



PROCEDURE MANUAL

Ministry of Environment

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SUBJECT			
Moose Harvest Management			

This Procedure Replaces:

None

Staff, Organizations Directly Affected:

Director
Regional Managers
Wildlife Management Staff
First Nations
Resident Hunters
Guide Outfitters

Policy Cross-Reference:

Ministry Policy Manual, Volume 4, Section 7

Subsections:

— 01.07 Game Harvest Management

Other Cross-References:

Ministry Policy Manual, Volume 4, Section 7

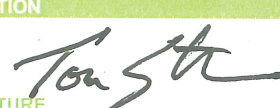
Subsections:

— 01.01 Allowable Harvest
— 01.02 Open Seasons
— 01.03 Harvest Allocation
— 01.05 Quota Allocation – Guided Hunting
— 01.06 Limited Entry Hunting
— 01.10 Resident Hunter Priority
— 01.11 Commercial Hunting Interests
— 04.01.3 Control of Species
— 13.01 Goal of Wildlife Management

Ministry Procedure Manual, Volume 4, Section 7

Subsections:

— 01.01.1 Allowable Harvest
— 01.02 Open Seasons
— 01.03.1 Harvest Allocation
— 01.05.1 Quota
— 01.05.2 Administrative Guidelines
— 01.06.1 Limited Entry Hunting

PREPARED BY		AUTHORIZATION	
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		DATE EFFECTIVE	March 1, 2010
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- 01.07.1 Big Game Harvest Management
- 04.01.3 Protecting Species at Risk From Other Species

Purpose:

To establish a sound and transparent approach for developing management objectives and harvest regulations for moose province-wide.

Definitions:

“allocation” – means the division of the annual allowable harvest (AAH) remaining after the legal rights of First Nations have been recognized and provided for, between resident hunters and guided hunters.

“allocation period” – means the five year period to which an allocation share applies, as defined in the Harvest Allocation Procedure.

“annual allowable harvest” (AAH) – means the number of moose that are allowed to be killed by resident hunters and guided hunters each year.

“big game” – means big game as defined in the *Wildlife Act*, RSBC 1996 c.488.

“big game stock assessment” – means the process of collecting, analyzing, and reporting demographic information for the purpose of determining the effects of harvesting on big game populations.

“director” – means director as defined in the *Wildlife Act*, RSBC 1996, c.488.

“game management zone” (GMZ) – means a grouping of management units based on geographical, ecological, and access criteria.

“management unit” (M.U.) – means a specific and legally designated land area denoted by the initials M.U. and a hyphenated number, e.g. M.U. 3-18 (B.C. Reg. 64/96).

“maximum allowable mortality” – means the number of animals, or animals in a particular class, that are allowed to be killed by humans each year, including First Nations’ harvest for food, social, and ceremonial purposes, licensed hunting, and road/rail kill.

“population management unit” (PMU) – means the spatial scale at which a given big game population will be managed for hunting. This normally will be the geographic area that represents the year-round range of a big game population, while keeping interchange with other populations to a minimum.

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“regional section head” (RSH) – means a section head responsible for the management of fish and wildlife within a region, Regional Operations Branch, Ministry of Environment.

“sightability correction factor” – means a quantitative coefficient which is estimated or derived and applied to a survey population estimate to account for visibility or sightability bias of the observers.

“spike-fork moose” – means a bull moose having no more than two tines on one antler (includes tines on main antler and brow palms), but does not include a calf (i.e. a moose less than 12 months of age).

“wildlife manager” – means the Manager of the Wildlife Management Section, Fish and Wildlife Branch, Ministry of Environment, Victoria.

Procedure:

1 Population Management Units

- 1.1 Population Management Units (PMUs) will, unless otherwise stated, be equivalent to Game Management Zones (GMZs).
- 1.2 As specified in the Big Game Harvest Management Procedure, moose may be managed at smaller or larger spatial units, provided that the resulting units conform to the criteria outlined in the Big Game Harvest Management Procedure.

2 Management Objectives

- 2.1 Management objectives should be defined for each moose population management unit (PMU), and should take into consideration the big game management objectives described in the Big Game Harvest Management Procedure.
- 2.2 Unless formal population management objectives have been identified, hunted moose populations will be managed to avoid declines and to ensure that the post-hunt bull:cow ratio remains above 30 bulls:100 cows. For low density moose populations ($\leq 200/1000 \text{ km}^2$ of fall range, i.e. habitat currently or potentially used during the breeding season), a ratio of 50 bulls:100 cows is preferred.
- 2.3 Formal population management objectives will normally include a desired range in population density and bull:cow ratio. The lower range of the bull:cow ratio should not be below 30 bulls:100 cows, or 50 bulls:100 cows for low density moose populations ($\leq 200/1000 \text{ km}^2$ of fall range). Formal objectives should be developed in consideration of land use commitments, species at risk conservation, broader ecosystem considerations, First Nations needs, or other specified objectives; and approved by the Wildlife Manager.

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3 Harvest Strategy

3.1 Population Assessment

- 3.1.1 The maximum allowable mortality level should be determined through a big game stock assessment.
- 3.1.2 Population estimates from survey areas (e.g. Stratified Random Block) should be adjusted upwards using a sightability correction factor or relevant model wherever possible. Extrapolation of population estimates to the population management unit should be based on survey density, adjusted for habitat suitability of non-surveyed areas, and any other factors as deemed appropriate by the Regional Section Head (RSH).
- 3.1.3 The population assessment (aided by a computer model where appropriate) should be used to determine the maximum allowable mortality level that will enable the population objectives to be achieved over the allocation period.

3.2 Harvest Management Rules

- 3.2.1 For PMUs administered under the Harvest Allocation Policy and Procedure (i.e. allocated PMUs), the maximum allowable mortality level will, in general, be set to achieve the management objectives during the course of an allocation period.
- 3.2.2 The annual allowable harvest (AAH) for each allocated PMU will typically be calculated by:
 - a. estimating the maximum allowable mortality level through the big game stock assessment;
 - b. estimating or otherwise accounting for First Nations harvest of moose for food, social, and ceremonial purposes through the most appropriate means;
 - c. estimating or otherwise accounting for road/rail mortality where a substantive level of mortality is present; and
 - d. subtracting the First Nations harvest and the road/rail mortalities from the maximum allowable mortality.

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- 3.2.3 For allocated PMUs where there is insufficient information to perform a big game stock assessment, the AAH may be estimated from the historical average annual harvest of moose by licensed hunters, providing all available evidence suggests that the historic harvest has been sustainable.
- 3.2.4 It is recommended, but not required, that an AAH be established for unallocated PMUs.
- 3.2.5 In areas where there is a spike-fork moose harvest, the harvest of spike-fork moose should not exceed 50% of the total licensed bull moose harvest. The RSH may select a lower spike-fork moose percentage, if approved by the Wildlife Manager.
- 3.2.6 Season dates should fall within the bounds outlined in Table 1 of Appendix A.
- 3.2.7 Moose seasons in November may be adjusted in response to seasonal migration timing and hunting vulnerability.

3.3 Hunting Regulation

- 3.3.1 Numbers of LEH authorizations and guide outfitters' quotas should be set in accordance with the Harvest Allocation Procedure, Limited Entry Hunting Procedure, Quota Procedure, and Administrative Guidelines Procedure.
- 3.3.2 Success rates used to determine the number of LEH authorizations will reflect the most recent three years that were open to moose hunting. The spatial application of success rates will be by hunt zone.
- 3.3.3 Despite section 3.3.2, LEH success rates will be limited to a minimum of 5%. Higher minimum success rates may be applied in special circumstances where approved by the Director. LEH areas with consistently low success rates should be reviewed and other regulatory options considered.

4 Bag Limits

- 4.1 Normally, provincial and regional bag limits will be no more than one moose per hunter per year. The bag limit may be increased where required to achieve management objectives.

5 Regulation Review

- 5.1 The review of moose harvest regulations will follow the procedures outlined in the Big Game Harvest Management Procedure.

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APPENDIX A: Recommended Hunting Season Structure for Moose

Table 1. Season bounds (minimum/maximum season dates) for moose harvest seasons¹.

Class	Season Type	Season Bounds*
Spike-fork Bull	GOS	Aug 15 – Nov 30
Tripalm Bull [‡]	GOS	Aug 15 – Nov 30
10-point Bull [‡]	GOS	Aug 15 – Nov 30
Any Bull	GOS	Aug 15 – Nov 30
Any Bull	LEH Shared Hunt	Aug 15 – Nov 30
Cow/ Antlerless	GOS	Oct 1 – Dec 10
	LEH Shared Hunt	Oct 1 – Dec 10
Calf	GOS	Oct 1 – Dec 10
	LEH Age-Restricted	Oct 1 – Dec 10

* Start dates are in 5-day intervals

[‡] Only for Region 7

GOS= General Open Season

LEH = Limited Entry Hunt

¹ Season dates represent outer bounds of seasons for each season type. It is expected that any open season will fall within the dates specified, but not that the entire date range is used in each region.