
CHAPTER 16: BROWN BEAR MANAGEMENT REPORT

From: 1 July 2012

To: 30 June 2014

LOCATION

GAME MANAGEMENT UNITS: 17A, 17B, and 17C (18,800 mi²)

GEOGRAPHIC DESCRIPTION: Northern Bristol Bay

BACKGROUND

Brown bears are common throughout the northern Bristol Bay area and are seasonally abundant along salmon spawning areas in the Nushagak, Mulchatna, Togiak, and Kulukak drainages, as well as throughout the Wood River-Tikchik Lakes. Bears also are observed occasionally near aggregations of the Mulchatna caribou herd.

Bears in Unit 17 are neither as abundant nor usually as large as those found along the Alaska Peninsula, so historically there had not been as much hunting pressure on this bear population.

Along with increased interest in hunting bears elsewhere in the state, bear hunting in Unit 17 has increased since the mid-1990s. Prior to 1970, few bears were reported harvested from the unit. When the Alaska Board of Game restricted bear hunting opportunity in Unit 9 in regulatory year (RY) 1975 (regulatory year begins 1 July and ends 30 June, e.g., RY75 = 1 July 1975–30 June 1976) by only allowing bears to be hunted during alternating seasons (open during the fall of odd-numbered years and the spring of even-numbered years), the number of bears reported killed in Unit 17 increased. The increase in reported harvest may have been partially due to the displacement of some hunters and guiding activities from Unit 9 to Unit 17 where the bear hunting opportunity remained more consistent. There was also an increased enforcement effort aimed at reducing the illegal harvest of brown bears that may have led to better reporting of harvested bears. During RY70–RY97, annual reported harvests rarely exceeded 50 bears per year. Since 1997, annual reported bear harvests have increased substantially. In RY11 the bag limit for brown bear in Unit 17 increased from 1 to 2 bears per regulatory year which led to an immediate and dramatic increase in the number of bears harvested. During RY72–RY80, the harvest was generally balanced between the spring and fall seasons. During RY82–RY97 there were higher harvests during fall seasons than during the spring. Beginning with the increased spring hunting season length during RY98, spring harvests exceeded fall harvests for several years. However, during recent years, fall harvests have increased to almost twice the spring take. Spring harvest is almost entirely dependent on adequate snow depth and cover to allow access to bear denning areas with snowmachines that then allow hunters to spot and stalk bears near their den sites. In years with low snowfall such as spring RY13, few bears are taken because access to bears is extremely limited.

One reason for the increase in the fall harvest through the mid-1990s was increased hunting pressure on the rapidly growing Mulchatna caribou herd (Van Daele 1997; Woolington 2003). Reported moose hunting activity and harvests also increased dramatically during this same period (Woolington 2002). With more caribou and moose hunters in the field, more bears were killed either incidentally or during “combination” hunts. However, with the decline in the Mulchatna caribou herd, fewer caribou hunters are now coming to Unit 17 (Woolington 2009). Increased spring harvest does demonstrate a rising interest in hunting brown bears in Unit 17. Present bear harvest numbers probably reflect the popularity of bear hunting, as well as the ability for guided hunters to participate in multi-species hunts: moose, brown bear, black bear, and wolf.

Reported harvests probably reflect only a portion of the brown bears killed in the unit. All villages in the area have open landfills that attract bears during the spring, summer, and fall. Residential garbage, dog food, and fish-drying racks also bring bears close to humans. Many local residents have a low tolerance for bears near villages and fish sites, and they occasionally kill bears in these areas. Although reporting rates seem to have improved in recent years, many nonhunting mortalities are reported either indirectly or not at all. Because of what could be a substantial number of unreported kills, any conclusions for management purposes based solely on harvest data should be viewed with caution.

MANAGEMENT DIRECTION

MANAGEMENT OBJECTIVES

- Maintain a brown bear population that will sustain an annual harvest of 50 bears composed of at least 50% males.
- Use educational outreach to work with local communities and residents to minimize bear-human conflicts.

METHODS

Each brown bear legally harvested or reported killed in defense of life or property in the unit is sealed, the skull is measured, sex determined, and a premolar tooth extracted and aged. We record data on hunter residency, number of days hunted, transportation used, and date and location of kill at the time of sealing. When possible, we investigate circumstances surrounding defense of life or property and illegal kills. We collect subjective population data during caribou and moose surveys. Reports from agency fieldworkers, local residents, pilots and transporters, hunting guides, and hunters are also used to gain insight on bear population trends.

RESULTS

POPULATION STATUS AND TREND

No objective data on the status of the bear population specific to Unit 17 are available. The viewpoint of most local residents is that the bear density seems to be increasing, and generally much higher than they would like to see. They are concerned with bears becoming a public safety concern, as well as bears causing property damage and preying on both moose and caribou. However, in talking to several of the local pilots who have flown throughout this country for decades, their perception is quite different and they are convinced the bear numbers

are substantially lower than they were 5–10 years ago (R. Grant and T. Tucker, pilots, Dillingham, personal communication, 2014).

Population Size

No population size or density estimates have been made for the Unit 17 brown bear population. Densities are probably lower than those observed along the Alaska Peninsula but greater than that of interior areas to the north.

Distribution and Movements

We know little about the distribution and movements of brown bears in this unit. Bears concentrate along salmon spawning streams throughout the summer and fall. Individual bears and family groups are commonly observed near calving aggregations of caribou in late May. We have seen den sites in the mountains throughout the unit.

MORTALITY

Harvest

Season and Bag Limit.

Unit	Season	Bag limit
Unit 17	20 Aug–31 May	2 bears per regulatory year
Unit 17, residents only by state subsistence registration permit.	20 Aug–31 May	2 bears per regulatory year

Human-Induced Mortality. During RY12, 144 hunters reported killing brown bears in Unit 17, 78 males (54%) and 66 females (46%; Table 1). During the RY13 hunting season, 116 hunters reported killing brown bears in Unit 17, including 63 males (54%) and 49 females (43%) and 4 bear of undetermined sex (3%) (Table 1). This is the third year of the 2 bear bag limit, and since its inception in RY11, the harvest has declined in each of the past 2 years. The minimal spring harvest of 5 bears in RY13 was largely the result of the absence of snow, but even then, the overall harvest appears to be on a downward trend after the spike in RY11 when the 2 bear bag limit was implemented.

In RY12, 22 bears (9 males, 13 females) were reported killed in Unit 17A; 87 (46 males, 41 females) were reported killed in Unit 17B; and 35 (24 males and 11 females) were reported from Unit 17C. In RY13, 23 bears (14 males, 7 females, and 2 bears of unknown sex) were reported killed in Unit 17A; 61 (30 males and 30 females, and 1 bear of unknown sex) were reported killed in Unit 17B; and 32 (20 males and 11 females and 1 bear of unknown sex) were reported from Unit 17C. In the 5 years previous to this report period, 16% of the bears reported killed in the unit have been taken in Unit 17A, 57% in 17B, and 27% in 17C (Table 2).

Hunter Residency and Success. Nonresidents account for most of the brown bear harvest in Unit 17. During RY12 nonresidents took 81% of the bears reported killed in the unit. During RY13 nonresidents took 75% of the bears reported killed in the unit (Table 3).

Harvest Chronology. One hundred and six bears were reported killed during the fall hunting season in RY12, and 38 bears were reported killed during the spring. One hundred bears were reported killed during the fall hunting season in RY13, and 16 bears were reported killed during the spring (Tables 1 and 4). Most bears are consistently reported killed in fall in Unit 17 (Table 4). Fall seasons lend themselves to harvest by hunters pursuing moose and caribou who take a bear if they encounter one, whereas spring bears are taken only by hunters specifically targeting a bear. Also, in the fall, hunters have the advantage of finding bears along salmon streams or berry patches throughout the landscape, while in the spring, most bear harvest is dependent on snow conditions for hunting with snowmachines and therefore much more prone to poor conditions and thus low harvest.

Transport Methods. Most successful bear hunters in Unit 17 used aircraft for access. Boats and snowmachines were the only other consistently used methods of access (Table 5).

Other Mortality

During RY12, 4 brown bears were killed in defense of life or property, and 2 others were killed while conducting bear research. In RY13, 2 brown bears were reported killed in defense of life or property while a third bear was killed illegally at the Dillingham landfill. The degree to which brown bears are killed but not reported in Unit 17 is difficult to assess, but is a topic that comes up in conversation quite often. This is usually associated with the presumption that many people are generally intolerant of bears, and bears are routinely shot at when seen near homes, villages, along rivers, etc. If this is the case, there is likely a fair bit of additional mortality that we have no way of tracking.

HABITAT

Brown bear habitat in Unit 17 is virtually unaltered and in excellent condition. Salmon stocks are carefully managed, and escapements are adequate for the needs of the current bear population. Abundant ungulates in the unit have also provided a steady food supply for bears. Human settlements are small relative to urban areas, but village populations are growing. With resultant increase in land uses by local residents, areas used by both humans and bears are increasing. Increased localized food sources around these settlements (human food and garbage) may enhance the areas as bear habitat; however, bears using areas frequented by humans run the risk of being shot. Proposed development of mines in the area have the possibility of affecting bear habitat, but the degree to which the exploration and possible mine development might affect denning and use of the area by bears is currently unknown.

NONREGULATORY PROBLEMS-NEEDS

To reduce nuisance bear complaints and illegal kills, a public education effort was continued in the unit. Radio announcements and public meetings have been used to inform rural residents about bear behavior and to disseminate advice on how to deal with bear problems. The department has worked with city and local village government representatives and Dillingham city police to enforce existing regulations when bear problems are caused by improper food or garbage storage. Demonstration projects to publicize the use of electric fences to protect property from bears were set up in the Dillingham area and have been very effective.

We should continue efforts to encourage local residents to report all bears killed and to educate them on bear behavior and ways to minimize problems with bears. We should also emphasize nonlethal methods of dealing with “nuisance” bears. Concurrent with these efforts, we should work with local village governments and the Alaska Department of Environmental Conservation to improve landfills so they are less attractive to bears.

The Dillingham dump was consistently used by an unknown number of individual bears for more than 2 decades. The open landfill formerly used was closed and covered in 2003. The new landfill was moved to a different location and uses the “closed cell” concept. Garbage and waste material dropped off by the public at a transfer site is now incinerated before being hauled to a disposal site, which is covered with soil at the end of each day. In addition, the transfer and disposal sites are enclosed by chain link as well as electric fences. The former dump site attracted large numbers of bears to the surrounding residential areas. The design and operation of the new landfill has significantly reduced the number of bears and bear problems in the immediate Dillingham area.

CONCLUSIONS

Despite harvests during the reporting period of more than twice the historical average, we are meeting our population objective of maintaining a brown bear population that will support a harvest of 50 bears per year. Subjective evidence indicates the population is large enough to support such a harvest. The population objective of at least 50% males in the reported harvest has been met in most years, though the sex ratio for all bears killed (reported plus unreported) in the unit is unknown.

It is unknown if the unequal distribution of harvest between subunits is due to bear abundance, distribution, or hunter effort. We should strive to distribute hunting pressure more uniformly across Unit 17 to ease some of the pressure on the bear populations in some of the more easily accessible areas.

Changing the intolerant attitude of many local residents toward bears is a significant challenge. We have instituted a multifaceted approach, including education, enforcement, and implementation of nonlethal methods to minimize antagonistic bear–human encounters. It is difficult to objectively measure the success of these efforts, but in recent years there probably has been improvement.

REFERENCES CITED

- Van Daele, L. J. 1997. Mulchatna caribou. Pages 23–36 [*In*] M. V. Hicks, editor. Caribou management report of survey and inventory activities 1 July 1994–30 June 1996. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Study 3.0, Juneau.
- Woolington, J. D. 2002. Unit 17 moose. Pages 250–272 [*In*] C. Healy, editor. Moose management report of survey and inventory activities 1 July 1999–30 June 2001. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 1.0, Juneau.

Woolington, J. D. 2003. Mulchatna caribou. Pages 34–53 [*In*] C. Healy, editor. Caribou management report of survey and inventory activities 1 July 2000–30 June 2002. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 3.0, Juneau.

Woolington, J. D. 2009. Mulchatna caribou. Pages 11–31 [*In*] P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2006–30 June 2008. Alaska Department of Fish and Game, Division of Wildlife Conservation, Federal Aid in Wildlife Restoration Project 3.0, Juneau.

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Table 1. Unit 17 brown bear mortality, Alaska, regulatory years^a 2000–2013.

Regulatory year	Hunter kill				Nonhunting kill				Total reported mortality			
	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
<i>2000</i>												
Fall 2000	33	27	1	61	4	2	2	8	37	29	3	69
Spring 2001	36	7	0	43	0	0	0	0	36	7	0	43
Total	69	34	1	104	4	2	2	8	73	36	3	112
<i>2001</i>												
Fall 2001	21	25	1	47	0	3	0	3	21	28	1	50
Spring 2002	42	4	1	47	0	0	0	0	42	4	1	47
Total	63	29	2	94	0	3	0	3	63	32	2	97
<i>2002</i>												
Fall 2002	35	37	0	72	4	0	1	5	39	37	1	77
Spring 2003	21	6	0	27	0	0	0	0	21	6	0	27
Total	56	43	0	99	4	0	1	5	60	43	1	104
<i>2003</i>												
Fall 2003	26	42	0	68	2	2	0	4	28	44	0	72
Spring 2004	27	5	0	32	0	0	0	0	27	5	0	32
Total	53	47	0	100	2	2	0	4	55	49	0	104
<i>2004</i>												
Fall 2004	23	27	0	50	0	0	0	0	23	27	0	50
Spring 2005	30	5	0	35	1	0	0	1	31	5	0	36
Total	53	32	0	85	1	0	0	1	54	32	0	86
<i>2005</i>												
Fall 2005	35	39	0	74	0	0	0	0	35	39	0	74
Spring 2006	33	13	0	46	0	0	0	0	33	13	0	46
Total	68	52	0	120	0	0	0	0	68	52	0	120
<i>2006</i>												
Fall 2006	32	40	0	72	2	2	1	5	34	42	1	77
Spring 2007	36	7	0	43	0	0	0	0	36	7	0	43
Total	68	47	0	115	2	2	1	5	70	49	1	120

Regulatory year	Hunter kill				Nonhunting kill				Total reported mortality			
	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
<i>2007</i>												
Fall 2007	34	37	0	71	0	1	0	1	34	38	0	72
Spring 2008	29	18	0	47	0	0	0	0	29	18	0	47
Total	63	55	0	118	0	1	0	1	63	56	0	119
<i>2008</i>												
Fall 2008	40	27	0	67	0	1	0	1	40	28	0	68
Spring 2009	29	13	0	42	0	0	1	1	29	13	1	43
Total	69	40	0	109	0	1	1	2	69	41	1	111
<i>2009</i>												
Fall 2009	52	40	1	93	2	0	0	2	54	40	1	95
Spring 2010	27	7	0	34	1	0	0	1	28	7	0	35
Total	79	47	1	127	3	0	0	3	82	47	1	130
<i>2010</i>												
Fall 2010	48	53	0	101	2	2	1	5	50	55	1	106
Spring 2011	29	7	0	36	0	2	0	2	31	9	0	40
Total	77	60	0	137	2	4	1	7	81	64	1	146
<i>2011</i>												
Fall 2011	73	48	1	122	5	1	0	6	78	49	1	128
Spring 2012	31	15	0	46	0	0	0	0	31	15	0	46
Total	104	63	1	168	5	1	0	6	109	64	1	174
<i>2012</i>												
Fall 2012	54	52	0	106	3	1	0	4	57	53	0	110
Spring 2013	24	14	0	38	0	2	0	2	24	16	0	40
Total	78	66	0	144	3	3	0	6	81	69	0	150
<i>2013</i>												
Fall 2013	52	46	2	100	2	0	0	2	54	46	2	102
Spring 2014	11	3	2	16	0	1	0	1	11	4	2	17
Total	63	49	4	116	2	1	0	3	65	50	4	119

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 2000 = 1 July 2000–30 June 2001.

Table 2. Unit 17 brown bear harvest by subunit, Alaska, regulatory years^a 1991–2013.

Regulatory year	Subunit												Total ^b			
	17A				17B				17C				M	F	Unk	Total
	M	F	Unk	Total	M	F	Unk	Total	M	F	Unk	Total				
1991	2	2	0	4	18	12	2	32	6	3	0	9	26	17	2	45
1992	1	3	0	4	21	7	0	28	13	4	0	17	35	14	0	49
1993	1	2	0	3	16	6	0	22	4	4	0	8	21	12	0	33
1994	0	3	0	3	16	14	0	30	7	3	0	10	23	20	0	43
1995	1	3	0	4	19	13	0	32	7	3	0	10	27	19	0	46
1996	3	0	0	3	18	9	1	28	10	6	0	16	31	15	1	47
1997	3	0	0	3	28	18	0	46	11	6	0	17	42	24	0	66
1998	4	0	0	4	36	19	0	55	16	3	0	19	56	22	0	78
1999	7	3	0	10	33	17	0	50	17	5	0	22	57	25	0	82
2000	6	1	0	7	44	26	1	71	19	7	0	26	69	34	1	104
2001	3	2	0	5	31	17	0	48	29	10	2	41	63	29	2	94
2002	3	1	0	4	41	38	0	79	12	4	0	16	56	43	0	99
2003	5	5	0	10	29	31	0	60	19	11	0	30	53	47	0	100
2004	6	1	0	7	23	25	0	48	24	6	0	30	53	32	0	85
2005	12	5	0	17	33	39	0	72	23	8	0	31	68	52	0	120
2006	9	2	0	11	45	39	0	84	14	6	0	20	68	47	0	115
2007	8	13	0	21	34	32	0	66	21	10	0	31	63	55	0	118
2008	11	5	0	16	33	27	0	60	24	8	0	32	69	40	0	109
2009	13	9	0	22	40	31	1	72	26	7	0	33	79	47	1	127
2010	12	6	0	18	39	41	0	80	26	13	0	39	77	60	0	137
2011	18	7	1	26	58	41	0	99	28	14	0	42	104	62	1	167
2012	9	13	0	22	46	41	0	87	24	11	0	35	79	65	0	144
2013	14	7	2	23	30	30	1	61	20	11	1	32	64	48	4	116

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 1991 = 1 July 1991–30 June 1992.

^b Total harvest may include bears taken in a Unit 17 that could not be assigned to a subunit.

Table 3. Unit 17 brown bear successful hunter residency, Alaska, regulatory years^a 1991–2013.

Regulatory year	Local ^b resident (%)	Nonlocal resident (%)	Nonresident (%)	Total successful hunters ^c
1991	5 (11)	2 (4)	38 (85)	45
1992	8 (17)	4 (9)	35 (74)	49
1993	2 (6)	2 (6)	28 (88)	33
1994	4 (9)	2 (5)	37 (86)	43
1995	2 (4)	11 (24)	33 (72)	46
1996	4 (9)	4 (9)	39 (82)	47
1997	1 (1)	9 (14)	56 (85)	66
1998	5 (6)	3 (4)	70 (90)	78
1999	8 (10)	11 (13)	63 (77)	82
2000	1 (1)	14 (13)	89 (86)	104
2001	6 (7)	16 (17)	71 (76)	94
2002	2 (2)	15 (15)	81 (83)	99
2003	7 (7)	17 (17)	76 (76)	100
2004	5 (6)	9 (11)	71 (83)	85
2005	17 (14)	24 (20)	79 (66)	120
2006	3 (3)	20 (17)	92 (80)	115
2007	7 (6)	19 (16)	92 (78)	118
2008	12 (11)	14 (13)	83 (76)	109
2009	11 (9)	27 (21)	89 (70)	127
2010	14 (10)	20 (15)	103 (75)	137
2011	11 (7)	33 (20)	124 (74)	168
2012	8 (6)	19 (13)	117 (81)	144
2013	7 (6)	14 (12)	87 (75)	116

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 1991 = 1 July 1991–30 June 1992.

^b Residents of Game Management Unit 17.

^c Total may be higher than the sum of the columns because of hunters of unknown residency.

Table 4. Unit 17 brown bear harvest chronology percent by season, Alaska, regulatory years^a 1991–2013.

Regulatory year	Harvest chronology percent by season								<i>n</i>
	Fall				Spring				
	20–31 Aug	1–15 Sep	16–30 Sep	1–15 Oct	1–15 Apr	16–30 Apr	1–15 May	16–31 May	
1991 ^b		7	53	11		2	11	16	45
1992 ^b		12	47	6			21	14	49
1993 ^{b,c}		9	49	24			6	12	33
1994 ^{b,c}		9	58	16			5	12	43
1995 ^{b,c}		11	46	11			15	17	46
1996 ^{b,c}		6	34	24			17	19	47
1997 ^d		7	30	18		23	14	7	66
1998 ^d		2	25	18		27	19	9	78
1999 ^d		4	29	12	5	21	24	5	82
2000		5	44	10	2	18	14	7	105
2001 ^e		6	35	9	9	28	11	3	94 ^f
2002 ^e		8	52	13	1	9	12	5	99
2003 ^g		11	48	7	4	16	11		100 ^h
2004		13	39	7	16	18	6	1	85
2005 ⁱ		26	28	8	3	21	8	6	120
2006		25	33	4	7	13	15	3	115
2007		27	30	3	2	25	10	3	118
2008		26	28	8	6	18	7	7	109
2009		40	27	6	4	10	10	3	127
2010		48	23	3	3	12	7	4	137
2011 ^j	16	38	17	1	2	15	2	8	168 ^k
2012 ^l	22	31	16	4	1	14	3	7	144
2013 ^m	28	34	19	4	1	6	5	2	116

^a Regulatory year begins 1 Jul and ends 30 Jun, e.g., regulatory year 1991 = 1 Jul 1991–30 Jun 1992.

^b Season dates: Spring: 10 May–25 May; Fall Units 17A and 17C: 10 Sep–10 Oct; Fall Unit 17B: 20 Sep–10 Oct.

^c Unit 17 season dates for regulatory years 1993–1996 are the same as regulatory years 1990–1992 with the following addition: Western Alaska Brown Bear Management Area (including Unit 17A and that portion of Unit 17B that drains into Nuyakuk and Tikchik Lakes), 1 Sep–31 May.

^d Season dates: Spring: 15 Apr–25 May; Fall Units 17A and 17C: 10 Sep–10 Oct; Fall Unit 17B: 20 Sep–10 Oct; Western Alaska Brown Bear Management Area (including Unit 17): 1 Sep–31 May.

^e Season dates: Units 17A and 17C: 10 Sep–25 May; Unit 17B: 20 Sep–25 May.

^f Includes 1 bear taken 20 Oct 2001, and 1 bear taken 29 Mar 2002.

^g Season dates: Units 17A and 17C: 10 Sep–25 May; Unit 17B Mulchatna drainage, upstream of and including the Chilikadrotna River: 10 Sep–25 May; and Unit 17B, remainder: 20 Sep–25 May.

^h Includes 1 bear taken 16 Nov 2003 and 1 bear taken 27 Mar 2004.

ⁱ Season dates for Units 17A, 17B, and 17C: 10 Sep–25 May.

^j Season dates for Units 17A, 17B, and 17C: 20 Aug–31 May.

^k Includes 1 bear taken 12 Nov 2011 and 1 bear unknown kill date.

^l Total includes 1 bear taken 1 Jul, and 1 taken in fall (unknown date).

^m Total includes 1 bear taken in Nov, also 1 of unknown kill date.

Table 5. Unit 17 brown bear harvest percent by transport method, Alaska, regulatory years^a 1991–2013.

Regulatory year	Percent by transport method								<i>n</i>
	Airplane	Horse	Boat	ATV ^b	Snowmachine	Highway vehicle	Walk	Unknown	
1991	80		16					4	45
1992	84		14				2		49
1993	82		15				3		33
1994	82		16				2		43
1995	91		7			2			46
1996	79		17			2		2	47
1997	74		18		6		2		66
1998	73		8	1	18				78
1999	63		15	2	18		1		82
2000	78		8		10		4		104
2001	61		12	1	26				94
2002	92		7				1		99
2003	72		16		9		3		100
2004	58		10		32				85
2005	66		12		20	1	1		120
2006	79		5	1	12		3		115
2007	69		11		19	1			118
2008	67		11	1	20	1			109
2009	67		19	1	12			1	127
2010	56		26		14		1	2	137
2011	54	1	22		16	1	2	4	168
2012	53		31	1	12		2	1	144
2013	59		28		5	1	6	1	116

^a Regulatory year begins 1 July and ends 30 June, e.g., regulatory year 1991 = 1 July 1991–30 June 1992.

^b ATV = all-terrain vehicle.