

Cariboo-Chilcotin (Region 5) Mule Deer: Frequently Asked Questions

A number of questions and concerns have been expressed from resident hunters about the change in the mule deer hunting regulations for 2009 (Region 5). Those changes were based on concerns about the mule deer population and buck hunting in the Cariboo-Chilcotin region. We've compiled answers to the most frequently asked questions, which you'll find below.

1. How many mule deer are there in Region 5, and are they increasing, stable or declining?

The number of mule deer in Region 5 is not precisely known, although estimates have ranged from 15,000 to 30,000 animals. It is not reasonably possible to establish a measure of the regional deer population with specific precision. Information indicating deer population trends comes primarily from periodic aerial surveys in December that measure buck/doe and fawn/doe ratios, a spring survey that measures fawn/adult ratios (an index of overwinter fawn survival) and relative abundance, hunter harvest statistics and field observations from wildlife staff, hunters and agriculturalists. These information sources suggest deer numbers were generally increasing from 1995 to 2005, but since then have stabilized and even decreased in certain areas. Increased harvests, as well as above average winter severity in 2008 and 2009, are believed to be the primary reasons for the current decline in the deer population trend in Region 5.

2. What are the trends in the harvest of bucks and does over the last 10 years?

Overall, buck harvests have increased almost two-fold since 1999 and are currently estimated to exceed 4,000 animals. Antlerless hunting opportunities and harvests have increased substantially since 2004 to address wildlife-agriculture conflicts (see Figure 1).

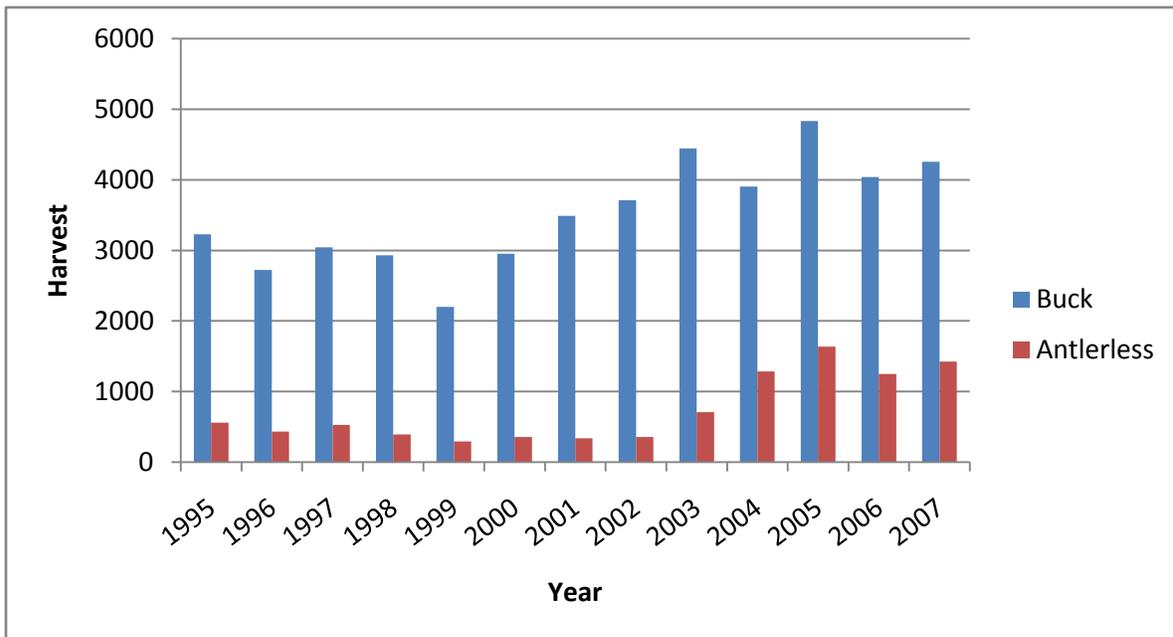


Figure 1: Trend in Mule Deer buck and antlerless harvests in Region 5 from 1995 to 2007.

3. What are the objectives for mule deer hunting in Region 5?

Provincially, mule deer are managed across the province to maintain post-hunting season buck/doe ratios at or above 20 bucks/100 does. Desired mule deer population levels are established regionally, or in some cases by management units (MU), based on First Nations and stakeholder interests. In Region 5, population objectives are to maintain the adult sex ratio above 20 bucks/100 does, and reduce and stabilize deer numbers within conflict areas. Buck/doe ratios measured from December surveys are shown in Figure 2.

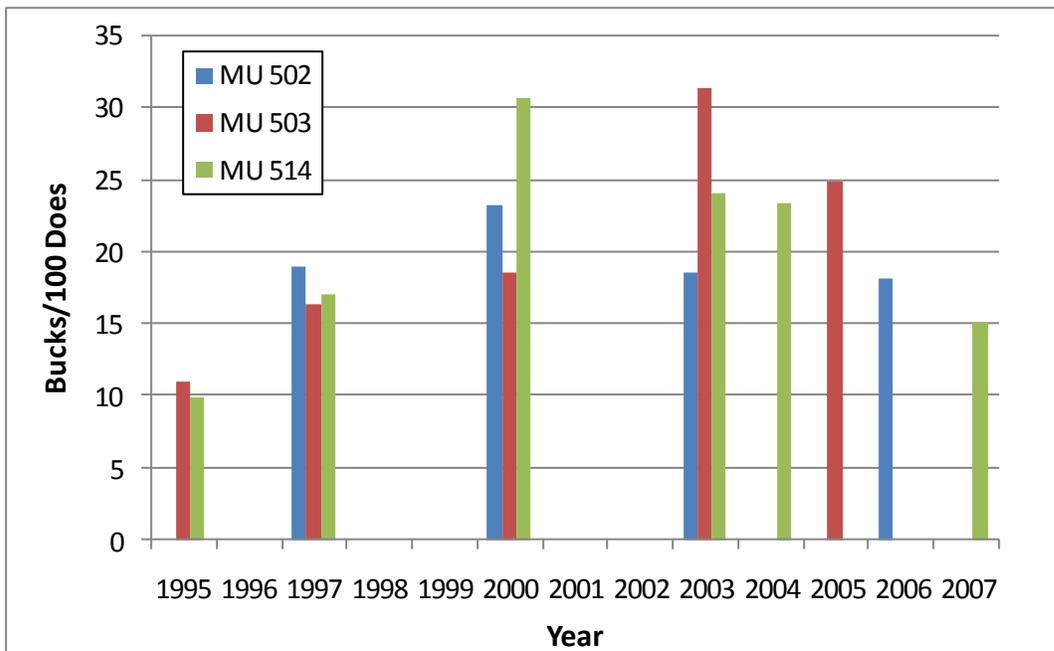


Figure 2: Mule Deer buck/doe ratios measured in December within MUs 502, 503 and 514. One management objective is to maintain a minimum of 20 bucks/100 does.

In addition to the population objectives, four new “tests” are now being applied to all hunting regulation proposals. These include:

- 1) Reducing the complexity of the hunting regulations synopsis (often referred to as regulation simplification);
- 2) Increasing harmonization of regulations within and between regions (i.e. increasing the consistency of regulations across the province, wherever possible);
- 3) Maintaining and, where possible, increasing hunting opportunity; and
- 4) Maintaining management (operational) costs within fiscal budgets.

While these tests have and will continue to be useful for reforming the hunting regulations in the province, the ministry’s highest priority continues to be conservation. For mule deer, this means that we will continue to ensure that mule deer populations are maintained at viable levels and that adequate numbers of bucks are maintained for breeding, hunting and viewing enjoyment.

4. Why do you not have a general open season on mule deer does to resolve concerns about buck/doe ratios?

Mule deer are considered to be vulnerable to overharvest throughout their range in North America. As mule deer population size and growth rate is largely dependent on the number of adult females, it's important to carefully regulate their harvest. General open seasons (GOS) for antlerless deer do not provide the same degree of control as limited entry hunting (LEH) for maintaining sustainable harvest levels, and can lead to localized overharvesting of mule deer.

Figure 3 shows how the antlerless harvest in Region 5 has been carefully controlled by using LEH from 1993 to 2007. This strong statistical relationship allows regional biologists to set LEH numbers to achieve desired antlerless harvest levels with much higher precision than could be achieved by GOS.

Although mule deer numbers in Region 5 continue to be healthy overall, the ministry continues to have concerns with the antlerless GOS for mule deer in southern B.C. In addition to the potential conservation concerns addressed above, past experience in Region 5 has also shown that the antlerless GOS also have created hunter crowding, safety problems, enforcement issues and substantial landowner conflicts.

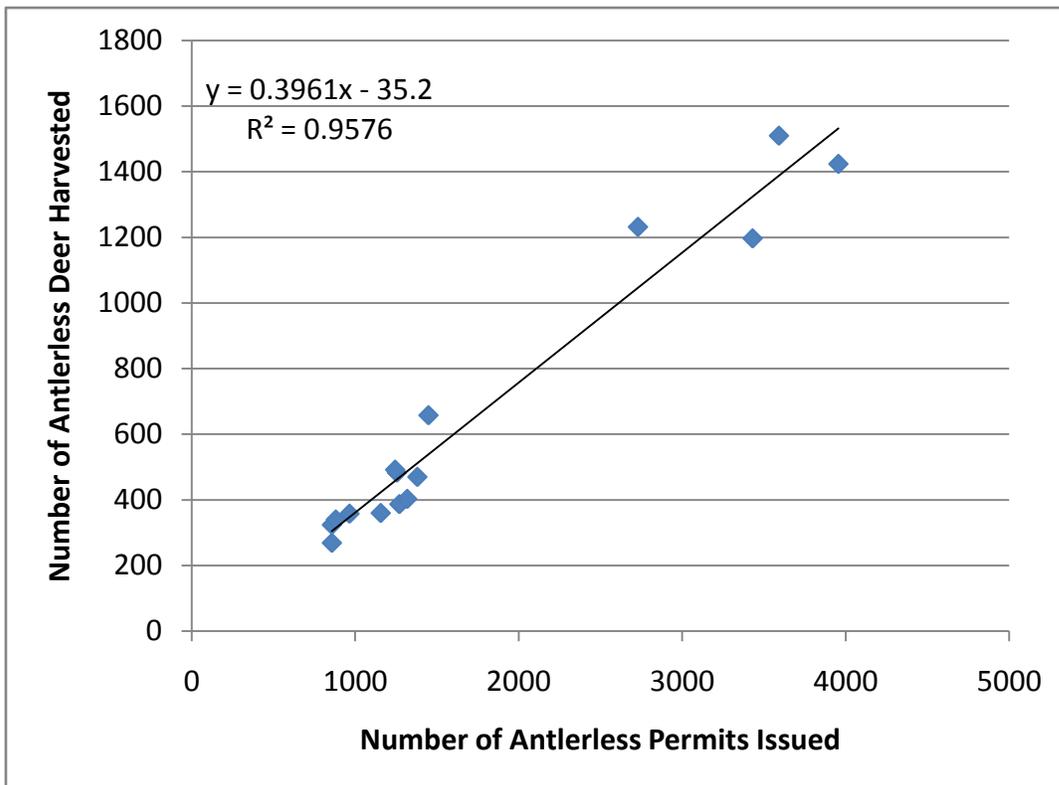


Figure 3: Relationship between number of antlerless permits issued and the number of antlerless Mule Deer harvested. This strong relationship enables regional biologists to set permit numbers in order to achieve desired antlerless deer harvest targets.

5. If the buck/doe ratio is down, why did you reduce the number of antlerless deer limited entry allocations in 2009 by 33 per cent?

LEH numbers were **not** reduced by 33 per cent. In fact, the number of LEH permits in 2009 was 3,371 which is a 4.4 per cent reduction from 2008, when 3,526 permits were issued. Figure 4 shows how the number of LEH permits issued in Region 5 has changed since 1993. We currently issue about 3,500 to 4,000 permits annually to achieve a harvest of around 1,200 to 1,500 antlerless animals.

Although the LEH numbers were only slightly reduced overall in 2009, certain hunts experienced a redistribution of general LEH antlerless authorizations in response to requests by resident hunters to provide more youth LEH hunting opportunities.

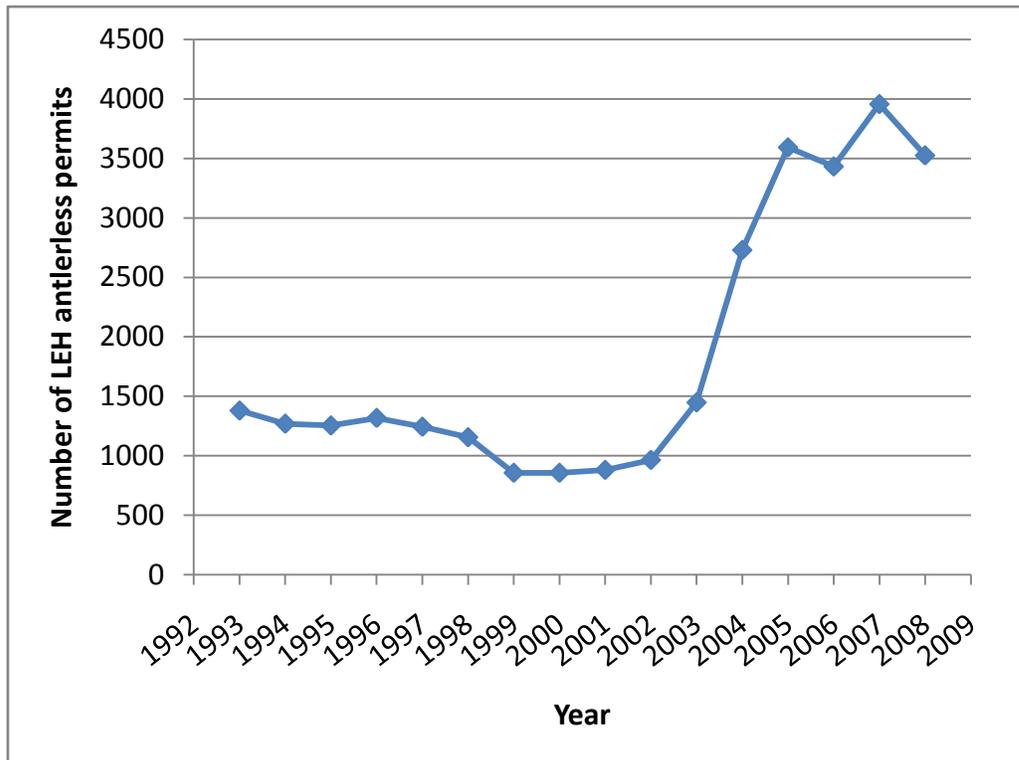


Figure 4: Trend in antlerless Mule Deer limited entry hunting (LEH) permits since 1993.

6. How reliable is your buck/doe estimate? You only survey a small part of the region.

The inventory plan for mule deer in Region 5 is to survey buck/doe ratios within three management units (MUs 502, 503 and 514) every three years. These three MUs support approximately 70 per cent of the regional mule deer harvest each year. While mule deer sex ratios likely vary in other MUs, these MUs do reflect the sex ratio in the area where most of the harvest is concentrated. The ministry is concerned about the declining trend in the buck/doe ratios in these MUs and that the buck/doe ratio has not been measured since 2007 (see Figure 2).

7. Your buck seasons have now changed four times in the past 15 years. Are these regulatory changes designed to increase the number of bucks for non-resident hunters and to discourage resident hunters from hunting?

Until this year, the ministry has been reluctant to decrease overall season lengths for mule deer bucks and has tried various buck seasons in an attempt to find an appropriate regulation that maintained a sustainable harvest of bucks without restricting resident hunting opportunity.

Figure 5 shows how the mule deer buck harvest has changed in response to periodic changes in the mule deer hunting regulations since 1991. None of these changes were successful in maintaining the buck harvest at a sustainable level. Unfortunately, this experience indicated that more restrictive regulations would be required. The regulation changes implemented in 2009 were designed to allow more bucks to survive through the hunting period and to improve the buck/doe ratio while minimizing restrictions to the length of the hunting season.

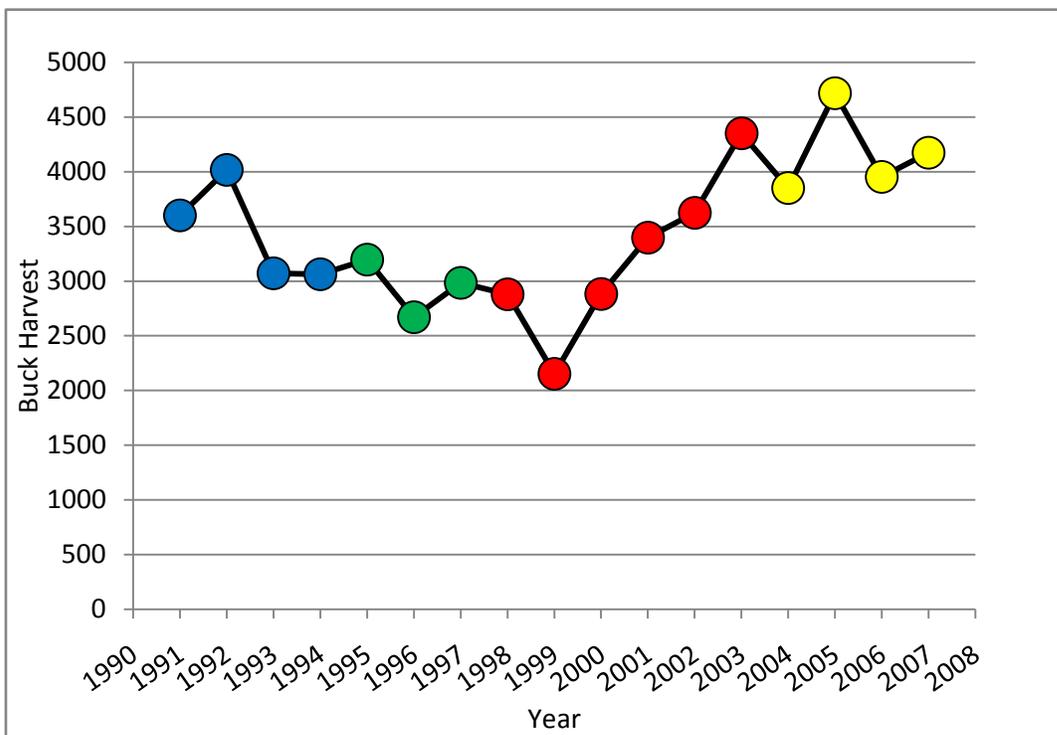


Figure 5: Trend in Mule Deer buck harvest in response to regulation changes.

- BLUE** – Any Buck: Sep 10 – Nov. 20, 4 pt Bucks: late Nov – early Dec
- GREEN** – Any Buck: Sep 10 – Nov. 20, 4 pt Bucks: Nov. 21 – Nov. 30
- RED** – Any Buck: Sep 10 – Oct. 31, 4 pt Bucks: Nov. 1 – Nov. 30
- YELLOW** – Any Buck: Sep 10 – Nov. 20, 4 pt Bucks: Nov. 21 – Nov. 30

8. A lot of people want to be able to go out and harvest the two deer they traditionally harvested. Why can't they when the ministry says there are lots of deer and no conservation concerns?

Mule deer population indicators point to an increasing mule deer population over the last decade, although spring surveys indicate the numbers may be stable or even locally declining. While there

continues to be healthy deer numbers, there are concerns that both buck numbers and the buck/doe ratios have declined. The primary rationale for the 2009 regulation changes was the need to increase buck numbers and restore the buck/doe ratio to 20 bucks/100 does. Although buck/doe ratios below 20 bucks/100 does are not a conservation concern (i.e. they do not threaten the viability of the mule deer population), they have been established provincially to meet multiple demands for use (i.e. harvest for meat, four-point buck hunting opportunities, wildlife viewing).

9. Why has the ministry implemented changes to all 16 management units of the Cariboo-Chilcotin region based on deer counts from only one MU?

The ministry has identified survey areas within 3 MUs surveys (MUs 502, 503 and 514) for conducting post-hunt (December) surveys (see Figure 2). These MUs support approximately 70 per cent of the regional mule deer harvest.

Previous experience has shown that when different GOS are applied to different MUs within a region, hunting pressure is often shifted towards those MUs with the most liberal seasons. This can lead to localized over-harvests and over-crowding within accessible areas. Other reasons for keeping regulations consistent throughout the region are to simplify the regulations, and provide regulations that can be effectively enforced (see question #3).

10. Why has the ministry taken such drastic action when the current buck/doe ratio is 19 bucks/100 does?

It is important to note that the 19 bucks/100 does is an average from the surveys conducted in 2005, 2006 and 2007. In 2005, the ratio was 25 bucks/100 does in MU 503, in 2006 it was 18 bucks/100 does in MU 502, and in 2007 it was 15 bucks/100 does in MU 514. Two of the three MUs (MU 503 and 514) had substantial declines between survey years. In MU 503, the buck/doe ratio dropped from 31/100 in 2003 to 25/100 in 2005, and three years have now passed since the last survey. In MU 514, the buck/doe ratio dropped from 23/100 in 2004 to 15/100 in 2007. In MU 502, the buck/doe ratios have remained below 20/100 over the last two survey periods (2003 – 19/100, 2006 – 18/100).

Given these trends, it is very likely that the current buck/doe ratio in the region is well below 20 bucks/100 does.

11. The ministry keeps saying they are concerned about the buck/doe ratio. Is there a shortage of bucks or are there just too many does?

There are two approaches to correct buck/doe ratios when they drop below population targets – reduce the harvest of bucks or increase the harvest of does. The most effective strategy depends upon the management objectives. Currently, the population management objectives for Region 5 are to maintain the buck/doe ratios at or above 20/100 and to reduce and stabilize the number of does and fawns in the population. The ministry has recently increased the LEH permits in an effort to reduce and stabilize the number of antlerless deer (see graph from question #5). Observations from wildlife staff suggest that this objective may have been met, but not the objective for buck/doe ratios. There is also some empirical evidence to suggest that increasing the harvest of does is not the

best solution to improving the buck/doe ratio. In MU 514, the antlerless harvest was almost equal to that of the buck harvest from 2004 to 2006 (46 per cent of 2,869 harvested adult deer were does). Despite the high antlerless harvest, the buck/doe ratio dropped from 24/100 in 2004 to 15/100 in 2007.

Another factor that must be considered when increasing antlerless hunting opportunities is that many hunters who harvest a doe also harvest a buck. Therefore, attempting to improve the buck/doe ratio by increasing the antlerless harvest may result in a further increase in the buck harvest with little or no improvement in the buck/doe ratio.

It's important to remember that as a general wildlife management principle, antlerless harvest targets are set to achieve desired deer population levels, while buck harvest targets are set to achieve desired buck/doe ratios. Regional staff are re-examining its deer population objectives (i.e. to reduce, stabilize or increase deer numbers) through the PAZWP (Provincial Agriculture Zone Wildlife Program), and further regulatory changes may be initiated in 2010.

12. The 2009 hunting regulation closed the rut hunt from November 11 to 20. When will the ministry reopen this season?

The ministry imposed the partial rut closure because that is the period when the mating behaviour of bucks makes them most vulnerable to hunting. Mule deer in Region 5 are also highly concentrated on, or near, specific winter ranges in mid-to-late November. Most of these wintering areas have significant levels of access, which also makes them highly susceptible to over-harvest at this time of year.

The rut closure is a short-term regulation to help reduce the buck harvest and thus increase the buck/doe ratio. Once the ratio has reached or exceeded 20 bucks/100 does, ministry staff will re-evaluate the mule deer regulations and determine if buck hunting opportunities can be increased without compromising the adult sex ratio. All options will be considered including re-instating the two buck bag limit, reducing the length of the rut closure or possibly even eliminating the rut closure entirely.

It's important to note that other regions in the southern interior of B.C., (i.e. Regions 4 and 8) have also had to restrict their November seasons in order to avoid or correct an overharvest of bucks.

13. Why has the ministry implemented a buck hunt that appears to restrict the ability of resident hunters to provide meat for their families while benefiting commercial guides catering to non-resident hunters?

The primary changes to the regulations in 2009 were to place bucks on a four-point season in September, to impose a rut closure in the middle of November and to reduce the bag limit of bucks from two to one deer.

Some hunters believe that these regulation changes were designed to produce more bucks for guide-outfitter clients. However, four-point buck seasons, such as those that now occur in September and November, are designed to help guard against an overharvest of bucks as these seasons provide additional protection to younger bucks. The rut closure is another mechanism for protecting all bucks, not just older bucks. Similarly, the reduction in bag limit was designed to protect more bucks.

Management experience across North America has shown that the only effective way to increase the production of older, large-antlered bucks is to maintain a low harvest of bucks. This typically means having limited entry hunting seasons for bucks. Most mule deer hunters in B.C. are generally opposed to LEH for bucks and the ministry has therefore used other regulatory tools in order to avoid a LEH season.

14. Why is the Cariboo-Chilcotin region not using time-proven mule deer harvest management models similar to the ones already being run successfully in other regions?

The 2009 buck season in Region 5 is very similar to the other mule deer buck hunting seasons in Regions 3 (Thompson), 4 (Kootenay) and 8 (Okanagan). These regions have a regulatory system that allows for the harvest of four-point bucks during September, any buck in October and four-point bucks again in November. These seasons have been in place for many years and, other than adjusting the length of the hunting season in November, have provided relatively stable regulations.

Unfortunately, the other southern interior regions have not been able to quantify buck/doe ratios and fawn recruitment to the same extent as Region 5. Region 5 has generally more favourable conditions for surveying mule deer and strives to undertake mule deer inventory as a high priority. This has allowed regional staff to acquire more data in order to determine how well various season structures are meeting their management objectives.

15. Has the mule deer populations exceeded the carrying capacity of its habitat in Region 5, and if so, why does the ministry not increase the harvest on does?

While deer numbers in the Cariboo region continue to be healthy, there is no evidence that their numbers have exceeded the carrying capacity of their habitat. The primary measure for determining if mule deer populations are approaching carrying capacity is declining overwinter survival of fawns.

While overwinter survival of fawns is expensive to measure (requires monitoring the survival of radio-collared fawns), an inexpensive but useful index to assess relative overwinter survival are spring carryover counts (see Figure 6 below). These surveys suggest overwinter survival of fawns has been relatively high and stable. A notable exception was the decline in 2008 (36 fawns/100 adults) and 2009 (29 fawns/100 adults) which biologists attribute to the relatively severe winters in those years (see Figure 7 below). This decline in deer population recruitment will work to decrease the overall mule deer population in the region.

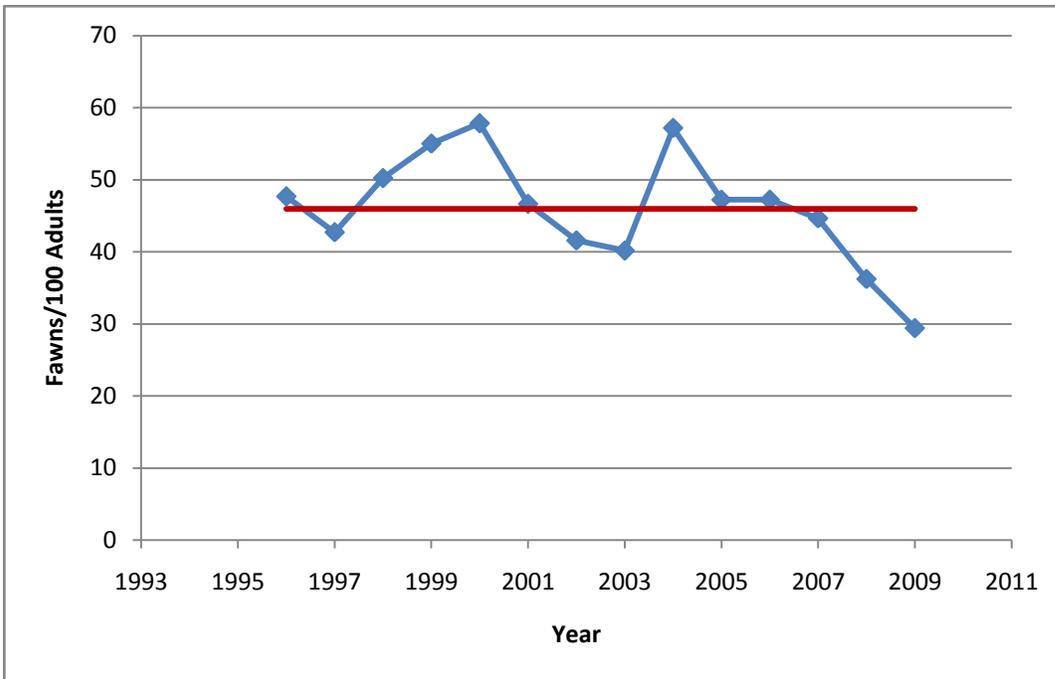


Figure 6: Trend in spring fawn/adult ratios for Mule Deer in Region 5. The average is 46 fawns/100 does.

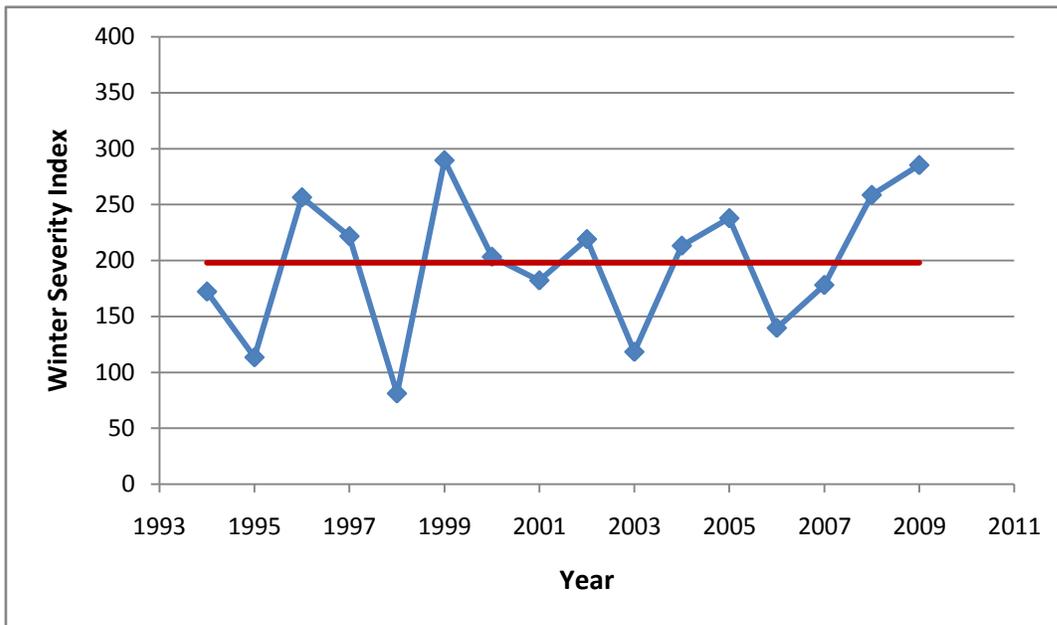


Figure 7: Winter severity in Region 5 based on winter weather records from the Williams Lake airport. The average winter severity index is 200. Numbers greater than 200 represent more severe winters.

16. The regulations in 2009 have added more restrictions and complexity to the already overly complex regulations. How does this address the ministry's goal of regulation simplification?

As outlined in question #3, the ministry has identified regulation simplification as one of its tests when approving new regulations. While the 2009 regulation imposed a number of changes including

replacing the “any buck” season with a “four-point season” in September, a partial rut closure in November and reducing the bag limit from two to one, these actions were considered necessary to reduce an ongoing overharvest of bucks.

Another equally important test for new regulations is the harmonization of hunting seasons between southern interior regions. The 2009 mule deer buck season in Region 5 is now more similar to other regions in the southern interior and also imposes a similar bag limit. Over the long-term, harmonized seasons also increase regulation simplicity and are much more cost-effective to implement.