

## **Reason for decision: Moose quota and LEH in the Cariboo Region, 2018**

### **Authority for decision**

This decision rationale focuses on 2018 moose hunting in the Cariboo Region. Wildfire in 2017, winter survey information, collaboration and engagement with First Nations and information from stakeholders required that the limited entry hunting (LEH) authorizations and quota decisions based on Allocation decisions for the 2017-2021 period be examined closely.

Section 7 and section 8 of the Limited Entry Hunt Regulation (LEHR) provides authority for the Director of Wildlife to determine the number of LEH authorizations to be granted with respect to an LEH open season, within a minimum and maximum range established through regulation. In making such determination, the Director must consider the following criteria: (a) the recommended numbers approved and submitted by regional managers, (b) data on population dynamics of the species in the area subject to LEH open season, and (c) hunter success rates.

Section 60 of the *Wildlife Act* provides the Regional Manager the authority to attach a quota as a condition to a guide outfitter licence. Under the Act, a quota represents the total number of a game species that the clients of a guide outfitter may kill in the guide outfitter's guiding area (or part of it). Under the LEHR, a guide outfitter that has been assigned quota for a particular species may guide clients during an open season in which an LEH authorization is required to hunt that species. As the Director, Wildlife and Habitat, Section 100 of the *Wildlife Act* provides me all of the statutory decision making powers of a Regional Manager, including those listed under s. 60 of the Act. 2018 is the first year the Director is exclusively exercising the power to make these quota decisions, as part of the Province's initiative to centralize all quota decisions and LEH decisions with a single decision maker.

The Minister of Forests, Lands and Natural Resource Operations and Rural Development holds the authority to make regulations for LEH (*Wildlife Act*, section 16) and has been delegated authority to establish or discontinue open seasons (close a hunt; *Wildlife Act* Section 108). It is not within my statutory authority to close a hunt; however, it is within my authority to (i) when determining the number of LEH authorizations to be granted for an LEH open season, choose the absolute minimum amount from the minimum and maximum range established through regulation (subject to the criteria which I am required to consider in making such determination); and (ii) not issue quota to any guide outfitter operating within an LEH zone. I have considered requests to completely close the hunt within this context only.

### **Policies and Procedures**

The scope of consideration under both Section 60 (*Wildlife Act*) and Section 8 (LEHR) is broad, and guidance is provided by several provincial policies and procedures (e.g., Allocation Policy (2015), Administrative Guidelines (2007), Game Harvest Management Policy and Procedure (2010), LEH Policy and Procedure (2016), Control of Species Policy (2006), Moose Harvest Procedure (2010)). Further, within the Cariboo region there are specific government-to-government agreements with Tsilhqot'in National Government (TNG) with supporting documents (e.g., Tsilhqot'in Stewardship Agreement;

Nenqay Deni Accord and supporting Letter of Intent and Letter of Intent Addendum (2015); Letter of Commitment (2017)). In addition, the government has committed to implement the principles of the United Nations Declaration of Rights for Indigenous Peoples (UNDRIP).

Guidance in the Provincial Moose Management Framework and Grey Wolf Management Plan also provides reference points for management options.

Annual Allowable Harvest (AAH) is the number of animals of a species in a specific area of land that may be harvested in a year by licensed hunters. The AAH is a derivative of several population assessments that first considers conservation and sustainability of the species requirements and secondly the needs of First Nations rights for food, social and ceremonial purposes. Only after these two assessments have been applied is there consideration to the AAH for residents and guided (non-resident and non-resident alien) hunters (Allocation Policy).

### **Considerations**

Specific priorities and objectives I have considered include:

1. Conservation: The foremost priority of managing any wildlife species is to ensure that any harvest does not have an unsustainable impact on the population.
2. First Nations' Rights and Interests: Section 35 of the *Constitution Act, 1982* recognizes and affirms existing Aboriginal and treaty rights of indigenous peoples in Canada. Moose is a highly valued species which is relied on for food for all local Indigenous communities including the Tsilhqot'in, the Southern Dakelh Nation Alliance and the Northern Secwepemc te Qelmucw .
3. Population targets: By agreement between the Province and TNG, the current objective for moose populations is to recovery numbers to 13,193 for the North Chilcotin Game Management Zone (5C) and 4,900 for the South Chilcotin Game Management Zone (5D); or approximately the population estimates from 2009.
4. Population compositions: The Moose Harvest Management Procedure (4.7.01.07.3) notes that bull:cow ratios should not be below 30 bulls:100 cows, or 50 bulls:100 cows where there are low density moose populations (< 200/1000 km<sup>2</sup> of fall range).
5. Allocation splits between licensed hunters: The Government's February 2015 announcement set the allocation of licensed harvest for the Cariboo at 75% resident/25% guided (non-residents and non-resident aliens). The Provincial government has reaffirmed they continue to support these splits and therefore informed my considerations.

### **1. Conservation Considerations**

#### Population management

Harvest must not be a significant impact to population status. Natural variation in populations is expected, therefore, modest harvest rates are most often applied (the exception is in those situations where a population is over its objective and conflicts are resulting). Further, because moose populations are strongly regulated by cow and calf survival the licenced bull-only harvest helps ensure that harvest is not the driving factor in population fluctuations, even when there is uncertainty in harvest rates.

According to the Provincial Framework for Moose Management in BC (2015) the average maximum licensed harvest rate of 5% is generally sustainable with the highest estimate at 9%. These estimates do not take into consideration natural mortality, First Nations harvest or poaching. The current licenced harvest rates are estimated at 2.7% in the North Chilcotin and 2.5% in the South Chilcotin. With estimates of First Nations harvest derived from best available information and information provided directly by First Nations at the time of the Allocation decision, those percentages increase to 9.2% (North) and 10.8% (South). Therefore it is reasonable to infer that licensed harvest is not driving declines to populations as it represents a relatively small proportion of human harvest which is limited to bulls only.

Although the status of moose provincially are considered secure, population trends are declining in many areas of the province. In the Cariboo Region specifically, populations are at lows relative to a recent peak in population in 2009. Factors contributing to declines are being assessed, which I considered. I also note that 2017 and 2018 surveys in 5-03 and 5-04B suggest that the South Chilcotin moose population is increasing, with bull to cow ratios well above minimum targets.

#### Landscape Impacts

My decision cannot direct or require landscape measures, as I am only empowered under the *Wildlife Act* to rule on matters related to the licensed harvest. However, in making my decision, I am mindful that landscape issues form an important backdrop to the discussion as they ultimately impact moose recruitment and survival and the ability of the Province to achieve 2009 population targets.

With respect to road and access issues, the Province is working with First Nations to address these concerns. It was apparent in reviewing the joint submission from the Fish & Wildlife Panel<sup>1</sup> that differing perspectives persist. I do note that there is a commitment to identify and deactivate 3-5 road areas between now and Sept. 1, 2018. While this is a positive development, this work does not weigh heavily on my decision because it has yet to occur, and is limited in scope. Similarly, the objectives for wildfire recovery and forest / habitat enhancement are not confirmed and areas have not been prioritized. I understand that these efforts are also underway, but do not inform my considerations at this time.

The landscape impacts may also be contributing to improved success of predator populations. First Nations and stakeholders have both indicated they would support increased predator management. Predator-prey dynamics are an important part of natural systems and current predator response and control programs are implemented only when there is a direct threat to livestock and species at risk. Further, predator management systems are complex and usually need to be intensive to be successful. That said, I am in agreement with the recommendations that further assessment and work-planning needs to be considered to determine if a predator management approach is a viable part of the overall objective to recover moose populations. I limit my consideration of predator-dynamics in the context of how licenced harvest contributes to the natural mortality rates including that from predators.

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<sup>1</sup> The Fish & Wildlife Panel was identified as a body to support the Tsilhqot'in Stewardship Agreement and later the Nenqay Deni Accord and is co-chaired by the Province and Tsilhqot'in National Government.

### Wildfire Impacts

Wildfire can cause direct mortality of wildlife<sup>2</sup>. The long-term impact of wildfires is typically positive due to resulting increases in forage. Recovery can be expected within a short timeframe, but can vary greatly depending on fire intensity, which is still being determined. Generally, the area affected by wildfire had a mosaic of varying burn impacts, but areas of high quality moose habitat (wetlands, deciduous patches) were generally less severely burnt compared to areas of low quality moose habitat.

Population surveys were undertaken during winter early in 2018 with an objective to monitor moose populations and identify impacts from wildfire. Population estimates were relatively unchanged (sighted slightly more moose in LEH zone 5-13A, the zone with the most extensive burn area than from previous surveys).

I considered the responses of other jurisdictions and completed a scan of management responses undertaken in several states recently impacted by wildfire (Idaho, California, Montana) which revealed that these jurisdictions did not close hunting seasons as a result of wildfire, except where fire activity resulted in concerns for human safety. In Idaho, access closures have been used to address excess hunter density following wildfire.

Both the TNG and provincial representatives expressed concerns that increased sightability (lack of secure forest cover, longer sightlines) and access (roads and fire guards) following wildfire could increase hunter success rates. Moose may be more susceptible to hunters (and predators), but there is no research available to quantify what may be expected. Ordinarily, success rate fluctuations are managed on a three-year rotational basis, where the prior three years' success informs the success applied to the AAH in the current year to determine the number of LEH authorizations issued (LEH procedure).

However, given the uncertainty, I considered the approach proposed by Provincial biologists to reduce harvest levels to account for potential increases in success in advance of the hunting season and the assessment of a 5-20% reduction based on the amount of moose habitat within the 2017 fire perimeter to incorporate this potential increased vulnerability. I note that the recommendation was to make this reduction cumulative to other reductions undertaken to recover bull to cow ratios. I also considered TNG proposals of a two year licenced hunt closure, reducing harvest levels in absolute terms based on the percentage of moose habitat burned in the MU, or that LEH Zones 5-03 and 5-04B, which were impacted by wildfire, be closed in particular. Provincial representatives note that wildfire impacts to identified moose habitat within these areas is relatively small (see Table 1).

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<sup>2</sup> Aerial surveys did not report any fire-related direct moose mortality; however, ground crews reported two dead moose. No mortality investigations were conducted, but the moose were reported unburned and may have died from smoke inhalation.

**Table 1.** Summary of wildfire overlap within LEH zones and suitable moose habitat within those zones.

LEH Zone	% Fire overlap	% moose habitat overlapped by wildfires*
5-13A	59%	68%
5-13C	39%	39%
5-14	32%	25%
5-04B/C	15%	12%
5-03	10%	9%
5-12A	7%	6%
5-13B	3%	3%

\*Note: Moose habitat is estimated from cumulative effects model assessment. Not all area within the fire perimeters would have burnt, and severity of burnt areas would vary.

## 2.0 First Nations' Rights, Title and Interests

There are several First Nations groups with asserted and proven Aboriginal rights and title claims in the Cariboo region that may be affected by my decision. The Tsilhqot'in Nation is comprised of six communities that are represented by the Tsilhqot'in National Government. The Tsilhqot'in Nation have proven Aboriginal rights in an area frequently identified as the Claim Area and proven Aboriginal title within an area affirmed by the Supreme Court of Canada in its June 26, 2014 decision.

The rest of the Cariboo region is subject to asserted Aboriginal rights and title claims of the Tsilhqot'in Nation, the members of the Southern Dakelh Nation Alliance and the members of the Northern Secwepemc te Qelmucw.

1,100 total moose were identified as harvested on an annual basis as part of the modelling work used to inform setting the 2017-21 allocation across the four Game Management Zones. This number is set aside for First Nations to address food, social and ceremonial rights prior to the consideration of licenced harvest. This represents approximately 60% of all potential calculated harvest based on population estimates for that allocation calculation. TNG submissions provide that despite the number of moose considered for calculation purposes, their community members are not successful in achieving their needs. Direct harvest information or community shortfall have not been provided, so although I acknowledge that there may be factors affecting community members from meeting their needs, I conclude that from a biological perspective, there is an available harvest that may be considered for licenced hunters.

I am also mindful of the Province's commitment to work collaboratively with the TNG in Chilcotin moose recovery and the very high value of moose to the Tsilhqot'in communities. The 2016 Nenqay Deni Accord is an effort to move beyond a long history of conflict, and to chart a new and better future with the Tsilhqot'in people as true partners in the social, political and economic life of British Columbia, for the benefit of all. BC has expressed the need to hear more from the TNG regarding details for issues raised (for example, around community moose harvest reporting, areas of interest related to landscape planning) to support collaborative decision-making. I note the collaborative wildlife work in the region to date includes:

- Collaborative forum for discussions the Fish & Wildlife Panel provides, including ongoing work planning and implementation of the Chilcotin Moose Recovery Plan.
- Tsilhqot'in community observers participating in moose and other wildlife surveys
- Community initiatives with an interest to sign binding MOUs for community initiatives between the Conservation Officer Service and the ?Esdilagh and Xeni Gwet'in and possibly other communities in similar initiatives around increased reliance on a bull-only harvest.
- Previously agreed commitments through the 2016 LOI Addendum and Strategic Forestry Agreement Funding. These agreements support the development of a Tsilhqot'in Nation Sustenance Harvest Policy, Moose Management Plan and an Access Management Project and are tied to previous Provincial decisions noted above related the reduced LEH harvest and September hunt closures.
- Cumulative Effects Project (led by 3 Tsilhqot'in communities, and BC)
- Review and update of the South Chilcotin Stewardship Plan

Collaboration implies that both parties to the Accord attempt to find consensus and common ground, even if this ground is not entirely their preferred approach.

Similarly, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) calls for effort be made to obtain the free, prior and informed consent from First Nations for decisions that affect their traditional territory and way of life. I find that the actions taken to date, including the efforts over the past five months, as well as the actions planned for implementation in the near future are addressing this core principle of UNDRIP, even though consensus was not achieved with all First Nations.

#### Tsilhqot'in National Government

The Province and the Tsilhqot'in Nation entered into a Tsilhqot'in Stewardship Agreement, with amendments effective March 31, 2017. In late 2017, citing wildfire impacts, the Tsilhqot'in leadership recommended a full closure of all licensed harvesting in the North and South Chilcotin for 2018 and 2019; the two years was suggested to provide the time for TNG and BC to focus on habitat and predation factors. From December 2017 to April 2018, 10 meetings were held (primarily through the bilateral (BC-TNG) Fish & Wildlife Panel ("the Panel") to flesh out options. Provincial staff provided the TNG with a set of possible scenarios laying out specific targeted reductions in areas with concerns surrounding either wildfire or bull-to-cow ratios, but not a full closure.

The TNG responded with a memorandum providing some comment on these proposals, but ultimately maintaining a two year closure for the entire Chilcotin as the only approach acceptable to them.

I also received a joint decision paper from the co-chairs of the Fish & Wildlife Panel. This paper confirmed that core differences of views exist between Provincial and TNG staff, and a consensus had not been reached. The document provides clarification of the perspectives of both parties.

Finally, I met directly with TNG representatives on May 4, 2018 where they reiterated their request for a full two-year closure of the licensed moose harvest and that the time could be used for research and plan ways to achieve the population objective. The importance of moose to the communities was emphasized and concerns expressed both regarding the population trend and ability of community members to successfully achieve their harvest needs. It was noted that there was a lack of ability for community members to successfully hunt in traditional hunting areas and that given a constraint on resources (e.g., time, equipment) community harvesters were likely not as successful as licenced hunters. Information was not provided on the number of moose harvested or specifics of the short fall. It was also communicated that the Xeni Gwet'in are considering a ban for their members on harvest of all moose, possibly depending on provincial action.

TNG representatives also suggested that LEH authorizations may be held to one authorization per harvestable animal rather than based on hunter success rate (e.g., resident success averages 31% resulting in a general ratio of roughly 3 authorizations per harvestable animal) as a way to manage the uncertainty of hunter success. In considering a 1:1 ratio I also considered how to honour allocation splits and therefore also considered potential impacts to guide quota.

The TNG indicated an interest in pursuing a Tsilhqot'in-wide Memorandum of Understanding with the Conservation Officer Service (COS) to ban harvest of cow moose by their members. Previously these types of initiatives were discussed with specific TNG bands (?Esdilagh and Xeni Gwet'in). The TNG indicated a view that all MOUs would be jeopardized if anything less than a full two year closure is enacted.

In weighing my decision, I had to balance the possible impacts from the potential "bull only" First Nations harvest against other management options. If such a ban were put in place, this could add additional pressure to bull harvest. It is difficult to analyze exact impact, as First Nations bull harvest would increase, but success rates would likely decrease. Also, other First Nations in the area (SDNA) would not be subject to the ban.

Reliable First Nations' harvest data would reduce the uncertainty in the needs and challenges achieving those needs, as well as estimates of potential population impacts. These data are a key deliverables of a Letter of Intent signed in early 2016 to support the signing of the Accord. In the absence of such data, I am required to rely on First Nations' harvest estimates previously established for the 2017-2021 harvest period, and determine if other management actions taken in low bull-to-cow ratio areas would be sufficient to absorb increased bull harvest pressure from First Nations.

#### Southern Dakelh Nation Alliance (SDNA)

The Southern Dakelh Nation Alliance is body that represents Lhoosk'uz Dene Nation, Lhtako Dene Nation, Nazko First Nation and Ulkatcho Nation. The SDNA do not yet have a consultation agreement or

reconciliation agreement with the Province regarding wildlife management, but their traditional territory is located partially in the North Chilcotin. A discussion document was provided to the communities of Lhoosk'uz Dene Nation, Lhtako Dene Nation, Nazko First Nation and Ulkatcho Nation on April 5, 2018 to seek input with the same options and analysis provided to the TNG. A phone call occurred on April 19, 2018 in which community representatives did not participate. An SDNA representative was in attendance and was invited to send along any feedback. None has been received to date.

#### Northern Shuswap

The Northern Shuswap Fish and Wildlife Joint Communication group meets quarterly to discuss fish and wildlife issues in the Cariboo region. The membership of this group includes the Northern Shuswap Tribal Council, a body that represents Tsq'escen' (Canim Lake), Stswecem'c/Xgat'tem (Canoe & Dog Creek), Xat'süll (Soda & Deep Creek), and T'exelc (Williams Lake) First Nation and the Esketem'c First Nation. The Northern Shuswap Fish and Wildlife Joint Communication group was contacted after surveys revealed low bull to cow ratios in their traditional territory (5-01, 5-02B, 5-02C). A briefing document was forwarded to the communities of Tsq'escen' (Canim Lake), Stswecem'c/Xgat'tem (Canoe & Dog Creek), Xat'süll (Soda & Deep Creek), T'exelc (Williams Lake) and the Esketem'c detailing management options mirroring those proposed for similarly affected areas in other parts of the Cariboo region. After discussion, the Northern Secwepemc communities supported the Province's proposed reduction of target licensed bull moose harvest by 50%, which would match the more aggressive proposal discussed with the TNG and SDNA in similarly affected areas in MU's in areas in their traditional territories (see below).

### ***3.0 Population Targets***

The population target set represents a high over the last twenty years based on inventory and harvest data that are collected (Table 2).

The Cariboo is divided into four Game Management Zones or GMZs, which are set to reflect natural barriers and movement of moose across the landscape. These are:

- GMZ 5A (aka Quesnel Highlands): comprising zones 5-15 A-D, 5-16
- GMZ 5B (aka Cariboo): comprising zones 5-01 and 5-02 A-D
- GMZ 5C (aka North Chilcotin): comprising zones 5-10, 5-12 A-B, 5-13 A-C and 5-14
- GMZ 5D (aka South Chilcotin): comprising zones 5-03, 5-04 A-C, 5-05 and 5-06



**Table 2.** Cariboo Region moose population estimates by GMZ; 1999 - 2018.

Year	GMZ 5A	GMZ 5B	GMZ 5C	GMZ 5D
1999	2,700	8075	8,680	3,140
2004	2,850	6,650	11,225	5,300
2008	1,680	6,727	13,193	4,900*
2012	1,680	6,265	8,966	2,896
2016	1,680	6,645	9,300	2,900
2018	1,680	6,645	7,850	3,700

\*2008 population estimate corrected based on errors found in 2005 survey analysis.

Moose populations naturally vary and are tied to many factors on the land base and weather (e.g., habitat changes from natural disturbances and land-use decisions, predator-prey dynamics, winter conditions, etc). The Province initiated a research project to better understand the factors affecting moose population declines six years ago. Cow moose were collared in five study areas and mortality causes were assessed. I am primarily informed by the results collected to date in the Big Creek Study Area (within the Cariboo Region); of the 17 cow moose that have died eight were a result of predators, five unlicensed harvest, three from health related causes (infection, starvation) and one accident.

#### ***4.0 Population Composition***

2018 moose surveys completed in the Cariboo region indicate that bull to cow ratios in Zones 5-01, 5-02B, 5-02C, 5-13A, 5-13B and 5-14 are below provincial minimum targets. While not fire-related, this represents a management concern. Target bull to cow ratios are set at 30 bulls per 100 cows in areas where moose density is at least 0.2 moose/km<sup>2</sup> and 50 bulls per 100 cows in areas where moose density is below 0.2 moose/km<sup>2</sup>. Low ratios are not a conservation issue directly, however, lower than desirable targets may affect probability that moose reproduce and thus recruitment rate may not achieve its full potential and is a concern for population recovery. Ratios in the above-noted LEH zones are provided in Table 3.

**Table 3.** Bull:Cow ratio by LEH zone.

LEH Zone	Bull to cow ratio
5-01	18 bulls per 100 cows
5-02B	20 bulls per 100 cows
5-02C	15 bulls per 100 cows
5-13A	42 bulls per 100 cows*
5-13B	24 bulls per 100 cows
5-14	24 bulls per 100 cows

\*Overall moose density is only 0.17 moose/km<sup>2</sup>, therefore 50 bulls per 100 cows is desirable

In response to low bull to cow ratios, and for consideration in my deliberations, I received three scenarios from the Fish & Wildlife Panel following collaborative discussions between the Province and the Tsilhqot'in; two from the provincial representatives (licensed harvest level reductions) and one from TNG representatives (closure).

1. Target recovery of bull/cow ratios by reducing licensed harvest levels in above-noted LEH Zones by 25%. This reduction in licensed harvest levels is expected to result in a proportional reduction in LEH authorizations and guide quotas issued in these zones.
2. Target rapid recovery of bull/cow ratios by reducing licensed levels in the above-noted LEH Zones by 50%. This reduction in licensed harvest levels is expected to result in a proportional reduction in LEH authorizations and guide quotas issued in these zones.
3. Close the entire Chilcotin (GMZs 5C and 5D) to licensed harvesting (preferred option for the TNG). This would exclude zones 5-01, 5-02B and 5-02C (GMZ 5B) as they do not overlap the Tsilhqot'in territory.

First Nations in 5-01 and 5-02 (Northern Secwepemc) supported a 50% reduction in their specific areas.

Reductions to licensed harvest have previously been used effectively to recover low bull/cow ratios in other Cariboo Region LEH Zones. In 1995, the bull/cow ratio in LEH Zone 5-13A was 15 bulls per 100 cows. LEH authorizations were reduced by approximately 50% and the ratio recovered to 29 bulls per 100 cows within three years. In 1996, the bull/cow ratio in LEH Zone 5-02A was 19 bulls per 100 cows. LEH authorizations were decreased by approximately 50% and the ratio recovered to 40 bulls per 100 cows within two years.

Despite the apparent population increases observed in the South Chilcotin, First Nations in the area (notably the Xeni Gwet'in on behalf of the Tsilhqot'in Nation) have indicated their members are having a hard time locating moose on the landscape. The Xeni Gwet'in are located primarily in LEH Zone 5-04. While density in 5-04 is relatively low (0.22 moose/km<sup>2</sup>) these estimates are an improvement over 2012 densities of 0.14 moose/km<sup>2</sup>. Current densities were previously incorporated into calculations made for the 2017-2021 period.

## **5.0 Resident and Guided (Non-resident and Non-resident Alien) Stakeholder considerations**

Resident and guided hunting are important activities in the province that provide both social and economic benefits to communities (e.g., food, employment and livelihood, tourism dollars). The Province also considers that hunting activities contribute to and enhance conservation values and environmental benefits by connecting people to nature and natural systems.

These stakeholders were provided an information package on April 11, 2018 and invited to provide comment. Comments received were limited. Predator control, habitat recovery and access were cited as important issues in addressing future moose recovery.

Guides also noted the hardships caused to their businesses from hunt reductions, previous closures and, in some cases, impacts from wildfires. The timing of the decision for the 2018 hunt was further impacting their ability to confirm fall hunts and having the potential to significantly impact their short-term business operations and long-term reputation.

Additionally, I heard that licensed hunters (guides and residents) would be supportive of a total ban on harvesting, if that total ban extended to First Nations. Such a ban would have to be voluntary with respect to First Nations, since the current population level, both locally and provincially, is within historic ranges and does not support a ban for First Nations for conservation purposes at this time.

### **Past management considerations**

Prior management efforts undertaken with respect to licensed hunting include:

- 2012-2016 Allocation Period: A 35% reduction in AAH compared to the previous period.
- 2015-2017 regulation cycle there were three notable actions taken by the Province to support Tsilhqot'in members access to moose for sustenance:
  - The closure of the September 10-September 30 LEH seasons in: 5-03, 5-04A, 5-04B, 5-04C, 5-05, 5-12A, 5-13A, 5-14 (extending period of exclusive First Nations' use), and an additional 33% reduction in the allowable licensed harvest in these areas.
  - The implementation of Compulsory Inspection requirements in Management Units 5-03 to 5-06 and 5-10 to 5-14 to better ensure compliance and enforcement needs and improve the calculation of hunter success rates in the future.
- 2017-2021: A further reduction in AAH for licensed harvest by 33%.

Also in 2017, due to concerns that impacts to the landscape from wildfires would have a negative impact on moose populations, immediately following wildfire access restrictions being lifted, motor vehicle restrictions (MUs 5-3, 5-4, 5-13, 5-14) and hunt closures (Oct. 15-Nov. 15 in 5-13A and 5-13C) were put in place under the *Wildlife Act*. These restrictions and closures were a precautionary measure to provide time to complete an initial assessment of the impacts of the wildfires on moose populations and habitat over the winter 2017/18.

I am also mindful of past decisions and actions taken by the Province and the TNG. AAH for all species in the Chilcotin were set in 2016, following consultation with First Nations and local stakeholders. This

AAH determination would ordinarily inform the 2017-21 5-year cycle and provides an estimated 5-year licensed moose harvest for both the North Chilcotin (335 bulls) and South Chilcotin (120 bulls) on an annual basis.

#### **6.0 Decision**

As noted above, my decision authority is scoped within the *Wildlife Act* and many of the factors that have the potential to maximize the benefits to moose populations fall under other resource planning and legislative frameworks. The activities being implemented or explored to address these complementary management options are strongly supported by the Province and in my role as Director of Wildlife and Habitat I will prioritize policy and guidance that supports the alignment activities across resource sectors.

I note that current populations in most management zones are within or near the historic variation, and population trends indicate southern Chilcotin moose populations are increasing. I further note that various scenarios of licenced harvest options resulted in minimal impacts to the rate of population change. Therefore on balance I perceive no overall conservation issue that would require a reduction to minimum LEH authorizations (i.e., LEH of 1; effective hunt closure). Further, although some stakeholders representing both resident and guided hunters are supportive of a total closure that would apply to both First Nations and licenced hunters, I conclude that, given the lack of conservation urgency and the management options that are available, it would not be appropriate to impact the First Nations hunt with that type of management approach.

The number of moose (1100) set aside for First Nations needs was not noted as the concern by First Nation representatives, rather that harvesters were not successful in meeting their needs. I was not provided specific locations of hunter effort or success, but note that spatial distribution of moose and limitations on hunter effort are possibly contributing to this factor. I therefore also assumed an even effort throughout the territory boundaries for my considerations of the options for licenced hunting. Previous actions to close early hunt windows will remain in effect to address temporal considerations.

There are several factors noted above that are influencing my decisions regarding LEH authorizations and subsequent allocation for guided hunts. These factors include the population recovery targets, population composition, TNG interests and concerns, impacts of wildfire, landscape changes, and other stakeholder concerns.

To address low bull to cow ratios, I find it reasonable to take a similar action as that taken in 1995 and 1996 when harvest levels were reduced by 50%. The proposed actions that may be taken by the TNG and individual communities to ban cow harvest or encourage bull only hunts are welcomed and these actions are likely to increase the rate to achieve population recovery targets (i.e., earlier timeframe) given the retention of cow moose in the population. These shifts in harvest pressures will, however, affect the ability to achieve population composition targets and potential to ensure the reproductive potential is met. Without quantified numbers about a Tsilhqot'in harvest I assume that the maximum First Nation harvest estimates will be achieved and that there will be a significant shift towards bulls. Therefore, I will increase the reduction recommended by Provincial staff from 50% to 60% in areas where bull:cow

objectives are not being met and 10% in other management units that overlap the Tsilhqot'in traditional territory.

I also acknowledge that wildfire and landscape impacts may be increasing the vulnerability of moose to harvest. Therefore I conclude that a precautionary approach to further reduce licensed harvest of bulls is warranted in the management zones impacted by 2017 fires. I note that no agreement on LEH reduction to address wildfire impacts was achieved. Provincial staff provided a recommendation of reduction derived from percentage of habitat impacted by wildfire and TNG representatives provided in the absence of a closure, either a reduction based the absolute wildfire impacted area or an assumption of 100% success. I will apply a reduction based on the % of area of habitat impacted and apply this cumulatively to the 60% reduction. I acknowledge this falls short of the TNG request, but find it reasonable based on the documented impacts and long-term benefits from wildfire and the overall reduction in the licenced harvest.

2017-21 is the first allocation cycle to fall wholly within the policy framework established in February 2015. Under this system, AAH of Category A species (typically those where demand for licensed harvest exceeds supply) is split between resident hunters and guides on a set percentage. For Cariboo Region 5 Game Management Zones for moose this split is set at 75% resident harvest, 25% guided harvest. While this policy direction is not binding on the statutory decision maker, the government has re-affirmed their support for it in 2017 and I have applied this policy in the subsequent allocation for guide quota based on the same principles noted above.

#### ***7.0 Future Steps***

The Province is committed to improving our shared knowledge base and collaboration with First Nations. I commend the collaboration and engagement efforts among First Nations and Provincial staff to date and encourage continued dialogue to refine the information used to support subsequent harvest decisions. However, harvest decisions are only one factor in the overall management of moose populations; I wish to re-iterate that the Province will continue to work collaboratively to address habitat and access issues, climate change impacts, and interactions with other wildlife in a manner that supports achieving the population objectives established for moose in the Cariboo Region. To this end the Province is committed to working with First Nation and stakeholders to explore and expand management activities that may include hunter game checks, enhanced enforcement, moose inventory and research, wildfire impact assessment, habitat enhancement and recovery post wildfire. No shooting areas could also be considered in areas of concern from a safety or high vulnerability perspective. Lastly, I note that the harvest decision is an annual decision and new information could change things in future years.