difficult for us to believe that the provincial government is committed to do what the federal Minister has said must be done.

## HABITAT PROTECTION AS WOLF CONTROL

VWS urges non-lethal wolf control by 1) expanding protection of intact, low-elevation, old-growth habitat 2) habitat recovery by obliteration of linear development in protected caribou habitat, and 3) removal of snowmobiling and heli-skiing from critical winter habitat.

1. Intact old-growth forest suppresses moose, deer and wolves because it has few foods for them. Reportedly it takes clearcuts 20 years to grow an abundance of foods for moose and deer, which bring wolves. But the spatial impacts of clearcuts and roads begin immediately. Johnson, et al., 2015 studied five herds (Moberly,

Burnt Pine, Quintette, Narraway, Bearhole–Redwillow) over 11 years and found that caribou are displaced from clearcuts by distances of 0.5 to 5.5 kilometers. Caribou also avoid linear corridors by distances from 0.5 to 13.5 kilometers. (13) The caribou become concentrated in smaller and smaller fragments of forest until predators know exactly where to find them.

2. At the Nakusp public meeting for the S. 11 Agreement, the government panel told the audience that the governments now recognize that some of the federally designated matrix habitat should be protected. This is encouraging and necessary, but VWS wishes to stress that our organization has never expected *all* matrix habitat to be protected. Some matrix habitat is in heavily fragmented areas that are unlikely to support caribou. The two governments' failure to come up with strategic identification of key matrix areas where increased protection would be effective lays the recovery efforts open to inflammatory accusations that all matrix habitat is about to be protected.

But on the other hand, the routine logging of all matrix habitat is scientifically indefensible. And how sincere is the intent to protect any of it? 1) Why isn't protecting some matrix mentioned in the Section 11 Agreement? 2) Why is current logging in matrix habitat allowed to foreclose opportunities to protect strategically important areas, as in the Trout Lake area in the range of the Central Selkirk herd?

Old-growth Interior Cedar-Hemlock (ICH) is critical spring and early-winter habitat, and it occurs at low and middle elevations. But by far most of this habitat type was relegated to the "matrix" category, which was explicitly not for protection, but for the purpose of creating a buffer zone between wolves and caribou. We have heard matrix habitat described as places where only enough logging would be allowed as to limit the population of moose and wolves. However, no limits have been set for the Southern Group, and the BC Ministry of Forests says simply that the matrix is for logging and shooting wolves.

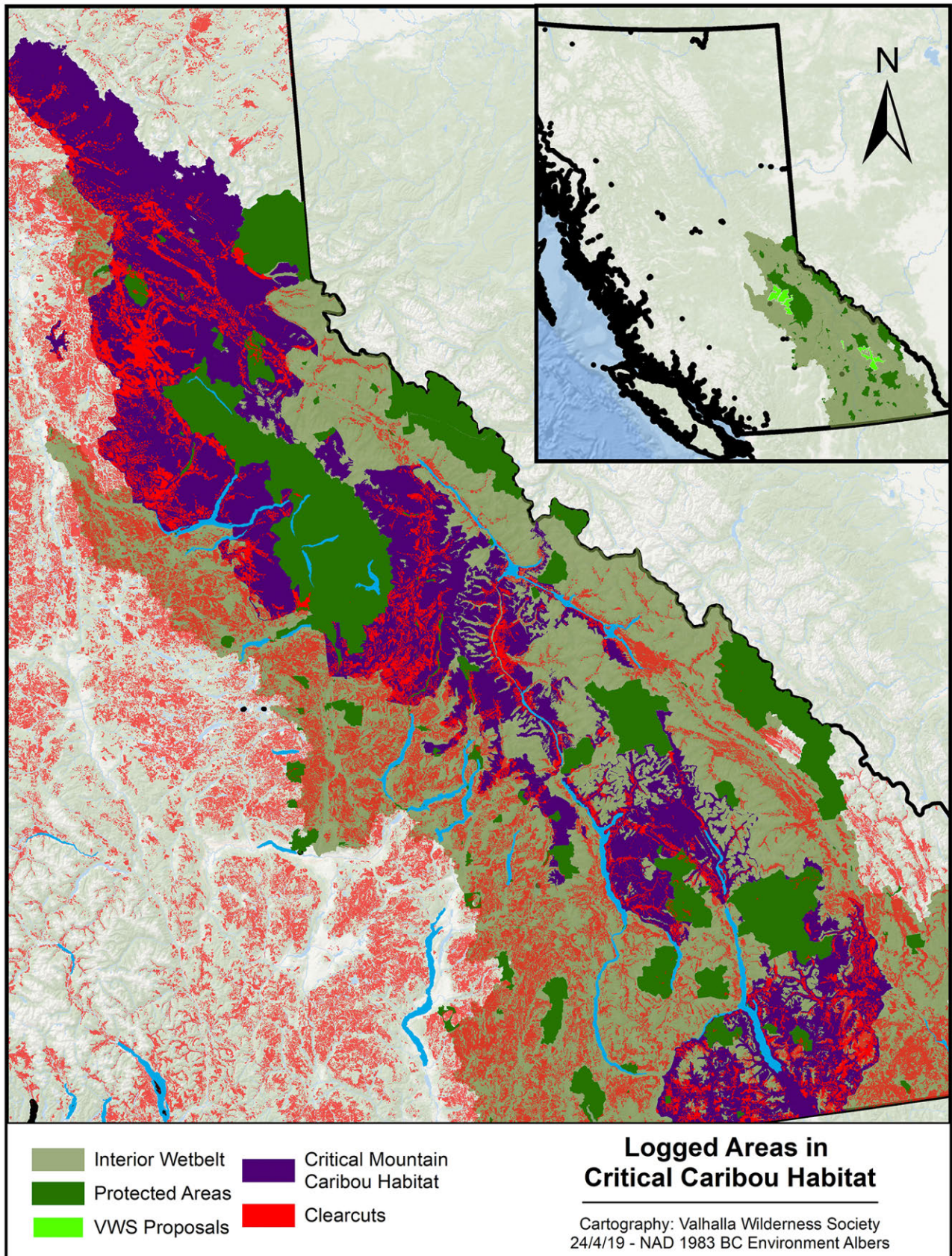
The idea that extending the clearcutting into the matrix, and building roads that will connect it to the core habitat, is "conservation" is not credible science. A new study has suggested that wolf density alone was not the cause of the decline of a herd of Boreal Caribou, and that a key factor was the availability of roads for more efficient hunting. (Johnson, 2014) (15).

It is no surprise that when Apps et al. (2013) analyzed the predation deaths of 207 collared Deep-snow Caribou, they found that "Wolf predation occurred primarily at low elevations at the broader scale and in association with roads at the finer scale." (16):

"The odds of caribou predation by wolves at level 1 [within sub-population boundaries] increased 47% for every 100-m drop in elevation, and 16% for every 10-point increase in the terrain complexity index. At level 2 [within home ranges], caribou were 5% more likely to be killed by wolves for every 1% increase in road density. The odds of caribou being killed by bears at level 1 increased 25% for every 1% increase in road density .... At level 2, caribou were 17% more likely to be killed by bears for every 100-m drop in elevation, and 27% more likely for every 10-point reduction in the terrain complexity index."

Because the pressure of predation by various species differs in various terrain complexities, the caribou need connectivity across a broad elevation range in order to achieve refuge from various predators. Matrix habitat is meaningless when it consigns intact, low- and mid-elevation old-growth ICH contiguous to caribou core areas for logging.





The purple areas combine federally-designated Critical and Critical Matrix Habitat.



3. The crucial need for expanded winter recreation closures — The case of the Deep-snow Caribou in winter differs from that of the more northerly herds, because caribou are more or less safe from predators in the deep snow at high elevations. Access by wolves is directly related to snow-packed trails and slopes created by machines and even skis and snowshoes.

Paquet et al., (2010) found that, while the Deep-snow Caribou wintered at high elevations, 81% of wolf movements were restricted to lower elevation during periods of snow, “with occasional forays to higher elevations on human-modified trails ... wolves used a network of ploughed roads, snowmobile trails, and ski trails to traverse upper elevation habitat with deep snow conditions, often crossing mountain passes that connected low elevation valleys ... Notably, all documented predation of caribou and sheep occurred along or near these trails. Human activities that improve access to these winter refugia appear to negate the anti-predator advantages conferred by these normally inaccessible areas.”(17)

Here is wolf control that can be had for simply expanding snowmobile closure zones, yet this subject is not mentioned in the draft S 11 Agreement.

## OBJECTIONS TO ANNEX 2

### Table 1. “Herd Planning”

1. Omission of the Central Selkirk herd from Phase 2 Herd Planning - Having dropped down to 25 animals, this herd belongs in a category cited in the Imminent Threat Assessment as highly unlikely to be recovered. We note, however, that the Klinse-za herd was down to 16 animals in 2013 when predator control and maternity penning began, and it has now nearly doubled and has a draft Partnership Agreement.

The Imminent Threat Assessment was accurate in stating that there is no clear evidence that wolf predation is the cause of the decline of the Central Selkirk herd. And it points out what we believe to be a chief factor in the decline: that the LPU has the highest level of winter recreation in the province. VWS has documented clearcuts going on in the habitat of the Central Selkirk herd this year, with caribou tracks nearby. And 9 cut-blocks are up for sale by BC Timber Sales, which refuses to abstain because the areas are federally listed as matrix habitat.

2. Planning Process\_ — Deciding where additional habitat planning could best be deployed is a simple matter of government conservation specialists studying maps to identify the remaining intact habitat and how the intact areas can receive expanded protection. Given the five years of caribou recovery process in 2003-2008, plus 10 years of follow-up research since then, the government’s caribou biologists likely already know exactly where these places are. Definitive proposals could then be presented at public meetings or planning tables for review.

Instead, the S11 Agreement would start up the huge machinery of an elaborate planning process with a scientific committee and multi-sector planning tables only 11 years after the previous such process. Parties that have a vested interest in the outcome are able to block protection of the caribou. Since January VWS has witnessed such interests whipping up concern in Nakusp, telling people the plans are being rushed, they will not be consulted, and Nakusp could lose its businesses. This resulted in demands to have people from every community, from the forest industry, commercial winter recreation, and even Mayors sitting at the planning tables, where interests alien to caribou habitat protection can prevent progress. In our experience, this will lead to enormous delay and obstruction, and be fatal to the process and to many Deep-snow Caribou.

## **Table 2 — Habitat Protection**

1. Best Management Practices — BMPs are of very little value when it is considered that:

“The habitat requirements of mountain caribou, as they are understood today, are incompatible with most current forest management practices ... Forests managed under any silvicultural system that eventually eliminates, or substantially reduces, the number of large, old, lichen-bearing trees will not provide winter habitat for caribou.”

Stevenson et al., “Mountain  
Caribou in Managed Forests,” 2nd Ed., Ministry of Forests 2001

2. A list of Southern Groups that will receive “analysis” and “recommendation” for future habitat protection omits the Central Kootenay LPU (of which the Central Selkirk herd is the only herd).
3. Acquire Next Creek land to protect SMC from further habitat disturbance — VWS field staff advise that Next Creek has been heavily clearcut. As well, it is in the range of the South Selkirk herd that was just declared functionally extirpated. According to the federal Imminent Threat Assessment, recovery of a functionally extirpated LPU “would likely require extraordinary measures, rendering recovery of that LPU highly unlikely or impossible.” *Why would the governments use taxpayer funds to buy private land that has been heavily clearcut, for caribou that were unable to survive there?*
4. “Opportunities for other land purchases” — any private land purchases for Mountain Caribou will be small. The impression we get from Table 2 is a strong blockage to committing public land to the protection of mountain caribou for the Southern Group.

## **Tables 3 and 4: Population Management**

1. Almost all caribou herds are declining across Canada. They shouldn’t be hunted except for aboriginal traditional use, and then only when the herds are large and not declining. A review of herds that are already hunted is certainly warranted. But such a review seems highly unrealistic for the Deep-snow Caribou (DSC). They face challenges in steep mountain terrain, deep snow, changing weather conditions and loss of lichen-bearing trees that caribou farther north do not face. Hunting is considered to have been a major factor in the early decline of the DSC. The first hunting closure was as early as 1916. (14) Since then, a vast amount of their habitat has been lost and hunting them is inconceivable.
2. Unrealistic demands to produce huntable numbers of caribou under conditions of extensive habitat destruction can only mean massive, ongoing slaughter of large carnivores, which has been proven to be a disaster to biodiversity. Even with the implementation of a massive predator kill program, it is unlikely that a fragmented habitat will ever sustain a huntable population of caribou.

A recent study (Johnson, et al., 2019) calculated that long-term lethal wolf control for the Chinchaga Boreal Caribou would cost the taxpayers \$25,665/caribou. (15) That’s expensive meat. Johnson, et al., conclude, after a modeling study that compared alternative remedies for the decline of two different Boreal caribou herds, that “a one-size solution will not fit all populations”. They state:

“We learned there is no benefit of controlling wolves if bear predation is limiting and there is no value in reducing the primary prey of wolves if the wolf population is [already low]. These lessons may be obvious, but there are examples where the results of invasive and expensive conservation and management actions, such as lethal wolf control, are less than optimal because of insufficient understanding or recognition of the internal dynamics of the system.” (Russel 2010))

3. The draft Section 11 Agreement opens the door to just about any and all predator control. There are suggestions that killing cougars, bears and wolverines is on the table. VWS is absolutely opposed to this. The killing of these species is not more unacceptable than the killing of wolves; indeed, the killing of wolves, a keystone species, does perhaps the most powerful damage to ecosystems. But the result of killing other carnivores will be cumulative. Black bear predation can have a significant effect on caribou herds, but may involve only a very small number of bears. The modelling exercise by Johnson, et al (2010) showed that upwards of 80% of black bears would have to be killed to increase the Charlevoix Boreal Caribou herd. (15) (So let's just not go there.)

Annex 2 predator control measures suggest abundance of scientific methodology and care; but they also reflect a very large expense, which will be multiplied if predator killing is intensified as suggested by Serrouya et al. (10) VWS predicts that these elaborate scientific measures will not be funded and staffed, and that predator control will become increasingly desperate, efficient and brutal due to the vast area to be covered and the expense of covering it — unless the Section 11 Agreement imposes some limitations. It should reject the use of strychnine and other poisons; reject wolf-killing contests; reject killing pups in their dens; reject the killing of grizzly bears and wolverines, which are species at risk; reject the killing of cougars, which have low reproductive rates, and can be tranquilized and transported elsewhere; and reject the killing of black bears, very few of which kill caribou.

### **Table 6: Complementary Measures**

There is a large disconnect between the rampant commercial, motorized recreation documented in the federal Imminent Threat Assessment (ITA), and the complete absence in the S 11 Agreement of any commitment to expand winter recreation restrictions for the Deep-snow Caribou. Besides the ample treatment of the issue in the ITA, BC caribou biologists/managers gave a very good description of the population-limiting effects of snowmobile and heli-skiing usage in critical caribou winter habitat. And herd displacements from critical winter habitat have been highlighted in the census reports for a number of herds. The BC government doesn't listen to its own biologists and managers.

Heli-skiing has been allowed to expand with huge overlapping territories in the range of the Deep-snow Caribou. Compared to this, the Annex 2 proposal to re-examine heli-skiing permits in parks is a wry joke, given the small size of the parks by comparison.

VWS's Section 80 petition gave detailed accounts of rampant snowmobiling in prime winter habitat of the Central Selkirk and Wells Gray-Thompson herds, with snow grooming machines packing trails into caribou Ungulate Winter Range, and snowmobile clubs receiving exclusive use of riding areas in return for monitoring, when the snowmobile interests later acknowledged that they had no authority to enforce voluntary closures. The BC government's own Caribou Progress Board stated that voluntary closures should be made legal, yet there is no word of that in this draft Agreement. Our petition (18) cited years of government census reports that warned that the Central Selkirk caribou were displaced from winter habitat by snowmobiles and heli-skiing. Yet the Compliance and Enforcement section of Table 6 refers only to existing closures.

## **CONCLUSION**

Many citizens wishing to participate in caribou planning today may not remember, or may have never known, that BC citizens went through this exact thing for three years at the planning tables in the 1995 Kootenay Boundary Land Use Plan, followed by another *five* years with the 2003-2008 Mountain Caribou Recovery Implementation Plan (MCRIP). While the MCRIP talks dragged on, VWS documented the clearcutting of one of the last patches of old-growth forest that the now-extirpated South Selkirk herd had left.

What has become clear to us, as Section 80 petitioners, is that unless there is an emergency order or a moratorium on all or key parts of the habitat, the federal government is simply directing us back to the provincial government herd planning, and the provincial government is putting us right back where we started out in 1995 and repeated in 2003: sitting at planning tables where interests like ourselves, seeking to protect the caribou have one, possibly two seats, and interests wanting to protect the AAC, or heli skiing, or snowmobile sales and rentals, and of course the local snowmobile clubs, have 5 to 7 seats.

Wayne McCrory, R.P. Bio, VWS Chair

### THE VALHALLA WILDERNESS SOCIETY

VWS began its efforts to protect Mountain Caribou in 1979, when the author, having formerly done research on the Yukon Porcupine Caribou herd, worked for Glacier National Park on a review of the park's caribou population. His report alerted Environment Canada to the critical state of endangerment of the caribou, and the likely connection to clearcutting of winter range outside the park boundary. According to *Caribou and Human Agency in the Columbia Mountains*, a book by Graham A. MacDonald, McCrory's report "helped to inaugurate joint inter-agency studies among federal, provincial and state authorities."

In 1995 VWS was instrumental in gaining the protection of Goat Range Provincial Park through the Kootenay Boundary Land Use Plan. The park is used by the Central Selkirk caribou herd today. However, the majority of the best caribou habitat proposed for protection was omitted when the government enacted the park, due to concerns about reducing the AAC and mining claims.

For the last 20 years VWS has had a project involving GIS mapping of Mountain Caribou habitat throughout the Interior Wetbelt, which is the home of the Southern Group — now commonly known as the "Deep-snow Mountain Caribou". VWS directors have extensive field experience in the range of the Central Selkirk herd, and considerable experience in the range of the Quesnel Highlands herd, which they have also toured with members of the Xats'ull and the T'exelc Bands of the Secwepemc Nation.

After conducting professional ecological inventories in both areas, VWS designed the proposed Selkirk Mountain Caribou Park, and the proposed Quesnel Lake Wilderness, that would expand existing provincial parks to preserve the remaining intact habitat of those herds. The Quesnel Lake Wilderness has been approved by the two Band Councils.

### References

1. Hatter, et al., "A Conservation Status Assessment of the Mountain Caribou Ecotype Based on IUCN Red List Criteria," Proceedings of the Species at Risk 2004 Pathways to Recovery Conference.
2. COSEWIC, "Designatable Units for Caribou (*Rangifer tarandus*) in Canada, 2011 [http://www.cosewic.gc.ca/eng/sct12/COSEWIC\\_Caribou\\_DU\\_Report\\_23Dec2011.pdf](http://www.cosewic.gc.ca/eng/sct12/COSEWIC_Caribou_DU_Report_23Dec2011.pdf)
3. Environment Canada, "Recovery Strategy for the Woodland Caribou, Southern Mountain population in Canada", 2014.
4. COSEWIC, "Assessment and Status Report on the Caribou in Canada", 2014.
5. Environment Canada, "Scientific Assessment to Inform the Identification of Critical Habitat for Woodland Caribou, Boreal Population, in Canada", 2011 Update.
6. "Alberta, BC Caribou need immediate intervention to survive, federal government," Canadian Press, May 4, 2018, <https://www.thestar.com/news/canada/2018/05/04/alberta-bc-caribou-need-immediate-intervention-to-survive-federal-government-says.html>.

7. “ ‘Immediate intervention’ needed to save dwindling caribou herds, says federal government”, National Post, May 4, 2018, <https://nationalpost.com/news/dwindling-caribou-herds-in-alberta-b-c-face-dire-threat-federal-government>.
8. Mountain Caribou Implementation Plan, Habitat Terms of Reference, Final Draft, 26/10/07.
9. Interim Strategy for Predator/Prey Management Actions in Support of Mountain Caribou Recovery: Fiscal 07/08 and early fiscal 08/09”, p. 1.
10. Serrouya, R., et al., “Saving Endangered Species Using Adaptive Management”, Proceedings of the National Academy of Sciences, 2019.
11. Palmer, V., “Horgan taps Liberal ex-minister to rescue caribou rescue plan,” Vancouver Sun, April 15, 2019, <https://vancouversun.com/opinion/columnists/vaughn-palmer-horgan-taps-liberal-ex-minister-to-rescue-caribou-rescue-plan>
12. Ball, D. P., “BC NDP’s plan to save threatened caribou could kill forest and mining jobs, Liberals argue,” Vancouver Star, April 11, 2019.
13. Johnson, C.J., Libby P.W., Ehlers, Seip, D. R., “Witnessing extinction—Cumulative impacts across landscapes and the future loss of an evolutionarily significant unit”, Biological Conservation, 186 (2015), 176-186.
14. Spalding, D. J., “The Early History of Woodland Caribou in BC”, BC Min. of Env, 2000.
15. Johnson, C.J., M.A. Mumma, and M.H. St. Laurent, “Modeling multispecies predator-prey dynamics: predicting the outcomes of conservation actions for woodland caribou”, ESA March 2019, <https://esajournals.onlinelibrary.wiley.com/doi/10.1002/ecs2.2622>
16. Apps, C. D., McLellan, B. N., Kinley, T. A., Serrouya, R., Seip, D. R., Wittmer, H. U., “Spatial Factors Related to Mortality and Population Decline of Endangered Mountain Caribou,” J. of Wildlife Mgmt., 2013.
17. Paquet, P.C., et al., 2010. “Influence of anthropogenically modified snow conditions on movements and predatory behaviour of gray wolves.” Published in The world of wolves: new perspectives on ecology, behaviour, and policy, by Musiani, Boitani and Paquet, University of Calgary Press.
18. See the VWS Section 80 Petition, pages 38-41 at <http://www.vws.org> .