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Withheld pursuant to/removed as

NR



Reference: 126733

Mr. Wilf Pfleiderer
Committee Chair, Wildlife Allocation Committee
BC Wildlife Federation
Unit 101 – 3060 Norland Avenue
Burnaby BC V5B 3A6

Dear Mr. Pfleiderer:

I wish to inform you on the decision I have made to include spike-fork (SF) moose into the Annual Allowable Harvest (AAH) for bull moose within Regions 3 and 8; and the rationale for my decision. The need for this decision was due to growing concerns by Wildlife Program staff that the SF moose harvest within Region's 3 and 8 has increased and is no longer sustainable.

As the status quo was not a viable option due to conservation concerns (i.e. maintaining the bull/cow ratio at or above 30 bulls/100 cows), two options were considered: (1) include the harvest of SF moose within the maximum allowable mortality (MAM) for bulls but exclude SF moose from the AAH allocated under the Allocation Policy; and (2) include the harvest of SF within the MAM *and* include the harvest of SF moose within the AAH allocated under the Allocation Policy.

As with a number of decisions that have recently been made by the Ministry with respect to hunting, this decision was influenced by Ministry directives for increased simplification, harmonization and hunting opportunity; while maintaining management costs within Ministry budgets.

From a provincial perspective, it is highly desirable to have a consistent approach to the management of SF moose that is transparent, fair and defensible. In 2007, the Omineca sub-region decided to include both SF moose and mature bulls (MB) in the AAH, as it was not possible to reliably estimate the SF harvest or the MB harvest in a science-based, transparent manner.

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The concern was some guide outfitter clients harvest SF moose, but guide declaration forms do not document this information. Similarly, there was concern that LEH resident hunters also harvest some SF moose, but the Hunter Sample does not document this information either. These concerns also apply to the harvest of bull moose within Regions 3 and 8. While the harvest of SF moose by guide-outfitters is likely very low in Regions 3 and 8, there is currently no method to accurately estimate the SF harvest and MB harvest by resident and guided hunters without using Compulsory Inspection (CI). While the potential of CI was considered, it was abandoned as it would increase the Ministry's management costs, and because it would be inconvenient for resident hunters.

To summarize, my decision to include both SF and MB moose in the AAH was made for the following reasons:

1. It ensures that bull moose will continue to be sustainably managed for hunting.
2. It provides a harmonized approach for managing all bull moose as a Category A species under the Allocation Policy.
3. It can be implemented with existing resources and budgets.
4. It provides a more transparent process and does not require the use of assumptions that would be required to separately enumerate the harvest of SF and MB moose by resident and guided hunters.
5. It continues to allow resident hunters to harvest SF moose through GOS, and thus maintains the opportunity for a resident hunter to hunt moose every year.
6. It provides assurance that both residency groups will be able to achieve their allocated share of the bull moose harvest. For example, LEH permits can be adjusted annually in response to changes in the GOS harvest (which can often change unpredictably), and thus ensures that residents are able to acquire their allocated share of the harvest.
7. It continues to recognize resident priority as resident hunters are expected to harvest >90% of the total bull moose harvest, and have exclusive access to the total AAH within vacant guide territories.

Sincerely,

Tom Ethier
Director, Fish and Wildlife Branch



Reference: 181625

Wilf Pfleiderer
Committee Chair, Wildlife Allocation Committee
BC Wildlife Federation
Unit 101 – 3060 Norland Avenue
Burnaby BC V5B 3A6

Dear Mr. Pfleiderer:

In May 2010, the Fish and Wildlife Branch wrote to inform you about our decision to include spike-fork (SF) moose in the Annual Allocable Harvest (AAH) for bull moose in Regions 3 and 8. At that time, Region 4 was excluded from this decision because the region was part way through a 3-year trial to implement a new SF season and closely monitor the outcome. I now wish to inform you that we have decided to include SF moose in the bull AAH for Region 4 in 2012. This is primarily due to conservation concerns, although provincial consistency in moose management is a secondary benefit.

Wildlife Program staff monitored moose populations in Region 4 prior to a SF season (2007-2008), and 3 years following implementation (2009-2011). Monitoring included annual post-hunt surveys to assess bull to cow ratios, and Compulsory Inspections to track harvest of SF and mature bull moose. In areas with a high SF harvest (e.g., the Elk Valley) staff documented a decline in bull to cow ratios, as well as ratios below 30 bulls:100 cows. The Moose Harvest Management Procedure states that “moose populations will be managed to avoid declines and ensure that the post-hunt bull:cow ratio remains above 30 bulls:100 cows”. Including SF bulls in the AAH will reduce the overall bull harvest and should allow bull to cow ratios to recover.

At present, all other regions with SF seasons (i.e., Regions 3, 7a and 8) include SF moose in their bull AAH. Therefore, our decision for Region 4 contributes to a harmonized approach for managing moose across the province.

To summarize, I'd like to reiterate our rationale for including SF moose in the bull moose AAH:

1. It ensures that bull moose will continue to be sustainably managed for hunting.
2. It provides a harmonized approach for managing all bull moose as a Category A species under the Allocation Policy.

3. It can be implemented with existing resources and budgets.
4. It provides a more transparent process and does not require the use of assumptions that would be required to separately enumerate the harvest of SF and mature bull moose by resident and guided hunters.
5. It continues to allow resident hunters to harvest SF moose through General Open Season and thus maintains the opportunity for a resident hunter to hunt moose every year.
6. It provides assurance that both residency groups will be able to achieve their allocated share of the bull moose harvest. For example, Limited Entry Hunt permits can be adjusted annually in response to changes in the GOS harvest (which can often change unpredictably), and thus ensures that residents are able to acquire their allocated share of the harvest.
7. It continues to recognize resident priority as resident hunters are expected to harvest >90% of the total bull moose harvest.

Sincerely,

Ian Hatter
Manager
Wildlife Management Section

SPIKE FORK INCLUDED IN AAH allocation proportions Apply Hardship Rule? y (either "Y" or "N")

AAH = 6.0% of pop est						0.9 residents guides		SF limit 50.0% (% of AAH)					
MU	Zone	Moose pop estimate	GO territory estimate	AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	adjusted quota	Resident allocation	AAH check	LEH	GOS
312	A	600		36.000						36.000	36.000	18.000	18.000
312	B	100	70	6.000	Ritcey	70	0.420	1.000	0.800	5.200	6.000	2.600	2.600
313		200		12.000						12.000	12.000	6.000	6.000
317		60	15	3.600	Rickett	25	0.090	0.000	0.000	3.600	3.600	1.800	1.800
318		400		24.000						24.000	24.000	12.000	12.000
319	A	350		21.000						21.000	21.000	10.500	10.500
319	B	250		15.000						15.000	15.000	7.500	7.500
320		400	400	24.000	Ritcey	100	2.400	1.000	1.200	22.800	24.000	11.400	11.400
326		250	50	15.000	Ritcey	20	0.300	0.700	0.560	14.440	15.000	7.220	7.220
327		200		12.000						12.000	12.000	6.000	6.000
328	A	300		18.000						18.000	18.000	9.000	9.000
328	B	150		9.000						9.000	9.000	4.500	4.500
329	A	150		9.000						9.000	9.000	4.500	4.500
329	B	250	75	15.000	Michel	30	0.450	1.000	0.800	14.200	15.000	7.100	7.100
330	A	350	80	21.000	Giles	22.85714	0.480	1.000	0.800	20.200	21.000	10.100	10.100
330	B	500	120	30.000	Giles	24	0.720	1.000	0.800	25.900	30.000	12.950	12.950
			150		Loney	30	0.900	1.000	0.900				
			150		Michel	30	0.900	3.000	2.400				
331	A	250	250	15.000	Rickett	100	1.500	2.200	1.760	13.240	15.000	6.620	6.620
331	B	250	50	15.000	Rickett	20	0.300	0.500	0.400	13.550	15.000	6.775	6.775
			175		Searles	70	1.050	1.000	1.050				
332		250	50	15.000	Ambler	20	0.300	0.700	0.560	12.520	15.000	6.260	6.260
332			125		Bracewell	50	0.750	1.700	1.360				
			75		Sievers	30	0.450	0.700	0.560				
333		100	100	6.000	Bracewell	100	0.600	0.500	0.600	5.400	6.000	2.700	2.700
335		100		6.000						6.000	6.000	3.000	3.000
336		250	225	15.000	Friesen	90	1.350	1.500	1.350	13.650	15.000	6.825	6.825
337		200	120	12.000	Friesen	60	0.720	1.500	1.200	10.800	12.000	5.400	5.400
338		200		12.000						12.000	12.000	6.000	6.000
339		300	25	18.000	Condie	8.333333	0.150	1.000	0.800	17.200	18.000	8.600	8.600
340		300		18.000						18.000	18.000	9.000	9.000
341		200		12.000						12.000	12.000	6.000	6.000
342		250	125	15.000	Friesen	50	0.750	1.500	1.200	13.800	15.000	6.900	6.900
343		150		9.000						9.000	9.000	4.500	4.500
344		250		15.000						15.000	15.000	7.500	7.500
346		600	100	36.000	Maitland	16.66667	0.600	0.000	0.000	36.000	36.000	18.000	18.000
Total		8160	2530	489.600			15.180	22.500	19.100	470.500	489.600	235.250	235.250

residents get all AAH within non-allocated guide territories (previous practice)
if hardship rule evoked, then apply to individual guides
note for R3, that we don't have a previous AAH because SF was not considered to be part of AAH.

Total AAH	
Res LEH	235.250
GO	19.100
GOS SF	235.250
total	489.600

Allocated % GO= 3.9%
% Res= 96.1%

Spike Fork incuded in AAH

Total	% GO=	3.9%
	% Res=	96.1%

Spike Fork incuded in AAH

SPIKE FORK INCLUDED IN AAH allocation proportions Apply Hardship Rule? y (either "Y" or "N")

AAH = 6.0% of pop est						0.9 residents guides		SF limit 50.0% (% of AAH)					
MU	Zone	Moose pop estimate	GO territory estimate	AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	adjusted quota	Resident allocation	AAH check	LEH	GOS
312	A	600		36.000						36.000	36.000	18.000	18.000
312	B	100	70	6.000	Ritcey	70	0.420	1.000	0.800	5.200	6.000	2.600	2.600
313		200		12.000						12.000	12.000	6.000	6.000
317		60	15	3.600	Rickett	25	0.090	0.000	0.000	3.600	3.600	1.800	1.800
318		400		24.000						24.000	24.000	12.000	12.000
319	A	350		21.000						21.000	21.000	10.500	10.500
319	B	250		15.000						15.000	15.000	7.500	7.500
320		400	400	24.000	Ritcey	100	2.400	1.000	1.200	22.800	24.000	11.400	11.400
326		250	50	15.000	Ritcey	20	0.300	0.700	0.560	14.440	15.000	7.220	7.220
327		200		12.000						12.000	12.000	6.000	6.000
328	A	300		18.000						18.000	18.000	9.000	9.000
328	B	150		9.000						9.000	9.000	4.500	4.500
329	A	150		9.000						9.000	9.000	4.500	4.500
329	B	250	75	15.000	Michel	30	0.450	1.000	0.800	14.200	15.000	7.100	7.100
330	A	350	80	21.000	Giles	22.85714	0.480	1.000	0.800	20.200	21.000	10.100	10.100
330	B	500	120	30.000	Giles	24	0.720	1.000	0.800	25.900	30.000	12.950	12.950
			150		Loney	30	0.900	1.000	0.900				
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331	A	250	250	15.000	Rickett	100	1.500	2.200	1.760	13.240	15.000	6.620	6.620
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332			125		Bracewell	50	0.750	1.700	1.360				
			75		Sievers	30	0.450	0.700	0.560				
333		100	100	6.000	Bracewell	100	0.600	0.500	0.600	5.400	6.000	2.700	2.700
335		100		6.000						6.000	6.000	3.000	3.000
336		250	225	15.000	Friesen	90	1.350	1.500	1.350	13.650	15.000	6.825	6.825
337		200	120	12.000	Friesen	60	0.720	1.500	1.200	10.800	12.000	5.400	5.400
338		200		12.000						12.000	12.000	6.000	6.000
339		300	25	18.000	Condie	8.333333	0.150	1.000	0.800	17.200	18.000	8.600	8.600
340		300		18.000						18.000	18.000	9.000	9.000
341		200		12.000						12.000	12.000	6.000	6.000
342		250	125	15.000	Friesen	50	0.750	1.500	1.200	13.800	15.000	6.900	6.900
343		150		9.000						9.000	9.000	4.500	4.500
344		250		15.000						15.000	15.000	7.500	7.500
346		600	100	36.000	Maitland	16.66667	0.600	0.000	0.000	36.000	36.000	18.000	18.000
Total		8160	2530	489.600			15.180	22.500	19.100	470.500	489.600	235.250	235.250

residents get all AAH within non-allocated guide territories (previous practice)
if hardship rule evoked, then apply to individual guides
note for R3, that we don't have a previous AAH because SF was not considered to be part of AAH.

Total AAH	
Res LEH	235.250
GO	19.100
GOS SF	235.250
total	489.600

Allocated % GO= 3.9%
% Res= 96.1%

Spike Fork incuded in AAH

Total	% GO=	3.9%
	% Res=	96.1%

Spike Fork incuded in AAH

allocation proportions														Apply Hardship Rule? N (either "Y" or "N")	
residents															
0.9 guides															
0.1															
AAH = 6.0% of pop est														SF limit 50.0% (% of AAH)	
MU	Zone	Moose pop estimate	GO territory estimate	AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	adjusted quota	Resident allocation	AAH check	LEH	GOS		
312	A	600		36.000						36.000	36.000	18.000	18.000		
312	B	100	70	6.000	Ritcey	70	0.420	1.000	0.420	5.580	6.000	2.790	2.790		
313		200		12.000						12.000	12.000	6.000	6.000		
317		60	15	3.600	Rickett	25	0.090	0.000	0.090	3.510	3.600	1.755	1.755		
318		400		24.000						24.000	24.000	12.000	12.000		
319	A	350		21.000						21.000	21.000	10.500	10.500		
319	B	250		15.000						15.000	15.000	7.500	7.500		
320		400	400	24.000	Ritcey	100	2.400	1.000	2.400	21.600	24.000	10.800	10.800		
326		250	50	15.000	Ritcey	20	0.300	0.700	0.300	14.700	15.000	7.350	7.350		
327		200		12.000						12.000	12.000	6.000	6.000		
328	A	300		18.000						18.000	18.000	9.000	9.000		
328	B	150		9.000						9.000	9.000	4.500	4.500		
329	A	150		9.000						9.000	9.000	4.500	4.500		
329	B	250	75	15.000	Michel	30	0.450	1.000	0.450	14.550	15.000	7.275	7.275		
330	A	350	80	21.000	Giles	22.85714	0.480	1.000	0.480	20.520	21.000	10.260	10.260		
330	B	500	120	30.000	Giles	24	0.720	1.000	0.720	27.480	30.000	13.740	13.740		
			150		Loney	30	0.900	1.000	0.900						
			150		Michel	30	0.900	3.000	0.900						
331	A	250	250	15.000	Rickett	100	1.500	2.200	1.500	13.500	15.000	6.750	6.750		
331	B	250	50	15.000	Rickett	20	0.300	0.500	0.300	13.650	15.000	6.825	6.825		
			175		Searles	70	1.050	1.000	1.050						
332		250	50	15.000	Ambler	20	0.300	0.700	0.300	13.500	15.000	6.750	6.750		
332			125		Bracewell	50	0.750	1.700	0.750						
			75		Sievers	30	0.450	0.700	0.450						
333		100	100	6.000	Bracewell	100	0.600	0.500	0.600	5.400	6.000	2.700	2.700		
335		100		6.000						6.000	6.000	3.000	3.000		
336		250	225	15.000	Friesen	90	1.350	1.500	1.350	13.650	15.000	6.825	6.825		
337		200	120	12.000	Friesen	60	0.720	1.500	0.720	11.280	12.000	5.640	5.640		
338		200		12.000						12.000	12.000	6.000	6.000		
339		300	25	18.000	Condie	8.333333	0.150	1.000	0.150	17.850	18.000	8.925	8.925		
340		300		18.000						18.000	18.000	9.000	9.000		
341		200		12.000						12.000	12.000	6.000	6.000		
342		250	125	15.000	Friesen	50	0.750	1.500	0.750	14.250	15.000	7.125	7.125		
343		150		9.000						9.000	9.000	4.500	4.500		
344		250		15.000						15.000	15.000	7.500	7.500		
346		600	100	36.000	Maitland	16.66667	0.600	0.000	0.600	35.400	36.000	17.700	17.700		
Total		8160	2530	489.600			15.180	22.500	15.180	474.420	489.600	237.210	237.210		

residents get all AAH within non-allocated guide territories (previous practice)
if hardship rule evoked, then apply to individual guides
note for R3, that we don't have a previous AAH because SF was not considered to be part of AAH.

Total AAH	
Res LEH	237.210
GO	15.180
GOS SF	237.210
total	489.600

apply SF to resident AAH (2)

allocation proportions														Apply Hardship Rule? N (either "Y" or "N")	
AAH = 6.0% of pop est				0.9 residents		0.1 guides		SF limit		50.0% (% of AAH)					
MU	Zone	Moose pop estimate	GO territory estimate	AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	adjusted quota	Resident allocation	AAH check	LEH	GOS		
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312	B	100	70	6.000	Ritcey	70	0.420	1.000	0.420	5.580	6.000	2.790	2.790		
313		200		12.000						12.000	12.000	6.000	6.000		
317		60	15	3.600	Rickett	25	0.090	0.000	0.090	3.510	3.600	1.755	1.755		
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320		400	400	24.000	Ritcey	100	2.400	1.000	2.400	21.600	24.000	10.800	10.800		
326		250	50	15.000	Ritcey	20	0.300	0.700	0.300	14.700	15.000	7.350	7.350		
327		200		12.000						12.000	12.000	6.000	6.000		
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328	B	150		9.000						9.000	9.000	4.500	4.500		
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330	A	350	80	21.000	Giles	22.85714	0.480	1.000	0.480	20.520	21.000	10.260	10.260		
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333		100	100	6.000	Bracewell	100	0.600	0.500	0.600	5.400	6.000	2.700	2.700		
335		100		6.000						6.000	6.000	3.000	3.000		
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343		150		9.000						9.000	9.000	4.500	4.500		
344		250		15.000						15.000	15.000	7.500	7.500		
346		600	100	36.000	Maitland	16.66667	0.600	0.000	0.600	35.400	36.000	17.700	17.700		
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Total AAH	
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GO	15.180
GOS SF	237.210
total	489.600

apply SF to resident AAH (2)

allocation proportions														Apply Hardship Rule? N (either "Y" or "N")	
AAH = 6.0% of pop est				0.9 residents		0.1 guides		SF limit		50.0% (% of AAH)					
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312	A	600		36.000						36.000	36.000	18.000	18.000		
312	B	100	70	6.000	Ritcey	70	0.420	1.000	0.420	5.580	6.000	2.790	2.790		
313		200		12.000						12.000	12.000	6.000	6.000		
317		60	15	3.600	Rickett	25	0.090	0.000	0.090	3.510	3.600	1.755	1.755		
318		400		24.000						24.000	24.000	12.000	12.000		
319	A	350		21.000						21.000	21.000	10.500	10.500		
319	B	250		15.000						15.000	15.000	7.500	7.500		
320		400	400	24.000	Ritcey	100	2.400	1.000	2.400	21.600	24.000	10.800	10.800		
326		250	50	15.000	Ritcey	20	0.300	0.700	0.300	14.700	15.000	7.350	7.350		
327		200		12.000						12.000	12.000	6.000	6.000		
328	A	300		18.000						18.000	18.000	9.000	9.000		
328	B	150		9.000						9.000	9.000	4.500	4.500		
329	A	150		9.000						9.000	9.000	4.500	4.500		
329	B	250	75	15.000	Michel	30	0.450	1.000	0.450	14.550	15.000	7.275	7.275		
330	A	350	80	21.000	Giles	22.85714	0.480	1.000	0.480	20.520	21.000	10.260	10.260		
330	B	500	120	30.000	Giles	24	0.720	1.000	0.720	27.480	30.000	13.740	13.740		
			150		Loney	30	0.900	1.000	0.900						
			150		Michel	30	0.900	3.000	0.900						
331	A	250	250	15.000	Rickett	100	1.500	2.200	1.500	13.500	15.000	6.750	6.750		
331	B	250	50	15.000	Rickett	20	0.300	0.500	0.300	13.650	15.000	6.825	6.825		
			175		Searles	70	1.050	1.000	1.050						
332		250	50	15.000	Ambler	20	0.300	0.700	0.300	13.500	15.000	6.750	6.750		
332			125		Bracewell	50	0.750	1.700	0.750						
			75		Sievers	30	0.450	0.700	0.450						
333		100	100	6.000	Bracewell	100	0.600	0.500	0.600	5.400	6.000	2.700	2.700		
335		100		6.000						6.000	6.000	3.000	3.000		
336		250	225	15.000	Friesen	90	1.350	1.500	1.350	13.650	15.000	6.825	6.825		
337		200	120	12.000	Friesen	60	0.720	1.500	0.720	11.280	12.000	5.640	5.640		
338		200		12.000						12.000	12.000	6.000	6.000		
339		300	25	18.000	Condie	8.333333	0.150	1.000	0.150	17.850	18.000	8.925	8.925		
340		300		18.000						18.000	18.000	9.000	9.000		
341		200		12.000						12.000	12.000	6.000	6.000		
342		250	125	15.000	Friesen	50	0.750	1.500	0.750	14.250	15.000	7.125	7.125		
343		150		9.000						9.000	9.000	4.500	4.500		
344		250		15.000						15.000	15.000	7.500	7.500		
346		600	100	36.000	Maitland	16.66667	0.600	0.000	0.600	35.400	36.000	17.700	17.700		
Total		8160	2530	489.600			15.180	22.500	15.180	474.420	489.600	237.210	237.210		

residents get all AAH within non-allocated guide territories (previous practice)
if hardship rule evoked, then apply to individual guides
note for R3, that we don't have a previous AAH because SF was not considered to be part of AAH.

Total AAH	
Res LEH	237.210
GO	15.180
GOS SF	237.210
total	489.600

apply SF to resident AAH (2)

SPIKE FORK EXCLUDED FROM AAH

allocation proportions

Apply Hardship Rule?

y (either "Y" or "N")

85.0% residents

15.0% guides

SF limit

50.0% (% of AAH)

AAH =		6.0%					15.0%	guides		SF limit	50.0%	(% of AAH)
MU	Moose population estimate (Gyug 2007)	AAH	GOS SF	Allocated AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	adjusted quota	Resident allocation	AAH check	
8-01	72	4.320	2.160	2.160	Weins	100	0.324	1.000	0.800	1.360	4.320	
8-02	8	0.480	0.240	0.240						0.240	0.480	
8-03	14	0.840	0.420	0.420	Schneider	100	0.063	0.000	0.000	0.420	0.840	
8-04	52	3.120	1.560	1.560	Schneider	100	0.234	1.000	0.800	0.760	3.120	
8-05	62	3.720	1.860	1.860	Schneider	44	0.123	0.830	0.664	0.532	3.720	
					Wabnegger	49	0.000	0.830	0.664			
8-06	108	6.480	3.240	3.240	Wabnegger	66	0.321	1.330	1.064	2.176	6.480	
8-07	68	4.080	2.040	2.040	Schneider	64	0.196	1.000	0.800	1.240	4.080	
8-08	313	18.780	9.390	9.390	Marc Hubbard	100	1.409	2.660	2.128	7.262	18.780	
8-09	105	6.300	3.150	3.150	Marc Hubbard	100	0.473	1.660	1.328	1.822	6.300	
8-10	236	14.160	7.080	7.080	Marcella H	100	1.062	2.000	1.600	5.480	14.160	
8-11	198	11.880	5.940	5.940	Marcella H	100	0.891	2.000	1.600	4.340	11.880	
8-12	261	15.660	7.830	7.830	Grosch	85	0.998	1.000	0.998	6.032	15.660	
					Kilback	15	0.000	1.000	0.800			
8-13	5	0.300	0.150	0.150						0.150	0.300	
8-14	116	6.960	3.480	3.480	Kilback	77	0.402	1.000	0.800	2.416	6.960	
					Brandow	23	0.000	0.330	0.264			
8-15	74	4.440	2.220	2.220	Brandow	100	0.333	0.500	0.400	1.820	4.440	
8-21	49	2.940	1.470	1.470						1.470	2.940	
8-22	37	2.220	1.110	1.110						1.110	2.220	
8-23	207	12.420	6.210	6.210	Mackenzie	76	0.708	1.330	1.064	5.146	12.420	
8-24	78	4.680	2.340	2.340						2.340	4.680	
8-25	98	5.880	2.940	2.940						2.940	5.880	
8-26	38	2.280	1.140	1.140						1.140	2.280	
Total	2199	131.940	65.970	65.970			7.536	19.470	15.774	50.196	131.940	

residents get all AAH within non-allocated guide territories (previous practice)

if hardship rule evoked, then apply to individual guides

note for R8, that we don't have a previous AAH because SF was not considered to be part of AAH.

Total AAH

Res LEH	50.196
GO	15.774
GOS SF	65.970
total	131.940

65.970

Allocated

% GO=	23.9%
% Res=	76.1%

Total

% GO=	12.0%
% Res=	88.0%

Spike Fork Excluded from AAH

SPIKE FORK EXCLUDED FROM AAH

allocation proportions

Apply Hardship Rule?

y (either "Y" or "N")

85.0% residents

15.0% guides

SF limit

50.0% (% of AAH)

AAH =		6.0%					15.0%	guides		SF limit	50.0%	(% of AAH)
MU	Moose population estimate (Gyug 2007)	AAH	GOS SF	Allocated AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	adjusted quota	Resident allocation	AAH check	
8-01	72	4.320	2.160	2.160	Weins	100	0.324	1.000	0.800	1.360	4.320	
8-02	8	0.480	0.240	0.240						0.240	0.480	
8-03	14	0.840	0.420	0.420	Schneider	100	0.063	0.000	0.000	0.420	0.840	
8-04	52	3.120	1.560	1.560	Schneider	100	0.234	1.000	0.800	0.760	3.120	
8-05	62	3.720	1.860	1.860	Schneider	44	0.123	0.830	0.664	0.532	3.720	
					Wabnegger	49	0.000	0.830	0.664			
8-06	108	6.480	3.240	3.240	Wabnegger	66	0.321	1.330	1.064	2.176	6.480	
8-07	68	4.080	2.040	2.040	Schneider	64	0.196	1.000	0.800	1.240	4.080	
8-08	313	18.780	9.390	9.390	Marc Hubbard	100	1.409	2.660	2.128	7.262	18.780	
8-09	105	6.300	3.150	3.150	Marc Hubbard	100	0.473	1.660	1.328	1.822	6.300	
8-10	236	14.160	7.080	7.080	Marcella H	100	1.062	2.000	1.600	5.480	14.160	
8-11	198	11.880	5.940	5.940	Marcella H	100	0.891	2.000	1.600	4.340	11.880	
8-12	261	15.660	7.830	7.830	Grosch	85	0.998	1.000	0.998	6.032	15.660	
					Kilback	15	0.000	1.000	0.800			
8-13	5	0.300	0.150	0.150						0.150	0.300	
8-14	116	6.960	3.480	3.480	Kilback	77	0.402	1.000	0.800	2.416	6.960	
					Brandow	23	0.000	0.330	0.264			
8-15	74	4.440	2.220	2.220	Brandow	100	0.333	0.500	0.400	1.820	4.440	
8-21	49	2.940	1.470	1.470						1.470	2.940	
8-22	37	2.220	1.110	1.110						1.110	2.220	
8-23	207	12.420	6.210	6.210	Mackenzie	76	0.708	1.330	1.064	5.146	12.420	
8-24	78	4.680	2.340	2.340						2.340	4.680	
8-25	98	5.880	2.940	2.940						2.940	5.880	
8-26	38	2.280	1.140	1.140						1.140	2.280	
Total	2199	131.940	65.970	65.970			7.536	19.470	15.774	50.196	131.940	

residents get all AAH within non-allocated guide territories (previous practice)

if hardship rule evoked, then apply to individual guides

note for R8, that we don't have a previous AAH because SF was not considered to be part of AAH.

Total AAH

Res LEH	50.196
GO	15.774
GOS SF	65.970
total	131.940

65.970

Allocated

% GO=	23.9%
% Res=	76.1%

Total

% GO=	12.0%
% Res=	88.0%

Spike Fork Excluded from AAH

SPIKE FORK EXCLUDED FROM AAH

allocation proportions											
85.0% residents											
Apply Hardship Rule? y (either "Y" or "N")											
15.0% guides											
SF limit											
50.0% (% of AAH)											
AAH =	6.0%										
Moose population estimate (Gyug 2007)	AAH	GOS SF	Allocated AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	adjusted quota	Resident allocation	AAH check	
8-01	72	4.320	2.160	2.160	Weins	100	0.324	1.000	0.800	1.360	4.320
8-02	8	0.480	0.240	0.240						0.240	0.480
8-03	14	0.840	0.420	0.420	Schneider	100	0.063	0.000	0.000	0.420	0.840
8-04	52	3.120	1.560	1.560	Schneider	100	0.234	1.000	0.800	0.760	3.120
8-05	62	3.720	1.860	1.860	Schneider	44	0.123	0.830	0.664	0.532	3.720
					Wabnegger	49	0.000	0.830	0.664		
8-06	108	6.480	3.240	3.240	Wabnegger	66	0.321	1.330	1.064	2.176	6.480
8-07	68	4.080	2.040	2.040	Schneider	64	0.196	1.000	0.800	1.240	4.080
8-08	313	18.780	9.390	9.390	Marc Hubbard	100	1.409	2.660	2.128	7.262	18.780
8-09	105	6.300	3.150	3.150	Marc Hubbard	100	0.473	1.660	1.328	1.822	6.300
8-10	236	14.160	7.080	7.080	Marcella H	100	1.062	2.000	1.600	5.480	14.160
8-11	198	11.880	5.940	5.940	Marcella H	100	0.891	2.000	1.600	4.340	11.880
8-12	261	15.660	7.830	7.830	Grosch	85	0.998	1.000	0.998	6.032	15.660
					Kilback	15	0.000	1.000	0.800		
8-13	5	0.300	0.150	0.150						0.150	0.300
8-14	116	6.960	3.480	3.480	Kilback	77	0.402	1.000	0.800	2.416	6.960
					Brandow	23	0.000	0.330	0.264		
8-15	74	4.440	2.220	2.220	Brandow	100	0.333	0.500	0.400	1.820	4.440
8-21	49	2.940	1.470	1.470						1.470	2.940
8-22	37	2.220	1.110	1.110						1.110	2.220
8-23	207	12.420	6.210	6.210	Mackenzie	76	0.708	1.330	1.064	5.146	12.420
8-24	78	4.680	2.340	2.340						2.340	4.680
8-25	98	5.880	2.940	2.940						2.940	5.880
8-26	38	2.280	1.140	1.140						1.140	2.280
Total	2199	131.940	65.970	65.970			7.536	19.470	15.774	50.196	131.940

residents get all AAH within non-allocated guide territories (previous practice)			Total AAH		65.970
if hardship rule evoked, then apply to individual guides			Res LEH	50.196	
note for R8, that we don't have a previous AAH because SF was not considered to be part of AAH.			GO	15.774	
			GOS SF	65.970	
			total	131.940	
Allocated			% GO=	23.9%	
			% Res=	76.1%	
Total			% GO=	12.0%	
			% Res=	88.0%	

Status Quo		RM: Up to 50% of AAH can be SF		RM: Up to 50% of Res AAH can be SF	
Moose	2583	Moose	2200	Moose	2200
HR	0.04	HR	0.06	HR	0.06
AAH	103.32	AAH	132	AAH	132
SF Kill	122 (1st 5 yrs)	SF Kill	66		
GO quota	20 ?	Res/NR	0.85 0.15	Res/NR	0.85 0.15
Res LEH	61.4 (1st 5 yrs)	Res (GOS)	66	NR AAH	19.8
		allocated LEH/quota	66	Res AAH	112.2
		Res (LEH)	56.1	Res SF (GOS)	56.1
		NonRes=	9.9	Res (LEH)	56.1
				NonRes=	19.8
		total Res	122.1	total Res	112.2
		total NR	9.9	total NR	19.8

Notes

- 1 AAH previously calculated as 103 bulls (4% of 2583). Spike-forks were excluded from the calculation
- 2 New population estimate = 2200
- 3 AAH = 6% of pop estimate = 132
- 4 Allocation Split = 85% Res, 15% NR
- 5 The allocation split applies only to the areas occupied by guide outfitters. Allocation within vacant territories goes 100% to residents
- 6 Assuming all areas occupied by guides (which is not true), then residents would get $.85 * 132 = 112$, and non-residents get $.15 * 132 = 20$
- 7 Although the AAH has changed, the composition of animals within the AAH has also changed (moved from mature bull to all bulls). Use 85%/15% split
- 8 Guide quotas must be within +/- 20% of previous allocation, i.e. Apply hardship rule to each guide outfitter
- 9 Option 1: up to 50% of new AAH can be SF (see calculation above)
- 10 Option 2: up to 50% of the resident AAH can be SF (see calculation above)

allocation proportions											
0.85 residents											
0.15 guides											
SF limit											
0.5											
MU	Moose population estimate (Gyug 2007)	AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	hardship quota	Resident allocation	adjust Res allocation	LEH	GOS
8-01	72	4.320	Weins	100	0.648	1.000	0.800	3.672	3.642	1.821	1.821
8-02	8	0.480						0.480	0.476	0.238	0.238
8-03	14	0.840	Schneider	100	0.126	0.000	0.000	0.714	0.708	0.354	0.354
8-04	52	3.120	Schneider	100	0.468	1.000	0.800	2.652	2.630	1.315	1.315
8-05	62	3.720	Schneider	44	0.246	0.830	0.664	3.162	3.136	1.568	1.568
			Wabnegger	49	0.273	0.830	0.664				
8-06	108	6.480	Wabnegger	66	0.642	1.330	1.064	5.508	5.462	2.731	2.731
8-07	68	4.080	Schneider	64	0.392	1.000	0.800	3.468	3.439	1.720	1.720
8-08	313	18.780	Marc Hubbard	100	2.817	2.660	2.817	15.963	15.831	7.915	7.915
8-09	105	6.300	Marc Hubbard	100	0.945	1.660	1.328	5.355	5.311	2.655	2.655
8-10	236	14.160	Marcella H	100	2.124	2.000	2.124	12.036	11.936	5.968	5.968
8-11	198	11.880	Marcella H	100	1.782	2.000	1.782	10.098	10.014	5.007	5.007
8-12	261	15.660	Grosch	85	1.997	1.000	1.200	13.311	13.201	6.600	6.600
			Kilback	15	0.352	1.000	0.800				
8-13	5	0.300						0.300	0.298	0.149	0.149
8-14	116	6.960	Kilback	77	0.804	1.000	0.804	5.916	5.867	2.933	2.933
			Brandow	23	0.240	0.330	0.264				
8-15	74	4.440	Brandow	100	0.666	0.500	0.600	3.774	3.743	1.871	1.871
8-21	49	2.940						2.940	2.916	1.458	1.458
8-22	37	2.220						2.220	2.202	1.101	1.101
8-23	207	12.420	Mackenzie	76	1.416	1.330	1.416	10.557	10.470	5.235	5.235
8-24	78	4.680						4.680	4.641	2.321	2.321
8-25	98	5.880						5.880	5.831	2.916	2.916
8-26	38	2.280						2.280	2.261	1.131	1.131
Total	2199	131.940			15.937	19.470	17.927	114.966	114.013	57.007	57.007

Res 112.149
GO 19.791 (if all MU's occupied by guides)
Total 131.94

	#	%
Res	114.013	86.41295
GO	17.92676	13.58705
Total	131.94	

residents get all AAH within non-allocated guide territories (previous practice)
if hardship rule evoked, then apply to individual guides
note for R8, that we don't have a previous AAH because SF was not considered to be part of AAH.

apply SF to resident AAH

allocation proportions											
0.85 residents											
0.15 guides											
SF limit											
0.5											
MU	Moose population estimate (Gyug 2007)	AAH	Guides	Portion of tenure in MU	allocation quota	previous quota	hardship quota	Resident allocation	adjust Res allocation	LEH	GOS
8-01	72	4.320	Weins	100	0.648	1.000	0.800	3.672	3.642	1.821	1.821
8-02	8	0.480						0.480	0.476	0.238	0.238
8-03	14	0.840	Schneider	100	0.126	0.000	0.000	0.714	0.708	0.354	0.354
8-04	52	3.120	Schneider	100	0.468	1.000	0.800	2.652	2.630	1.315	1.315
8-05	62	3.720	Schneider	44	0.246	0.830	0.664	3.162	3.136	1.568	1.568
			Wabnegger	49	0.273	0.830	0.664				
8-06	108	6.480	Wabnegger	66	0.642	1.330	1.064	5.508	5.462	2.731	2.731
8-07	68	4.080	Schneider	64	0.392	1.000	0.800	3.468	3.439	1.720	1.720
8-08	313	18.780	Marc Hubbard	100	2.817	2.660	2.817	15.963	15.831	7.915	7.915
8-09	105	6.300	Marc Hubbard	100	0.945	1.660	1.328	5.355	5.311	2.655	2.655
8-10	236	14.160	Marcella H	100	2.124	2.000	2.124	12.036	11.936	5.968	5.968
8-11	198	11.880	Marcella H	100	1.782	2.000	1.782	10.098	10.014	5.007	5.007
8-12	261	15.660	Grosch	85	1.997	1.000	1.200	13.311	13.201	6.600	6.600
			Kilback	15	0.352	1.000	0.800				
8-13	5	0.300						0.300	0.298	0.149	0.149
8-14	116	6.960	Kilback	77	0.804	1.000	0.804	5.916	5.867	2.933	2.933
			Brandow	23	0.240	0.330	0.264				
8-15	74	4.440	Brandow	100	0.666	0.500	0.600	3.774	3.743	1.871	1.871
8-21	49	2.940						2.940	2.916	1.458	1.458
8-22	37	2.220						2.220	2.202	1.101	1.101
8-23	207	12.420	Mackenzie	76	1.416	1.330	1.416	10.557	10.470	5.235	5.235
8-24	78	4.680						4.680	4.641	2.321	2.321
8-25	98	5.880						5.880	5.831	2.916	2.916
8-26	38	2.280						2.280	2.261	1.131	1.131
Total	2199	131.940			15.937	19.470	17.927	114.966	114.013	57.007	57.007

Res 112.149
GO 19.791 (if all MU's occupied by guides)
Total 131.94

residents get all AAH within non-allocated guide territories (previous practice)
if hardship rule evoked, then apply to individual guides
note for R8, that we don't have a previous AAH because SF was not considered to be part of AAH.

	#	%
Res	114.013	86.41295
GO	17.92676	13.58705
Total	131.94	

apply SF to resident AAH