# SPECIES MANAGEMENT REPORT

# Alaska Department of Fish and Game Division of Wildlife Conservation (907) 465-4190 PO Box 115526

(907) 465-4190 PO Box 115526 Juneau, AK 99811-5526

# **CHAPTER 2: MOOSE MANAGEMENT REPORT**

From: 1 July 2011 To: 30 June 2013

# **LOCATION**

GAME MANAGEMENT UNIT: 1B (3,000 mi<sup>2</sup>)

GEOGRAPHIC DESCRIPTION: Southeast Alaska mainland, Cape Fanshaw to Lemesurier Point

#### **BACKGROUND**

#### HABITAT DESCRIPTION

Isolated populations of moose (*Alces alces*) occur in Unit 1B and are believed to be the *andersonii* subspecies. They migrated from interior British Columbia via the Coast Range and the Stikine River valley around the turn of the twentieth century.

Moose occur in several areas of Unit 1B, with concentrations near Thomas Bay, Farragut Bay, and along the Stikine River. Moose also occur around Virginia Lake, Mill Creek, and Aaron Creek, with a few moose occupying suitable habitat adjacent to Bradfield Canal.

The Thomas Bay moose population is isolated from populations in Canada by the Coast Mountains. For the most part, these moose occupy an area that was heavily logged from the late 1950s through the early 1970s. The Thomas Bay moose population now appears to be in decline and will likely continue to decline as conifer regeneration in clearcuts matures and reduces forage production.

Moose inhabiting the Alaska portion of the Stikine drainage represent the westernmost tip of a mainland population emanating from Canada. The Alaska portion of this population was estimated at 300 animals in 1983 (Craighead et al. 1984). From 1983 to 1995 most winters were mild and the moose population, based on harvest records and subjective impressions, appeared to increase until 1989, when it started to decline. The decline continued for several years before eventually culminating in an emergency season closure of the moose hunting season in that portion of Unit 1B south of the LeConte Bay and Glacier in 1994. In 1995 antler restrictions were implemented in the drainages of the Stikine River and as a result now apply to moose hunting throughout Unit 1B.

### **HUMAN USE HISTORY**

Moose are indigenous but recently established in Unit 1B. Since the mid-twentieth century, isolated populations of moose on the U.S. side of the Stikine River valley and at Thomas Bay have been hunted for food and trophies.

## Regulatory History

From 1959 to present, the Stikine River moose season has generally been from 15 September through 15 October with a 1-bull limit. From 1972 to 1974, however, the harvest of antlerless moose was also allowed by permit only. From 1990 to 1992 a harvest ticket was required to hunt moose on the Stikine, and since 1993 a registration permit (RM038) has been required. Antler restrictions were implemented on the Stikine in 1995, defining a legal bull as having a spikefork, 50-inch antler spread, or 3 or more brow tines on at least 1 antler.

From 1959 to 1981 the Thomas Bay season was bulls-only and typically 31 days long, 15 September through 15 October. Since 1978 the use of motorized land vehicles to hunt moose has been prohibited at Thomas Bay. From 1984 to 1994 the moose season was from 1 through 15 October. Since 1984 a registration permit has been required to hunt moose, and antler restrictions were implemented defining a legal bull as having a spike, fork, or at least 50-inch antlers. In 1993 the antler restriction was amended to include bulls with 3 or more brow tines on at least 1 antler. Since 1995 the season has been 15 September through 15 October.

Action by the Alaska Board of Game (BOG) effective 1 July 1995 put all of Units 1B and 3 and that portion of Unit 1C south of Point Hobart under one registration permit hunt (RM038). A legal moose for this registration permit hunt is a bull with spike-fork or 50-inch antlers or 3 brow tines on at least 1 antler.

Speculation had long existed that the antler restrictions developed for the *gigas* subspecies of moose found elsewhere in Alaska were overly restrictive when applied to the smaller *andersonii* subspecies inhabiting the Central Panhandle. In fall 2004 the BOG adopted a department sponsored proposal to implement drawing permit hunts allowing the taking of a limited number of "any-bull" moose in Unit 1B. At the time, the registration moose hunt (RM038) was managed under a selective harvest strategy that allowed the taking of only those bulls that met the spike-fork-3-brow tine or 50-inch antler criteria. Data collected from bulls harvested during the any-bull drawing permit hunts were later used to evaluate the age structure and antler characteristics of that segment of the bull population protected under the existing antler restrictions. Information gathered via the any-bull drawing hunts proved useful for evaluating the effectiveness of the existing antler restrictions, and was used to persuade the Board of Game to liberalize the RM038 moose antler regulations beginning with the 2009 season.

In fall 2006, the Board of Game adopted a regionwide (Division of Wildlife Conservation, Region I, Southeast Alaska) regulation stating that a broken, damaged, or altered antler does not satisfy the spike-fork requirement in antler-restricted moose hunts. This regulation resulted from a steadily increasing number of bulls being checked in annually that met the specified point requirements only as a result of broken or damaged antlers, and growing suspicion that hunters might be intentionally modifying antlers.

Prior to 2006, state law contained a positive customary and traditional use finding for moose in Stikine River drainages specifying that a harvest of 40 moose annually was necessary to meet subsistence needs. In fall 2006, the board expanded the customary and traditional use finding beyond the Stikine drainages to include all of Units 1B and 3. As a result, the 40 moose necessary for subsistence now applies to all of Units 1B and 3. Because bulls taken during the any-bull drawing hunts are considered a part of the amount necessary for subsistence,

nonresidents have been excluded from future participation in the DM033 and DM035 any-bull drawing hunts.

On 6 October 2006 we issued an emergency order closing the RM038 Stikine River moose hunting season early because the reported harvest of bull moose in these drainages had reached 31 animals. This was the highest moose harvest on the river since 1990. The problem of high harvest was exacerbated by a growing number of hunters who were not complying with the existing antler regulations. This resulted in an unacceptably high harvest of bull moose that the existing regulations were intended to protect.

In fall of 2008, based on age and antler data collected during the any-bull moose drawing permit hunts implemented in 2004, the Board of Game liberalized the moose antler restrictions for the entire RM038 hunt area. As a result, beginning with the 2009 season, a legal bull must possess spike-forked antlers or 50-inch antlers or antlers with 3 or more brow tines on at least 1 side, or 2 or more brow tines on both sides. In a related action, the board eliminated the DM033 and DM035 any-bull drawing hunts until such time that the impact of the new liberalized antler restrictions on the moose herd could be evaluated.

#### Historical Harvest Patterns

Annual harvest of Stikine River moose from the 1950s through the 1970s averaged about 27 moose. During the 1980s the average rose to 39 but fell to 18 during the 1990s. In 1994 the state moose season was closed by emergency order in that portion of Unit 1B south of LeConte Bay and Glacier due to a lack of mature breeding bulls in the population; however, 3 moose were taken on the Stikine under federal permits. In 1995 (the first year antler restrictions were implemented on the Stikine River) the last week of the season was closed by emergency order due to the high percentage of illegal moose taken. Since the implementation of antler restrictions in 1995 the Stikine moose population and harvest have steadily increased. From 2000 to 2010 the harvest of Stikine River moose averaged 20 bulls, and ranged from 11 to 34 moose annually.

The average annual harvest of bulls from Thomas Bay rose steadily through the decades from 5 during the 1950s to 21 during the 1990s. A scarcity of calves prompted closure of the season in 1982 and 1983. In recent years, the harvest at Thomas Bay has been declining, averaging just 12 moose annually from 2000 to 2010.

## Historical Harvest Locations

The vast majority of moose harvested in the subunit are taken either from the Stikine River drainage or in the vicinity of Thomas Bay. In recent years the distribution of moose in Unit 1B appears to be expanding northward, fed by source populations on the Stikine and at Thomas Bay.

## MANAGEMENT DIRECTION

#### MANAGEMENT OBJECTIVES

The following moose management objectives for Unit 1B are based on biological data and input from the public.

## Stikine River

	Plan Objective	<u>2011</u>	<u>2012</u>
Post-hunt numbers	300	N/A	N/A
Annual hunter kill	30	19	20
Number of hunters	250	164	198
Hunter-days of effort	1,750	1,247	1,532
Hunter success	12%	12%	10%
Thomas Bay			
	Plan Objective	<u>2011</u>	<u>2012</u>
Post-hunt numbers	200	N/A	N/A
Annual hunter kill	20	10	10
Number of hunters	160	70	61
Hunter-days of effort	675	608	386
Hunter success	12%	14%	16%

## **METHODS**

We flew late winter population surveys along the Stikine River valley to count moose and to gather composition data (calves and adults). Of the 3 surveys conducted during the report period, 2 were conducted prior to antler drop, thereby allowing us to identify the sex of adult moose observed and calculate bull:cow ratios. All successful hunters were required to present the antlers attached to the skull plate to ADF&G representatives to verify compliance with antler restrictions. They were also required to turn in the lower front teeth for aging. Since 1997 in Unit 1B we have asked hunters to report the number of moose (by sex and age class), wolves, and bears they observed during the hunting season.

Harvest data were summarized by regulatory year (RY), which begins 1 July and ends 30 June (e.g. RY11 = 1 July 2011–30 June 2012).

## RESULTS AND DISCUSSION

#### POPULATION STATUS AND TREND

## Population Size

Three aerial surveys were conducted during this report period, 1 in 2011 (80 moose observed) and 2 in 2012 (86 and 65 moose observed). Without a sample of radio-marked moose, we do not have the capability to estimate sightability during these surveys, so these numbers represent minimum counts.

# Population Composition

Table 1 shows the results of all Stikine River valley surveys since 1996. Dense coniferous forest, variable snowfall, and inclement weather make adequate surveys difficult. Except in rare instances when early snowfall facilitates aerial surveys prior to antler-drop, no attempt is

generally made to differentiate between bulls and cows, but adults and calves are differentiated during late winter aerial surveys.

Three surveys were conducted during this report period (Table 1). We had early winter snowfall and good survey conditions in December 2011 and 2012 that allowed us to get bull:cow ratios prior to antler drop during both years. In December 2011 a total of 80 moose were counted, including 6 bulls, 61 cows, 12 calves and 1 moose that could not be identified to sex, for a bull:cow ratio of 10:100 and a calf:cow ratio of 20:100. In March 2012, a total of 86 moose were counted; however, because of the late survey date it was not possible to reliably distinguish the sex and age of moose seen. In December 2012 a total of 65 moose were counted, including 8 bulls, 49 cows and 16 calves, for a bull:cow ratio of 20:100 and a calf:cow ratio of 39:100.

The number of moose observed and recorded by hunters on registration hunt reports provides some of the limited information on population composition in the subunit. Because these data are based on anecdotal accounts from hunters, we expect a high likelihood of replicate sightings and so interpret the data cautiously. In 2011 a total of 234 RM038 hunters reported seeing a total of 1,325 moose in Unit 1B, including 458 bulls, 627 cows, and 240 calves, for a bull-to-cow ratio of 73:100, and a calf-to-cow ratio of 38:100. In 2012, 259 RM038 hunters reported seeing a total of 1,478 moose, including 495 bulls, 669 cows, and 314 calves, for a bull-to-cow ratio of 74:100, and a calf-to-cow ratio of 47:100.

#### **MORTALITY**

Harvest

Season and Bag Limit Resident and nonresident hunters

Unit 1B 15 Sep-15 Oct

1 bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on 1 side, or 2 or more brow tines on both sides by registration permit only

<u>Alaska Board of Game Actions and Emergency Orders.</u> No Board of Game actions took place, and no emergency orders were issued during the report period.

Hunter Harvest. For the Stikine River portion of Unit 1B, in 2011, 164 hunters harvested 19 moose, including 1 illegal kill. In 2012, 198 hunters harvested 20 moose, including 2 illegal kills (Tables 2 and 4). For the Thomas Bay/Farragut Bay portion of Unit 1B, in 2011, 70 hunters harvested 10 moose in the general vicinity of Thomas Bay, including 4 from Farragut Bay (Tables 3 and 5). Three additional moose were harvested at Port Houghton in southern Unit 1C, which is within the RM038 hunt boundaries. Because Port Houghton is in Unit 1C, numbers for moose harvested there appear in the Unit 1C management report and are not included in the tables for this report. In 2012, 61 hunters harvested 10 moose in the Thomas Bay vicinity, including 6 from Farragut Bay. Two additional moose were harvested at Port Houghton in southern Unit 1C.

<u>Hunter Residency and Success</u>. Most Unit 1B moose hunters are local residents and participation by nonlocal residents and nonresidents is typically low. In both 2011 and 2012, local residents of Wrangell and Petersburg represented 95% of successful hunters on the Stikine River, and nonlocal hunters represented 5% (Table 4). The overall success rate for Stikine River moose hunters was 12% in RY11 and 10% in RY12.

Petersburg residents continued to dominate the Thomas Bay and Farragut Bay moose hunts (Table 5). In 2011, local residents of Petersburg and Wrangell represented 90% of successful hunters in the vicinity of Thomas Bay and Farragut Bay, and nonlocal hunters represented 10%. In 2012, local residents of Petersburg represented 80% of successful hunters in the vicinity of Thomas Bay and Farragut Bay, and nonlocal residents represented 20%. The overall success rate for Thomas Bay and Farragut Bay moose hunters was 14% and 16%, respectively, in 2011 and 2012.

Harvest Chronology. Harvest chronology for Unit 1B moose varies from year to year. In general, most bulls are killed during the first half of the season and the success rate typically declines as the season progresses (Table 6). In 2011, the largest percentage of the annual harvest in the Thomas Bay area occurred during the third week of the season, followed by the second and fourth weeks. The largest percentages of the annual harvest on the Stikine River, in order beginning with the highest, occurred during the first, fourth and second weeks of the season. In 2012 the largest percentages of the annual harvest at Thomas Bay occurred during the third, second, and fourth weeks of the season. The largest percentages of the annual harvest on the Stikine occurred during the first and second weeks of the season followed by the third and fourth weeks, each with identical harvests. Most hunters are in the field early in the season, and except for weekends, effort tends to drop off as the season progresses. Inclement weather does not appear to slow hunting effort early in the season.

Harvest in particular WAAs. During the report period, moose harvest was reported in 5 Unit 1B WAAs and 1 Unit 1C WAA. In 2011 the highest percentage of the annual harvest occurred in WAA # 1708 (52%) on the Stikine River and in WAA # 1605 (21%) at Thomas Bay, respectively. In 2012 the highest percentage of the annual harvest occurred in WAA # 1708 (53%) on the Stikine River and in WAA # 1602 (20%) at Farragut Bay.

<u>Guided Hunter Harvest</u>. No guided moose hunts are currently offered in the subunit.

<u>Transport Methods.</u> During the report period all successful Unit 1B hunters reported using boats to reach the areas they hunted (Table 7). Motorized land vehicles are prohibited for moose hunting in the Thomas Bay hunt and within the Stikine–LeConte Wilderness. In the Thomas Bay area, however, motorized land vehicles may be used for other moose hunt related activities such as establishing camps, checking boats, and retrieving harvested moose, which results in this regulation being difficult to enforce and frequently abused.

# Other Mortality

Wolves, black bears, and brown bears prey on moose calves, and wolves and brown bears take adult moose. The extent of predation on these moose herds is unknown, but it appears that in some years wolves and bears are responsible for low calf survival on the Stikine River. At

Thomas Bay, wolves are thought to be the main predators of moose. Poaching of moose undoubtedly occurs in Unit 1B; however, we don't know how prevalent it is.

#### **HABITAT**

#### Assessment

Moose populations at Thomas Bay responded favorably to the initial increase in available browse resulting from extensive clearcut logging between 1958 and 1975. Since that time the dense, closed-canopy forests resulting from natural regeneration of second growth stands has reduced available understory browse vegetation.

#### Enhancement

Pre-commercial thinning of second-growth stands has been estimated to extend the habitat value of clearcuts for 20–30 years. In March 1997 ADF&G enhanced moose habitat on state land at Thomas Bay by thinning 4 second-growth units totaling 380 acres. The project was completed in October 1998. Anecdotal reports from hunters and observations by staff over the past 14 years indicate that moose use has increased in these thinned units.

## CONCLUSIONS AND RECOMMENDATIONS

During this report period, the only Stikine management objective met was that of hunter success in 2011. The success rate of 12% in 2011 and 10% in 2012 was equal to and below, respectively, the management objective of 12%. While the total number of hunters increased by 5% from the previous report period, and the actual days of effort increased by 7%, both remained well below the management objectives of 250 hunters and 1,750 days of effort. The harvest of 19 moose on the Stikine River in 2011 and 20 moose in 2012 were both below the management objective of 30 moose per year. We believe the Stikine moose population was at low levels during the late 1990s and early 2000s, but the population now appears to have increased and stabilized at moderate to high density.

During this report period, only the Thomas Bay management objective for hunter success was met, which occurred in both 2011 and 2012. The success rate of 14% in 2011, and 16% in RY12, were both above the management objective of 12% success. The number of hunters has been steadily declining in recent years, and that trend continued during the report period. During the report period, the total number of hunters decreased by 29% from the previous report period. During the same period, the days of effort decreased by nearly 19%. The Thomas Bay moose population currently appears to be in decline and is thought to be at carrying capacity.

After a sharp decline which began in 1989 and culminated in the RY94 emergency closure of the Stikine moose hunting season, the moose population and harvest have rebounded in recent years. The Unit 1B total harvests of 29 bulls in 2011, and 30 bulls in 2012, were both above the long-term average annual harvest of 26 moose during the period 1952 to 2010. An aerial moose survey in December 2006 documented 199 moose on the United State side of the international boundary, which is the highest count since 1960. The relatively sudden appearance of moose in high numbers on the U.S. side of the international boundary implies that there may be considerable transboundary movement of moose between the U.S. and Canada. During this report period, however, the number of moose observed during aerial surveys of the Stikine River valley steadily declined from the high of 199 in 2006, to 80 in 2011 and 86 in 2012.

In 2008 the Board of Game adopted a department sponsored proposal to liberalize the moose antler restrictions for the RM038 hunt area to allow the harvest of bulls with 2 or more brow tines on both antlers. The new antler regulation took effect at the beginning of the 2009 season and is believed to be partially responsible for the relatively high harvest that year. In 2011, 9 (31%) of the 29 bulls harvested in Unit 1B had 2 brow tines on both antlers. In 2012, 9 (30%) of the 30 bulls harvested had 2 brow tines on both antlers. We recommend that the current antler regulations remain in effect while we continue to monitor the impact of the liberalized antler restrictions on the moose herd.

We recommend that Units 1B and 3, and the extreme southern portion of Unit 1C, continue to be managed by a common registration permit hunt, and that the season dates remain from 15 September 15 through 15 October with a bag limit of 1 bull with spike-fork or 50-inch antlers or 3 or more brow tines on 1 antler, or 2 or more brow tines on both antlers.

# REFERENCES CITED

Craighead, F. L., E. L. Young, and R. Boertje. 1984. Stikine River moose study, wildlife evaluation of Stikine-Iskut dams. Final Report. Alaska Department of Fish and Game. Juneau.

Prepared by: Submitted by:

Richard E. Lowell Neil Barten

Wildlife Biologist III Regional Management Coordinator

Please cite any information taken from this section, and reference as:

Lowell, R. E. 2014. Unit 1B moose management report. Pages 2-1 through 2-15 [*In*] P. Harper and L. A. McCarthy, editors. Moose management report of survey and inventory activities 1 July 2011–30 June 2013, Alaska Department of Fish and Game, Species Management Report ADF&G/DWC/SMR-2014-6, Juneau.

While this unit report was actually published in 2016, it is part of the set of 2014 unit species management reports, so we suggest citing the report as a 2014 report to maintain its relationship to the other 2014 unit reports.

Product names used in this publication are included for completeness but do not constitute product endorsement.

The State of Alaska is an Affirmative Action/Equal Opportunity Employer. Contact the Division of Wildlife Conservation at (907) 465-4190 for alternative formats of this publication.

Table 1. Unit 1B Stikine area aerial moose surveys, regulatory years 1996 through 2012.

Yr month/day	Adults	Calves	(%) Calves	Unidentified	Total moose	Moose/hour
1006						
1996	100	25	(22)	0	157	47
3/08	122	35	(22)	0	157	47
1997	No doto					
1000	No data	-	-	-	-	-
1998	102	22	(24)	0	125	4.4
2/24	103	32	(24)	0	135	44
1999	No data					
2000	2	2	(50)	0	4	4
$\frac{2}{17}^{e}$	2 9	2 2	(50)	0	4	4
3/22 <sup>a</sup> 6/11	9 11	7	(18) (39)	$0 \\ 0$	11 18	8 9
2001	11	/	(39)	U	10	9
2/7 <sup>a</sup>	3	2	(40)	3	8	8
2002	3	2	(40)	3	O	O
3/14 <sup>a, f</sup>	71	5	(7)	0	76	31
6/16 a	21	8	(28)	0	29	19
2003	21	O	(20)	O	2)	1)
3/31 <sup>a, f</sup>	33	6	(15)	0	39	13
2004	33	U	(13)	O	37	13
2/15 <sup>a, f</sup>	103	32	(24)	0	135	47
2005	103	32	(24)	O	133	77
$12/06^{a}$	138	61	(31)	0	199	60
2006	130	01	(31)	O	177	00
3/29 <sup>a, f</sup>	124	22	(15)	0	146	54
2008	124	22	(13)	U	140	34
$1/23^{a}$	54	11	(17)	0	65	30
2009	J <del>4</del>	11	(17)	U	03	30
2/18 <sup>a</sup>	82	21	(20)	39	142	53
2010	02	21	(20)	37	172	33
12/14 <sup>a</sup>	96	26	(21)	3	125	49
2011	70	20	(21)	J	123	<del>1</del> 7
$12/07^{a}$	67	12	(15)	1	80	24
2012	07	14	(13)	1	30	∠ <del>'1</del>
$\frac{2012}{3/21^a}$	NA	NA	NA	NA	86	34
$12/12^{a}$	1NA 49	16	(25)	0	65	27
1 Z/ 1 Z	49	10	(23)	U	US	۷1

<sup>&</sup>lt;sup>a</sup> Helicopter survey.

<sup>b</sup> River stage high, full leaf out in lower river, moose not visible.

<sup>c</sup> Helicopter survey aborted due to weather.

<sup>d</sup> Farm Island to 15 Mile Island only, then abandoned due to weather.

<sup>e</sup> Poor survey conditions on lower river, US/Canada boarder to Kakwan Point only.

<sup>f</sup> Some older calves may have been classified as adults.

Table 2. Unit 1B (Stikine<sup>a</sup>) moose harvest by permit hunts, regulatory years 1999 through 2012.

		Hunter harvest	reported		_		
Year	M	(%)	F	(%)	Illegal	Unk	Total
1999	20	(100)	0	(0)	0	0	20
2000	12	(100)	0	(0)	2	0	14
2001	18	(100)	0	(0)	0	0	18
2002	11	(100)	0	(0)	0	0	11
2003	17	(100)	0	(0)	1	0	18
2004	24	(100)	0	(0)	3	0	27
$2005^{b}$	19	(100)	0	(0)	2	0	21
2006 <sup>b, c</sup>	32	(100)	0	(0)	3	0	35
$2007^{\rm b}$	17	(100)	0	(0)	3	0	20
$2008^{b}$	15	(100)	0	(0)	1	0	16
2009	27	(100)	0	(0)	2	0	29
2010	22	(100)	0	(0)	0	0	22
2011	18	(100)	0	(0)	1	0	19
2012	18	(100)	0	(0)	2	0	20

<sup>&</sup>lt;sup>a</sup> Includes Unit 1B south of the Stikine River
<sup>b</sup> Includes RM038 and DM033 harvest.
<sup>c</sup> State season closed by emergency order on October 6.

Table 3. Unit 1B (Thomas and Farragut bays) moose harvest by permit hunts, regulatory years 1999 through 2012.

			. 1						
Year		Hunter harvest reported							
	M	(%)	F	(%)	Illegal	Unk.	Total		
1999	19	(100)	0	(0)	1	0	20		
2000	6	(100)	0	(0)	0	0	6		
2001	14	(100)	0	(0)	1	0	15		
2002	14	(100)	0	(0)	1	0	15		
2003	9	(100)	0	(0)	2	0	11		
2004	11	(100)	0	(0)	4	0	15		
2005 <sup>a</sup>	12	(100)	0	(0)	1	0	13		
$2006^{a}$	13	(100)	0	(0)	0	0	13		
$2007^{a}$	8	(100)	0	(0)	2	0	10		
$2008^{a}$	9	(100)	0	(0)	0	0	10		
2009	14	(100)	0	(0)	0	0	14		
2010	5	(100)	0	(0)	1	0	6		
2011	8	(100)	0	(0)	2	0	10		
2012	10	(100)	0	(0)	0	0	10		

<sup>&</sup>lt;sup>a</sup> Includes RM038 and DM033 harvest.

Table 4. Unit 1B (Stikine<sup>a</sup>) moose hunter residency and success by permit hunt, regulatory years 1999 through 2012.

			Successf	ul				U	nsuccessfu	ıl			
	Local <sup>a</sup>	Nonlocal	Non-				Local <sup>b</sup>	Nonlocal	Non-				Total
Year	resident	resident	resident	Unk.	Total	(%)	resident	resident	resident	Unk.	Total	(%)	hunters
1999	18	2	0	0	20	(11)	147	18	0	0	165	(89)	185
2000	13	1	0	0	14	(8)	137	12	2	0	151	(92)	165
2001	18	0	0	0	18	(11)	133	14	3	0	150	(89)	168
2002	11	0	0	0	11	(8)	126	7	1	0	134	(92)	145
2003	15	3	0	0	18	(12)	128	6	0	0	134	(88)	152
2004	25	1	1	0	27	(16)	124	15	0	0	139	(84)	166
2005	21	0	0	0	21	(13)	129	11	2	0	142	(87)	163
2006	35	0	0	0	35	(20)	133	2	1	0	136	(80)	171
2007	19	1	0	0	20	(14)	114	13	0	0	127	(86)	147
2008	15	1	0	0	16	(9)	143	11	1	0	155	(91)	171
2009	27	2	0	0	29	(16)	145	7	1	0	153	(84)	182
2010	21	1	0	0	22	(14)	130	9	1		140	(86)	162
2011	18	1	0	0	19	(12)	130	15	0	0	145	(88)	164
2012	19	1	0	0	20	(10)	173	3	2	0	178	(90)	198

<sup>&</sup>lt;sup>a</sup> Includes Unit 1B south of the Stikine River.
<sup>b</sup> Residents of Petersburg and Wrangell.

Table 5. Unit 1B (Thomas and Farragut bays) moose hunter residency and success by permit hunt, regulatory years 1999 through 2012.

	Successful					Unsuccessful					
Voor	Local <sup>a</sup> resident	Nonlocal resident	Non- resident	Total	(%)	Local <sup>a</sup> resident	Nonlocal resident	Non- resident	Total	(0/)	Total
<u>Year</u>	resident	resident	resident	Total	(%)	resident	resident	resident	Total	(%)	hunters
1999	19	1	0	20	(19)	79	8	0	87	(81)	107
2000	6	0	0	6	(6)	91	5	2	98	(94)	104
2001	15	0	0	15	(13)	92	5	1	98	(87)	113
2002	15	0	0	15	(13)	90	8	0	98	(87)	113
2003	11	0	0	11	(9)	106	3	1	110	(91)	121
2004	15	0	0	15	(14)	81	11	1	93	(86)	108
2005 <sup>b</sup>	13	0	0	13	(12)	90	7	0	97	(88)	110
$2006^{b}$	12	1	0	13	(15)	65	6	0	71	(85)	84
$2007^{b}$	8	2	0	10	(15)	52	5	0	57	(85)	67
$2008^{b}$	10	0	0	10	(14)	57	5	0	62	(86)	72
2009	12	2	0	14	(14)	79	8	0	87	(86)	101
2010	6	0	0	6	(7)	66	11	0	77	(93)	83
2011	9	1	0	10	(14)	54	6	0	60	(86)	70
2012	8	2	0	10	(16)	42	9	0	51	(84)	61

<sup>&</sup>lt;sup>a</sup> Residents of Petersburg and Wrangell. <sup>b</sup> Includes RM038 and DM035 harvest.

Table 6. Unit 1B moose harvest chronology, regulatory years 1999 through 2012.

		15–21	22–28	29 Sep–5	6–15
Area	Year	Sep	Sep	Oct	Oct
Thomas and					
Farragut bays					
	1999	5	4	7	4
	2000	3	2	1	0
	2001	3	2	2	8
	2002	7	1	4	3
	2003	4	1	3	3
	2004	7	1	7	0
	2005	3	3	7	0
	2006	2	4	6	1
	2007	1	3	2	4
	2008	3	1	3	3
	2009	4	2	5	3
	2010	3	1	0	2
	2011	1	3	4	2
	2012	2	1	5	2
C4:1-: a					
Stikine <sup>a</sup>	1000	6	2	4	7
	1999	6	3	4	7
	2000	3	1	5	5
	2001 <sup>b</sup>	6	2	2	7
	2002	6	1	2	2
	2003	2	3	7	6
	2004	10	5	2	10
	2005	10	2	3	6
	2006 <sup>c</sup>	21	3	9	2
	2007	8	6	4	2
	2008	6	5	3	2
	2009	17	3	2	7
	2010	10	5	4	3
	2011	8	3	2	6
	2012	12	4	2	2

<sup>&</sup>lt;sup>a</sup> Includes Unit 1B south of the Stikine River.
<sup>b</sup> Excludes one unknown.
<sup>c</sup> State season closed emergency order on October 6.

Table 7. Unit 1B successful moose hunter transport methods by area, regulatory years 1999 through 2012.

Area   Year   Airplane   Boat   vehicle   wheeler   Horse   Other   Total	unough 2012.				Highway	3- or 4-			
Farragut bays    1999	Area	Year	Airplane	Boat		wheeler	Horse	Other	Total
Farragut bays    1999									
1999									
2000	Farragut bays								
2001									
2002									
2003					0	0		0	
2004			0		0	0			
2005		2003	0	11	0	0	0	0	11
2006		2004	1	13	0	0	0	1	15
2007		2005	0	13	0	0	0	0	13
2008		2006	0	13	0	0	0	0	13
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2007	2	8	0	0	0	0	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2008	0	10	0	0	0	0	10
2011 0 10 0 0 0 0 0 10 10 2012 0 10 0 0 0		2009	0	14	0	0	0	0	14
Stikine <sup>a</sup> 1999		2010	0	6	0	0	0	0	6
Stikine <sup>a</sup> 1999		2011	0	10	0	0	0	0	10
1999       0       20       0       0       0       0       20         2000       0       14       0       0       0       0       14         2001       1       17       0       0       0       0       18         2002       0       11       0       0       0       0       11         2003       0       18       0       0       0       0       18         2004       0       27       0       0       0       0       27         2005       0       21       0       0       0       0       21         2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       29         2010       0       29       0       0       0       0       29         2011       0       19       0       0       0       0       0       29		2012	0	10	0	0	0	0	10
1999       0       20       0       0       0       0       20         2000       0       14       0       0       0       0       14         2001       1       17       0       0       0       0       18         2002       0       11       0       0       0       0       11         2003       0       18       0       0       0       0       18         2004       0       27       0       0       0       0       27         2005       0       21       0       0       0       0       21         2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       29         2010       0       29       0       0       0       0       29         2011       0       19       0       0       0       0       0       29	Stikine <sup>a</sup>								
2000       0       14       0       0       0       0       14         2001       1       17       0       0       0       0       18         2002       0       11       0       0       0       0       11         2003       0       18       0       0       0       0       18         2004       0       27       0       0       0       0       27         2005       0       21       0       0       0       0       21         2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       19	Stikine	1999	0	20	0	0	0	0	20
2001       1       17       0       0       0       0       18         2002       0       11       0       0       0       0       11         2003       0       18       0       0       0       0       18         2004       0       27       0       0       0       0       27         2005       0       21       0       0       0       0       21         2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       19									
2002       0       11       0       0       0       0       11         2003       0       18       0       0       0       0       18         2004       0       27       0       0       0       0       27         2005       0       21       0       0       0       0       21         2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       19									
2003       0       18       0       0       0       0       18         2004       0       27       0       0       0       0       27         2005       0       21       0       0       0       0       21         2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       22         2011       0       19       0       0       0       0       19									
2004       0       27       0       0       0       0       27         2005       0       21       0       0       0       0       21         2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       22         2011       0       19       0       0       0       0       19									
2005     0     21     0     0     0     0     21       2006     1     34     0     0     0     0     35       2007     1     19     0     0     0     0     20       2008     0     16     0     0     0     0     16       2009     0     29     0     0     0     0     29       2010     0     22     0     0     0     0     22       2011     0     19     0     0     0     0     19									
2006       1       34       0       0       0       0       35         2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       22         2011       0       19       0       0       0       0       19									
2007       1       19       0       0       0       0       20         2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       22         2011       0       19       0       0       0       0       19									
2008       0       16       0       0       0       0       16         2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       0       22         2011       0       19       0       0       0       0       19									
2009       0       29       0       0       0       0       29         2010       0       22       0       0       0       0       0       22         2011       0       19       0       0       0       0       19									
2010 0 22 0 0 0 0 22 2011 0 19 0 0 0 0 19									
2011 0 19 0 0 0 0 19									
2012   0   20   0   0   0   0   20		2011		20	0	0	0	0	20

<sup>&</sup>lt;sup>a</sup> Includes Unit 1B south of the Stikine River.