

# **PROPOSED RECOMMENDATIONS FOR TOTAL ALLOWABLE HARVEST OF DESIGNATED SPECIES IN THE NASS WILDLIFE AREA FOR 2016/17**

**JUNE 15, 2016**

## **1. CONTEXT**

The Nisga'a Final Agreement (the NFA) came into effect in 2000. The NFA established a Wildlife Committee that is responsible for making recommendations to the Minister and to the Nisga'a Lisims Government for the total allowable harvest (TAH) for moose, mountain goat and grizzly bear in the Nass Wildlife Area (see Map 1). The TAH defines the harvest of designated species to be allocated to resident and non-resident hunters and to the Nisga'a Nation in accordance with the allocation provisions set out in Schedule A of Chapter 9 of the NFA.

This document sets out the Wildlife Committee's proposed TAH recommendations for the period of April 1, 2016 to March 31, 2017.

## **2. CONSIDERATIONS AND RECOMMENDATIONS**

### **Moose**

#### *Population Estimate and Trend*

The most current population estimate for moose in the NWA is 517 animals ( $\pm 28\%$ ), and is based on a stratified random block survey conducted in 2011. A new survey was scheduled for January-February 2016, but was postponed due to unfavourable snow conditions resulting from unusually warm weather.

Survey results indicate the moose population in the NWA declined significantly between 2001 and 2007, from 1595 animals ( $\pm 19\%$ ) in 2001 to 638 animals ( $\pm 33\%$ ) in 2007. Between 2007 and 2011, the population may have declined slightly, to 517 animals ( $\pm 28\%$ ), though each of the 2007 and 2011 population estimates are within the confidence interval of the other, so there is no statistical difference in the population estimates.

The Wildlife Committee has considered options to estimate the current moose population in the NWA in the absence of new survey information. Attempting to revise the population estimate in the absence of new survey information would rely on assumptions and anecdotal information which are impossible to verify, and would carry significant risk of error.

The Wildlife Committee has also considered the following:

- The population trend between 2007 and 2011 appears to have been relatively stable, and the TAH has been more conservative since 2011 than it was between 2007 and 2011.
- The TAH was reduced in 2011 and is for bulls only, and bull-only harvests are unlikely to have an effect on population trends unless the bull-to-cow ratio drops below a threshold that allows for full breeding of capable cows. The 2011 survey results indicate a bull-to-cow ratio of 63 bulls per 100 cows ( $\pm 25\%$ ), which is well above the threshold at which such ratios would become a concern.
- The NWA was closed to licensed resident and non-resident harvest in 2012, which means that the residual allocation of moose after accounting for the Nisga'a allocation was not harvested by resident and non-resident hunters.
- The reported harvest by permitted Nisga'a hunters has been below the Nisga'a allocation and the TAH.

## PROPOSED RECOMMENDATIONS FOR TOTAL ALLOWABLE HARVEST OF DESIGNATED SPECIES IN THE NASS WILDLIFE AREA FOR 2016/17

- Available information regarding moose harvest by other aboriginal hunters does not suggest an increase in harvest pressure on the population between 2011 and present, though this information is not complete and some of it is anecdotal.

In light of these factors, the Wildlife Committee considers the 2011 population estimate to be the best available information upon which to base a TAH recommendation, and has therefore based its 2016/17 TAH recommendation on the 2011 population estimate. The Wildlife Committee has made updating survey information to inform the 2017/18 TAH recommendation a priority.

### *Sustainable Harvest Rate*

The current TAH for moose in the NWA is derived by applying a harvest rate of 6% to the 2011 population estimate. This is a conservative harvest rate considering 2011 survey information indicates bull:cow ratios in the Nass Wildlife Area are above provincial objectives and calf:cow ratios are indicative of an increasing population, assuming cow mortality is not excessive.

The Wildlife Committee has therefore based its 2016/17 TAH recommendation on a continued harvest rate of 6%.

### *Wildlife Committee's Total Allowable Harvest Recommendation for Moose*

The Wildlife Committee recommends that the TAH for moose in the NWA be 32 bulls only (no cows or calves). The Wildlife Committee will revisit the TAH, in light of a new population estimate based on the survey planned for January-February 2017, and in light of the objectives of the Nass Moose Management Plan currently under development and which the Wildlife Committee hopes will be completed by that time.

## **Mountain Goat**

### *Population Estimate and Trend*

The most current population estimate for mountain goats in the NWA is 3,333, and is based on a combination of surveys conducted in 1997/1998 and 2002.

The Wildlife Committee did not consider options to estimate the current mountain goat population in the NWA in the absence of new survey information. Attempting to revise the population estimate in the absence of new survey information would rely on assumptions and anecdotal information which are impossible to verify, and would carry significant risk of error.

The Wildlife Committee has also considered the following:

- The reported harvest by permitted Nisga'a hunters has been below the Nisga'a allocation and the TAH.
- Harvest of mountain goats by resident and non-resident harvest is targeted at mature males (billies) and reported harvest rates are considered sustainable.
- Available information regarding mountain goat harvest by other aboriginal hunters does not suggest an increase in harvest pressure on the population between 2011 and present, though this information is not complete and some of it is anecdotal.

In light of these factors, the Wildlife Committee considers the combined 1997/1998 and 2002 survey data to be the best available information upon which to base a TAH recommendation, and has therefore based its 2016/17 TAH recommendation on the population estimate derived from these data.

**PROPOSED RECOMMENDATIONS FOR TOTAL ALLOWABLE HARVEST OF DESIGNATED SPECIES IN THE NASS WILDLIFE AREA FOR 2016/17**

*Sustainable Harvest Rate*

The previous TAH for mountain goat in the NWA was derived by applying a harvest rate of 4% to the population estimate of 3,333. Historic harvest trends suggest that harvest has been substantially below the TAH. The Wildlife Committee has no information to suggest that the actual harvest by all hunters will increase in coming years from that in recent years.

The Wildlife Committee has therefore based its 2016/17 TAH recommendation on a harvest rate of 4%.

*Wildlife Committee's Total Allowable Harvest Recommendation for Mountain Goat*

The Wildlife Committee recommends that the TAH for mountain goats in the NWA be 133.

**Grizzly Bear**

*Population Estimate and Trend*

The most current population estimate for grizzly bear in the NWA is based on modelled population densities by Grizzly Bear Population Unit (GBPU) in 2012 (Mowat et al. 2013). The NWA overlaps with three GBPUs (Cranberry, Stewart, Khutzeymateen) from which population densities were used to calculate the estimated number of bears present within the portions of each GBPU within the NWA. The Khutzeymateen GBPU is closed to hunting. The population estimates for the NWA GBPUs are:

<b>GBPU</b>	<b>GBPU Population Estimate</b>	<b>NWA Population Estimate</b>
Cranberry	352	138
Stewart	355	285
Khutzeymateen*	280	62
Total Population	987	485
Total Hunttable Population (Cranberry and Stewart)	707	423

The Wildlife Committee considers the 2012 population estimate to be the best available information upon which to base a TAH recommendation, and has therefore based its 2016/17 TAH recommendation on the 2012 population estimate.

*Sustainable Harvest Rate*

The current TAH for grizzly bear in the NWA is derived by applying a harvest rate of 5% to the 2012 population estimate. This is considered a conservative harvest rate. The portions of the same GBPUs outside the NWA are managed based on a harvest rate of 6%.

The Wildlife Committee has based its 2016/17 TAH recommendation on a continued harvest rate of 5%.

*Wildlife Committee's Total Allowable Harvest Recommendation for Grizzly Bear*

The Wildlife Committee recommends that the TAH for grizzly bear in the NWA be 21.