



PROCEDURE MANUAL

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SUBJECT			
Southern Interior Mule Deer Harvest Management			

This Procedure Replaces:

Previous procedure "Southern Interior Mule Deer Harvest Management", March 1, 2010

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
— 01.06 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
— 01.02.1 Open Seasons
— 01.06.1 Limited Entry Hunting
— 01.07.1 Big Game Harvest Management
— 04.01.3 Protecting Species at Risk from Other Species

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POSITION	Forests, Lands and Nat. Res. Op.	SIGNATURE	
		DATE EFFECTIVE	November 27, 2014
		REVISION NO.	



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Purpose:

To establish a sound and transparent approach for developing management objectives and harvest regulations for Mule Deer in resource management regions 3, 4, 5 and 8.

Definitions:

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

“big game stock assessment” – 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) – a grouping of management units based on geographical, ecological, and access criteria.

“herd composition survey” – a survey to measure the composition of a populations (e.g. buck:doe and fawn:doe ratios), usually after the hunting season.

“management unit” (M.U.) – 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).

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

“provincial agricultural zone wildlife program” (PAZWP) – the interagency initiative, led by the Ministry of Forests, Lands and Natural Resource Operations and the Ministry of Agriculture, that supports the coordination of wildlife damage compensation, mitigation and prevention programs at provincial and regional levels.

“southern interior” – areas in British Columbia that are contained within resource management regions 3, 4, 5 and 8.

“sustainable harvest” – the number of animals that can be harvested from a population year after year without reducing the population over time.

“wildlife manager” – the Manager of the Wildlife Management Section, Fish, Wildlife and Habitat Management Branch, Ministry of Forests, Lands and Natural Resource Operations, Victoria.

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Procedure:

1 Population Management Units

- 1.1 This procedure applies to Mule Deer harvest management in the Southern Interior.
- 1.2 The PMU for Mule Deer in the Southern Interior should normally be the region or sub-region (e.g. East Kootenay, West Kootenay).
- 1.3 As specified in the Big Game Harvest Management Procedure, Mule Deer may be managed at smaller spatial units (e.g. GMZs, PAZWP special management areas) 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 Southern Interior Mule Deer PMU, and should take into consideration the big game management objectives described in the Big Game Harvest Management Procedure.
- 2.2 Formal population and harvest objectives should be developed and recommended to the Wildlife Manager, where supported by a big game stock assessment (see Big Game Harvest Management Procedure). Harvest objectives may consider hunting vulnerability, severe winters, timing of seasonal migrations or other factors affecting achievement of objectives.
- 2.3 In the absence of formal population management objectives within a PMU, Mule Deer should be managed to:
 - a. maintain sustainable harvests on broad spatial scales, recognising that localised declines may occur; and
 - b. maintain buck:doe ratios above 20 bucks:100 does after the hunting season (post-hunt) within each PMU, as identified in 1.2 and 1.3 (also see 3.1.2).

3 Harvest Strategy

3.1 Population Assessment

- 3.1.1 The appropriate Resource Information Standards Committee (RISC) standards should be used when performing inventories of Mule Deer populations.
- 3.1.2 Post-hunt buck:doe ratios should be measured within survey units established for each PMU whenever and wherever reliable herd composition surveys can be conducted.

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- 3.1.3 Where prescribed, the frequency and severity of winters within PMUs should be monitored through a standardized winter severity index.
- 3.1.4 Survey data, harvest and hunter effort information, and winter severity indices may be incorporated into a big game stock assessment model to assess population status and evaluate the effects of harvesting on the population.

3.2 Hunting Regulations

- 3.2.1 Mule Deer harvest seasons should normally be regulated using a combination of season types and season bounds as outlined in Table 1 of Appendix A.
- 3.2.2 In areas where herd composition survey data is lacking and cannot be obtained, increased emphasis should be placed on keeping regulations consistent from year to year in order to monitor Mule Deer population trends from hunter effort data (e.g. kill per unit effort)¹.
- 3.2.3 Notwithstanding 3.2.2, Mule Deer seasons may be adjusted in response to severe winters, over harvest, or other factors affecting achievement of management objectives.
- 3.2.4 Notwithstanding 3.2.2, Mule Deer seasons may be adjusted in response to seasonal migration timing and hunting vulnerability.
- 3.2.5 Antlerless harvests should generally be available where sustainable, and where required to achieve formal management objectives.
- 3.2.6 General Open Season antler-restricted hunts should be used to provide hunting opportunity when an unrestricted General Open Season does not allow management objectives to be achieved, and not because of expectations that they will increase the proportion of mature bucks within a population^{2,3}.
- 3.2.7 Before proposing regulation changes so that populations will meet the performance measures of management objectives (e.g. post-hunt buck:doe ratios), staff should examine lines of evidence as described in Appendix B to determine if those performance measures are not being met, and report that information to the Wildlife Manager.

¹ Keegan, T. W., et al. 2011. Methods for monitoring mule deer populations. Mule Deer Working Group, Western Association of Fish and Wildlife Agencies, USA.

² Erickson, G.L., J.R. Heffelfinger, and J.H. Ellenberger. 2003. Potential effects of hunting and hunt structure on Mule Deer abundance and demographics. In de Vos, Jr. J. C., M.R. Conover, and N.E. Headrick. Mule Deer Conservation: Issues and Management Strategies, Berryman Institute Press, Utah State University, Logan.

³ Carpenter, L.H. and B. Gill. 1987. Antler point regulations: the good, the bad, and the ugly. Transactions of the Western Association of Game and Fish Commissioners 67: 94-107.

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- 3.2.8 Harvest strategies developed under the Provincial PAZWP are not constrained by 3.1 and 3.2.

4 Bag Limits

- 4.1 Normally, bag limits will be no more than two Mule Deer per hunter per year in each region. The bag limit may be increased where required to achieve management objectives.
- 4.2 Normally, no more than one of the Mule Deer in 4.1 should be a buck.

5 Regulation Review

- 5.1 Regulations should be reviewed, and the results of any regulation changes monitored, according to Appendix B and the procedure outlined in the Big Game Harvest Management Procedure.
- 5.2 Regulation changes resulting from implementation of this procedure, which are substantially different from current harvest strategies, may be phased in over a 3 year period in order to reduce impact on stakeholders.

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Appendix A: Recommended Hunting Season Structure for Southern Interior Mule Deer

Table 1. Season bounds (minimum/maximum season dates) for Southern Interior Mule Deer harvest seasons⁴.

Class	Season Type	Season Dates
Antler-restricted (≥ 4 -point)	GOS	Sep 1 ⁵ – Sep 30 and/or Nov 1 – Dec 10
Any buck	GOS	Oct 1 – Oct 31
	ARS*	Sep 15 – Sep 30
	BOS**	Sep 1 – Sep 9 and/or Dec 1 – Dec 10 ⁶
Antlerless	LEH	Oct 1 – Oct 31 and/or Nov 1 – Nov 30

* “Any buck” ARS should be managed as part of GOS.

** “Any buck” BOS should be managed as part of GOS.

ARS = Youth/Age Restricted Season

BOS = Bow Only Season

GOS = General Open Season

LEH = Limited Entry Hunt

⁴ Season dates represent outer bounds of seasons for each 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.

⁵ The recommended opening date for this hunt is September 10, as it avoids increased hunting pressure over the Labour Day long weekend, can provide for exclusive bow-only seasons, and continues to allow age-restricted seasons to occur concurrently with non-age-restricted seasons. A September 1 opening date should only be considered where there is a need for increased hunting opportunities, and where such a season will not jeopardize the management objectives of the PMU.

⁶ Despite the listed season bounds, the intent is that BOS, in areas where they are being considered, should only occur for the 9 or 10 days preceding or following a GOS, respectively.

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Appendix B: Assessing and Monitoring Performance Measures of Management Objectives

Prior to Proposing a Regulation Change:

Population management units for Mule Deer in the Southern Interior should have one or more performance measures that are used to determine if management objectives are being met (e.g. maintain buck:doe ratios). It is important to note that these performance measures are meant to be used as general guidance and should not be used as a precise threshold for immediate initiation of a regulation change. This is because of the general problems associated with assessing populations (e.g. unfavourable weather conditions or observer bias when conducting aerial surveys).

It is recommended that multiple lines of evidence be examined that could indicate performance measures are not being met. These include:

- successive population surveys (i.e. repeat surveys over a year or number of years);
- a big game stock assessment (analysis of population and hunter harvest information); and
- reliable field observations from a variety of sources.

The spatial area to be used to assess a management concern will normally be the PMU. There may be circumstances where the performance measure is not being met in a portion of a PMU. In these situations, options should be examined for adjusting harvest regimes in the affected area only so as not to reduce hunting opportunities throughout the entire PMU. Where this occurs, the management focus should be recovery within the affected area, so as to restore consistent regulations throughout the PMU.

Monitoring the Regulation Change:

To evaluate if the regulation change has had the desired population effect (e.g. recovery above management threshold limits), a big game stock assessment should be conducted 3-5 years after the regulation change has been implemented in order to provide adequate time for the desired change in the population to occur. Normally, the stock assessment would include a minimum of one population survey in addition to the analysis of hunter harvest information.

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