

**IDAHO DEPARTMENT OF FISH AND GAME**

**Steven M. Huffaker, Director**

**Project W-170-R-29**

**Progress Report**



**PRONGHORN ANTELOPE**

Study I, Job 7

July 1, 2004 to June 30, 2005

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**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Pronghorn Antelope Surveys and Inventories</u>
<b>PROJECT:</b>	<u>W-170-R-29</u>	<b>STUDY NAME:</b>	<u>Big Game Population Status, Trends, Use, and Associated Habitat Studies</u>
<b>SUBPROJECT:</b>	<u>3-7</u>		
<b>STUDY:</b>	<u>I</u>		
<b>JOB:</b>	<u>7</u>		
<b>PERIOD COVERED:</b>	<u>July 1, 2004 to June 30, 2005</u>		

**STATEWIDE**

**Summary**

A total of 14,197 hunters (13,634 resident hunters and 563 non-resident hunters) applied for 1,565 controlled pronghorn antelope permits offered in 2004. There were 45 more permits offered in 2004 than in 2003. Thirty different controlled hunts were offered in Southwest, Magic Valley, Southeast, Upper Snake, and Salmon regions and generally ran from 25 September to 24 October. In addition, 1,299 hunters participated in general archery pronghorn antelope seasons offered from 15 August through 15 September in 32 units. Forty permits were offered in 2004 for youth hunters (12-17 years of age) to take pronghorn antelope.

An estimated 1,453 of the 1,565 (93%) controlled hunt permittees actually hunted pronghorn antelope. Hunters harvested 963 pronghorn antelope (758 males, 189 females, 16 unknown) in 4,542 days of hunting. General season archery hunters harvested an estimated 291 pronghorn (229 males, 51 females, 11 unknown) in 5,599 days of hunting. Average horn length for males harvested in controlled and general hunts was 11.0 inches and 11.2 inches, respectively.

**Introduction**

Most pronghorn antelope populations in Idaho have densities that vary from low to moderate. In general, Idaho's pronghorn antelope habitats do not support the levels which are characteristic of high-quality habitats in Wyoming and Montana. Low annual precipitation, poor range conditions, and conflicts with private landowners are probably important reasons for the differences. The Camas, Birch Creek, Medicine Lodge, Little Wood, Big Lost, and Little Lost valleys support herds at relatively high densities.

Hunter success in most years exceeds 70% in many controlled hunts. The proportion of bucks harvested in Idaho by permittees in either-sex pronghorn antelope controlled hunts averaged 80% in 2004. A history of pronghorn antelope harvest is presented in Table 1. The 2004 pronghorn antelope season structure is presented in Appendix A.

When Idaho implemented the 1991-1995 Antelope Species Management Plan, the pronghorn antelope management units were divided into 5 groups of units with similar attributes and

hunting opportunities (Figure 1). Knowledge of the opportunities present in these units will allow hunters to select the type of area and hunting experience they prefer. The Department's objective is to provide a variety of opportunities allowing hunters to match the setting and experience they desire. Variables used to classify units were hunting pressure, pronghorn antelope density and herd composition, road density and condition, natural condition of the environment, and distance from major human population centers.

In units of Group 1, hunting pressure is light or dispersed and generally occurs in areas of high aesthetic appeal away from major human population centers. Roads often traverse rough terrain, are of poor quality, and are limited in number. Pronghorn antelope numbers may be high or low, but the opportunity to harvest a mature buck is high. Management objectives for Group 1 hunts include: 1) maintain an average horn length of 12.0 inches in the firearm buck harvest, and 2) maintain a preseason buck:doe ratio of greater than 50:100.

Group 2 units can provide a full range of opportunities to hunters. Pronghorn antelope numbers are high, supporting high hunter densities, high harvest, and high success rates in many units. Doe/fawn pronghorn antelope hunts are often offered in these units for population control. Within many of these units, opportunities exist to participate in Group 1 or Group 3 type hunts if desired. Management objectives for Group 2 hunts include: 1) maintain an average horn length of 12.0 inches in the firearm buck harvest, and 2) maintain a preseason buck:doe ratio of greater than 40:100.

In general, Group 3 units are characterized by variable hunter and pronghorn antelope densities, high road densities, and motorized vehicle use. Availability of pronghorn antelope bucks is limited. Private ownership of, and restricted access to, pronghorn antelope habitat is high in most units and has resulted in depredation problems that often dictate hunting season structure and harvest levels. Management objectives for Group 3 hunts include: 1) maintain a preseason buck:doe ratio of greater than 40:100.

With the exception of Units 48 and 54, no hunts are offered in Group 4 and Group 5 units. Although pronghorn antelope are present in units of Group 4, low population numbers and/or low production levels limit harvest opportunity at this time. Portions of Group 5 units were historically pronghorn antelope habitat, but currently support few or no pronghorn antelope.

Because of what appeared to be a steady decline in fawn:doe ratios through time, the Department initiated a graduate student research project to identify factors affecting productivity. This project has been completed and an M. S. Thesis is available.

# ANTELOPE

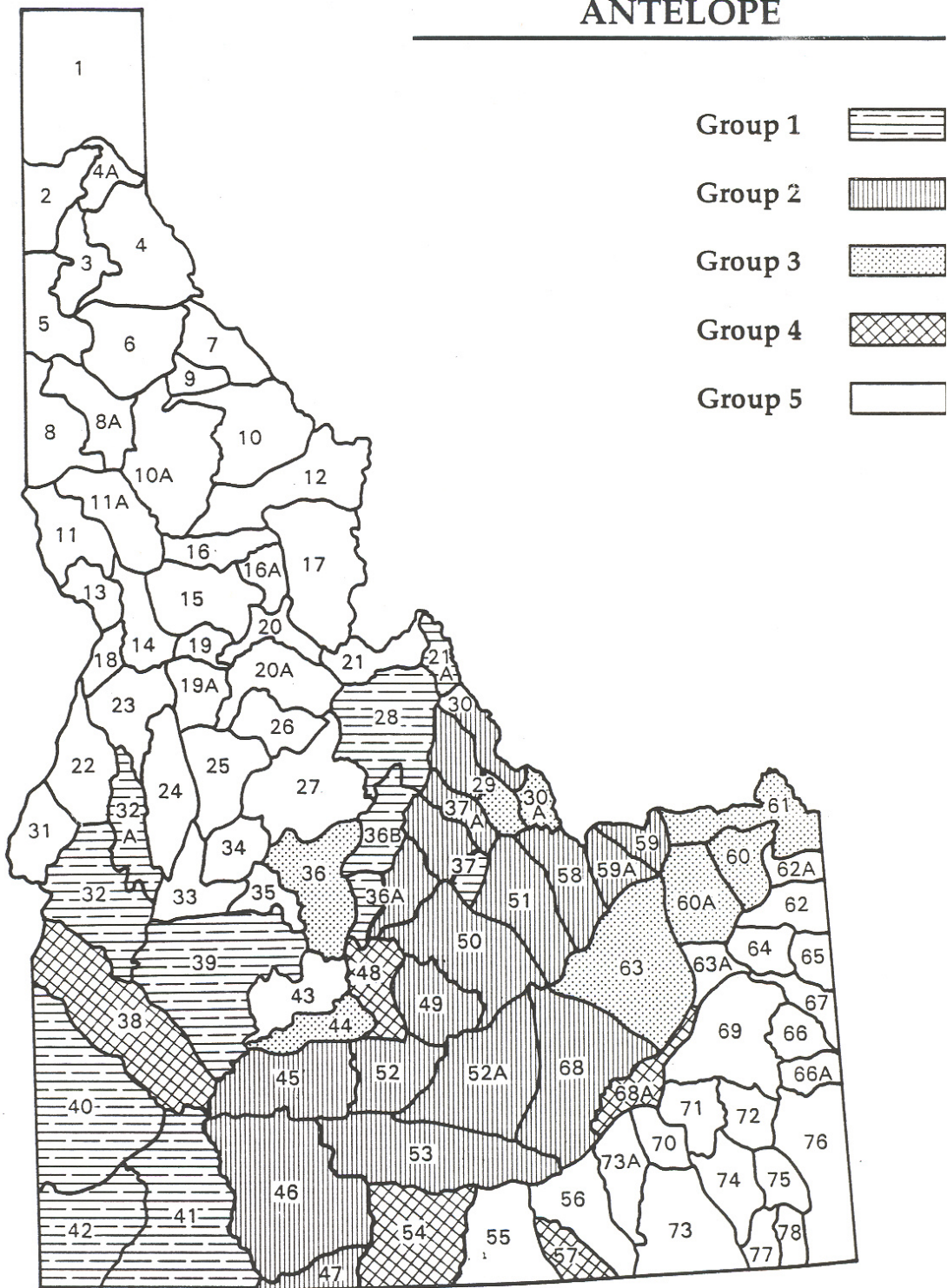


Figure 1. Pronghorn antelope management groups in Idaho.

Table 1. Pronghorn antelope estimated harvest history in Idaho, 1935-present.

Season	Year	Hunters	Harvest	Success (%)	Days hunted	
Archery	1982	760	130	17	4,900	
	1983	400	100	33	2,600	
	1984	230	20	8	1,200	
	1985	300	40	14	1,600	
	1986	100	40	40	400	
	1987	600	200	33	3,300	
	1988	800	200	27	4,800	
	1989	340	60	18	2,400	
	1990	200	80	36	1,300	
	1991	170	80	28	900	
	1992	600	150	25	2,900	
	1993	550	80	15	3,000	
	1994	860	235	27	4,800	
	1995	790	135	17	4,100	
	1996	920	155	17	5,200	
	1997 <sup>a</sup>					
	1998 <sup>a</sup>					
	1999 <sup>a</sup>					
		2000	772	189	24	3,800
		2001	822	245	30	3,450
		2002	1,126	263	23	5,448
		2003	1,036	259	25	4,915
		2004	1,299	291	22	5,599
Controlled	1982	2,400	2,000	85	4,500	
	1983	2,900	2,300	76	6,400	
	1984	2,740	2,050	70	5,600	
	1985	2,900	2,150	73	5,900	
	1986	3,000	2,500	83	6,200	
	1987	2,900	2,400	77	6,300	
	1988	3,100	2,600	80	6,800	
	1989	2,900	2,240	72	6,900	
	1990	2,500	2,000	72	6,600	
	1991	3,600	2,870	75	9,600	
	1992	3,980	3,000	72	11,100	
	1993	3,740	2,390	60	11,500	
	1994	3,110	1,600	72	10,900	
	1995	2,170	1,360	63	6,500	
	1996	1,920	1,260	66	6,000	
	1997	2,128	1,305	61	7,200	
	1998	1,917	1,153	55	6,600	
	1999	1,631	1,149	63	5,285	
	2000	1,571	1,086	69	4,825	
2001	1,584	1,118	71	4,615		
2002	1,500	1,076	72	4,554		

Table 1. Continued.

Season	Year	Hunters	Harvest	Success (%)	Days hunted
	2003	1,379	989	72	4,338
	2004	1,453	963	66	4,542
Extra doe/fawn	1989	1,400	1,200	81	3,200
	1990	1,300	1,100	80	3,400
Total	1935		144		
	1936		124		
	1937				
	1938				
	1939				
	1940		400		
	1941				
	1942		700		
	1943				
	1944		1,470		
	1945		650		
	1946				
	1947		461		
	1948		419		
	1949		383		
	1950		539		
	1951		1,349		
	1952		1,520		
	1953		1,254		
	1954		970		
	1955		822		
	1956		919		
	1957		1,001		
	1958		821		
	1959		679		
	1960		701		
	1961		579		
	1962		549		
	1963		774		
	1964		839		
	1965		977		
	1966		1,219		
	1967		1,286		
	1968		1,294		
	1969		1,472		
	1970		1,551		
	1971		1,465		
	1972		1,486		
	1973		1,237		
	1974		1,301		

Table 1. Continued.

Season	Year	Hunters	Harvest	Success (%)	Days hunted
	1975		1,314		
	1976		1,380		
	1977		1,250		
	1978		1,345		
	1979		1,430		
	1980		1,498		
	1981		1,837		
	1982	3,160	2,130	67	9,400
	1983	3,300	2,400	73	9,000
	1984	2,970	2,070	70	6,800
	1985	3,200	2,190	68	7,500
	1986	3,100	2,540	82	6,600
	1987	3,500	2,600	74	9,600
	1988	3,900	2,800	72	11,600
	1989	4,640	3,540	75	12,500
	1990	4,000	3,180	79	11,300
	1991	3,770	2,950	78	10,500
	1992	4,600	3,150	68	13,000
	1993	4,290	2,470	58	14,500
	1994	3,110	1,835	59	10,900
	1995	2,960	1,495	51	10,600
	1996	2,780	1,410	51	11,200
	1997 <sup>a</sup>	2,128	1,305	61	7,200
	1998 <sup>a</sup>	1,917	1,153	55	6,600
	1999 <sup>a</sup>	1,631	1,149	63	5,285
	2000	2,343	1,275	54	8,625
	2001	2,406	1,363	57	8,065
	2002	2,626	1,339	51	10,002
	2003	2,415	1,248	52	9,253
	2004	2,752	1,254	46	10,141

<sup>a</sup> Due to budget limitations, no survey was conducted to estimate number of pronghorn antelope harvested by archery hunters during general season.

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Pronghorn Antelope Surveys and Inventories</u>
<b>PROJECT:</b>	<u>W-170-R-29</u>	<b>STUDY NAME:</b>	<u>Big Game Population Status, Trends, Use, and Associated Habitat Studies</u>
<b>SUBPROJECT:</b>	<u>3</u>		
<b>STUDY:</b>	<u>1</u>		
<b>JOB:</b>	<u>7</u>		
<b>PERIOD COVERED:</b>	<u>July 1, 2004 to June 30, 2005</u>		

**SOUTHWEST REGION**

**Abstract**

Group 1 - A total of 456 permits were issued and 259 pronghorn were harvested in controlled hunts in 2004, including 24 pronghorn harvested by 27 landowner appreciation permit holders. Hunter success averaged 57%. Average horn length met the minimum management objective of 12 inches in Units 39, but average horn length in Units 32, 41, and 42 were slightly below the minimum objective.

An estimated 465 hunters harvested an estimated 129 antelope (27% success rate) during the 15 August-15 September general archery season in Units 40, 41, and 42.

Group 4 - No hunts or surveys took place in this area during the reporting period.

**Group 1**

**Management Units 32, 39, 40, 41, 42**

**Population Surveys** - No surveys were conducted on pronghorn during the reporting period. Incidental observations of pronghorn during bighorn sheep surveys and other activities suggest a static population.

**Harvest** - Based upon harvest reports, controlled hunt harvest increased from 254 pronghorn in 2003 to 259 in 2004 (Table 1). The muzzleloader hunt in Unit 41 had a success rate of 44% with a harvest of 16 pronghorn antelope. The success rate in the any-weapon controlled hunts was 56% with a harvest of 243 pronghorn antelope. Average horn length met the minimum management objective of 12 inches in Units 39 (avg. = 12.2 in,  $n = 18$ ), but average horn length in Units 32 (avg. = 11.1 in,  $n = 9$ ), 40 (avg. = 11.1 in,  $n = 70$ ), 41 (avg. = 11.0 in,  $n = 16$ ), and 42 (avg. = 11.8 in,  $n = 84$ ) were slightly below the minimum objective.

An estimated 465 hunters hunted 1,736 days and harvested an estimated 129 antelope (27% success rate) during the 15 August-15 September general archery season in Units 40, 41, and 42.

**Translocation** - In December 2004, 51 pronghorn (15 adult males, 2 yearling males, 5 male fawns, 20 adult females, 7 yearling females, and 2 female fawns) were translocated from Loa, Utah and released near Brown's Creek in Unit 40. One additional female fawn died of a capture-related neck injury during transit. Ten adult females were radio-marked and have been monitored monthly since the release. Two radio-marked females died with 2-3 weeks of release; one of predation, and the other of unknown causes. Radio locations and observations of the remaining 8 females indicate the released pronghorns assimilated with local herds and migrated off the release-site winter range with different bands. Radio-marked pronghorns have ranged from the area around the release site to Castle Creek to Triangle in Unit 40 and to the sage brush deserts in the Shoofly Creek, Little Jacks Creek, Big Jacks Creek, and Battle Creek drainages in Unit 41. The surgical tubing used to secure the temporary radio collars to the antelope appears to have deteriorated by late summer; 3 radios dropped off during September 2005. The remaining 5 animals will continue to be monitored as long as the radio collars stay attached.

#### **Group 4**

#### **Management Unit 38**

No hunts or surveys took place in this area during the reporting period.



Table 1. Pronghorn harvest, Group 1, Southwest Region, 1984-present.

Unit	Year <sup>a</sup>	Permits	Harvest			Male (%)	Success (%)
			Male	Female	Total		
32	2000	10	6	2	8	75	80
	2001	10	7	0	7	100	70
	2002	15	12	0	12	100	80
	2003	15	11	4	15	73	100
	2004	15	9	1	10	90	67
39	1996	10	8	1	9	89	90
	1997	10	9	0	9	100	90
	1998	10	10	0	10	100	100
	1999	10	8	1	9	89	90
	2000	20	16	1	17	94	85
	2001	20	17	0	17	100	85
	2002	50	41	2	43	95	86
	2003	28	22	2	24	92	86
	2004	28	21	1	22	95	75
	40	1984	50	28	8	36	78
1985		50	27	3	30	90	60
1986		50	32	8	40	80	80
1987		50	38	5	43	88	86
1988		50	35	6	41	85	82
1989		50	37	4	41	90	82
1990		100	70	16	86	81	86
1991		100	77	9	86	90	86
1992		125	76	13	89	85	71
1993		125	74	6	80	93	64
1994		150	82	15	97	85	65
1995		150	61	20	81	75	54
1996		150	63	12	75	84	50
1997		150	48	22	70	69	47
1998		150	77	13	90	86	60
1999		150	87	10	97	90	65
2000		150	67	15	82	82	55
2001		150	74	13	87	85	58
2002		150	69	23	92	75	61
2003		154	73	12	85	86	55
2004	164	81	16	97	84	59	
41	1984	10	4	1	5	80	50
	1985	10	5	0	5	100	50
	1986	15	6	0	6	100	40
	1987	15	5	0	5	100	33
	1988	15	10	3	13	77	87
	1989	15	4	1	5	80	33
	1990	25	12	0	12	100	48
	1991	25	10	2	12	83	48

Table 1. Continued.

Unit	Year <sup>a</sup>	Permits	Harvest			Male (%)	Success (%)
			Male	Female	Total		
	1992	25	9	1	10	90	40
	1993	25	5	1	6	83	24
	1994	25	6	0	6	100	24
	1995	25	4	3	7	57	28
	1996	25	7	0	7	100	28
	1997	25	5	0	5	100	20
	1998	25	7	0	7	100	28
	1999	25	11	1	12	92	48
	2000	40	12	0	12	100	30
	2001	40	15	3	18	83	45
	2002	40	12	1	13	92	33
	2003	41	12	2	14	86	34
	2004	40	16	0	16	100	40
42	1984	55	22	2	24	92	44
	1985	55	18	1	19	95	35
	1986	75	35	7	42	83	56
	1987	75	32	4	36	89	48
	1988	75	47	2	49	96	65
	1989	75	49	2	51	96	68
	1990	100	48	15	63	76	63
	1991	100	82	4	86	95	86
	1992	125	82	15	97	85	78
	1993	125	82	6	88	93	70
	1994	200	107	23	130	82	65
	1995	200	131	0	131	100	66
	1996	200	121	16	137	88	69
	1997	200	110	15	125	88	63
	1998	200	93	5	98	95	49
	1999	200	100	23	123	81	62
	2000	200	95	16	111	86	56
	2001	200	106	22	128	83	64
	2002	200	103	16	119	87	60
	2003	203	104	12	116	90	57
	2004	209	93	14	107	87	51

<sup>a</sup> Data from 2003 and later includes Landowner Appreciation Hunt permits and harvest.

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<b>PROJECT:</b>	<u>W-170-R-29</u>	<b>STUDY NAME:</b>	<u>Big Game Population Status, Trends, Use, and Associated Habitat Studies</u>
<b>SUBPROJECT:</b>	<u>4</u>		
<b>STUDY:</b>	<u>1</u>		
<b>JOB:</b>	<u>7</u>		
<b>PERIOD COVERED:</b>	<u>July 1, 2004 to June 30, 2005</u>		

**MAGIC VALLEY REGION**

**Abstract**

Group 2 - In recent years, pronghorn populations in Units 49 and 52 have remained relatively stable after increasing slightly during the early 2000s. Pronghorn numbers in Units 46/47 appear to have declined slightly and numbers in Units 53 and 52A remain low. Harvest has been substantially curtailed since 1994 to encourage population growth. Permit levels in 2004 were only 48% of 1993 levels. Observed reproductive performance in August 2004 was above the long-term average in Unit 46 (0.61 fawns:doe) and similar to the long-term average in Unit 49 (1.11 fawns:doe). Mean horn lengths of harvested bucks have been consistently below the 12-inch minimum objective only in Unit 49. Observed buck ratios from 1991-2003 have averaged 0.38 and 0.33 bucks:doe in Units 46 and 49, respectively.

Group 3 - Fawn production measured during August surveys averaged 0.93 fawns:doe from 1996-2004, the highest in the Region. The population is currently estimated at approximately 500 head and liberal doe-fawn harvest has stabilized the population. A ratio of 0.66 bucks:doe was observed in September 2004, exceeding the management objective of 0.40 bucks:doe.

Group 4 - Units 54 and 57 have relatively small numbers of pronghorn antelope and have been managed for quality opportunity. From 1996-2004, 131 hunters in Unit 54 have harvested 114 pronghorn with a mean maximum horn length of 14.0 inches. The hunt in Unit 57 was discontinued in 2002 because of low antelope numbers.

**Group 2**

**Management Units 45, 46, 47, 49, 52, 52A, 53**

**Management** - Pronghorn populations in Group 2 units have fluctuated widely during the past 25 years. After declining to low levels in the early 1980s, pronghorn populations increased to relatively high levels in the late 1980s and early 1990s before declining again in 1993. Successive years of drought followed by severe conditions during the 1992-1993 winter resulted in population declines estimated at 30-50%.

Hunts and permit levels were adjusted to encourage population recovery. Following the 1993 decline, pronghorn hunts were eliminated in Units 45, 52, and 52A, and doe-fawn hunts were eliminated in all units except Unit 46. Since 1994, pronghorn populations have increased moderately in Units 45, 49, 52, and 52A, and hunts have been restored in all units. Pronghorn numbers in Units 46 and 47 have declined since 1994, and numbers have remained low in Unit 53.

**Harvest** - Overall, the number of permits offered in Group 2 units in 2003 (255) was only 48% of 1993 levels. For all hunts combined, 260 hunters harvested 170 antelope (140 bucks and 30 does or fawns). Hunter success in any-antelope hunts in 2004 ranged from 39% in the Unit 47 muzzleloader season to 91% in Unit 49 and averaged 73% for all hunts combined (Table 1). The popular youth-only hunt in Unit 52 was continued for the sixth year. Eighteen of 22 youth hunters that participated harvested an antelope.

The number of bowhunters pursuing antelope in Group 2 units has increased from 285 hunters in 2002 to 391 in 2004. Bowhunters harvested an estimated 94 antelope (79% bucks) in 2004 for an overall success rate of 24%. Bowhunter success was 23% in 2003. Sixty-two percent of the archery harvest was from Unit 46, where bowhunters take as many pronghorn bucks as rifle hunters (Table 2).

One of the goals in the 1991-1995 Pronghorn Antelope Plan is to maintain a minimum mean horn length of 12 inches for firearm hunts. Reported horn lengths in 2004 were meeting the 12-inch objective only in Unit 45. In 2003, the 12-inch objective was achieved in all Group 2 units except Unit 49. Only in Unit 49 has mean horn length consistently been below objective (Table 3).

**Population Surveys** - Sex and age composition data are collected annually on ground surveys during August in Units 46, 47, and 49. In 2003 and 2004, in addition to ground surveys, fixed-wing and/or helicopter surveys were also conducted. The ground and aerial surveys produced similar results for observed fawn:doe ratios; however, the survey types typically produced different observed buck:doe ratios (Table 4). In Units 46/47, the observed ratio of 0.61 fawns:doe is higher than the 1982-2004 mean of 0.51 fawns:doe. In Unit 49, the observed ratio of 1.11 fawns:doe (helicopter survey) were substantially higher than the 1976-2003 mean of 0.80 fawns:doe.

An objective in the 1991-1995 Pronghorn Antelope Plan is to maintain an August ratio of 0.40 bucks:doe. From 1991-2004, observed August buck to doe ratios have averaged 0.38 bucks:doe in Unit 46 and 0.33 bucks:doe in Unit 49. In 2004, surveys suggest the buck:doe ratio objective is being met in Units 46/47. In Unit 49, data suggest we are slightly below objective (Table 4).

During the 2004-2005 reporting period, 3 winter depredation complaints were received from landowners in Unit 45.

## Group 3

### Management Unit 44

**Management** - Unit 44 is the only Group 3 unit in Magic Valley Region. During the late 1970s to mid-1980s, depredation complaints on Camas Prairie (Unit 44 and parts of Units 45 and 52) were common, and the management objective was to maintain the pronghorn antelope population below 100 head. Currently, the summering antelope population exceeds 500 animals on Camas Prairie. However, depredation complaints have been minimal during the past 15 years, indicating an increased landowner tolerance for antelope. No depredation complaints were received during the 2004-2005 reporting period.

**Harvest** - In 2004, 50 permits were maintained in the any-antelope hunt and 100 permits were maintained in the doe-fawn hunt. Since 1999, hunter success in the 2 hunts combined has averaged 76% (Table 5). The mean maximum horn length reported by hunters in 2004 was 10.7 inches. From 1991-2004, mean horn length met the 12-inch plan objective in 7 years (Table 6).

**Population Surveys** - Camas Prairie pronghorns suffered high losses during the 1992-1993 winter. Doe-fawn hunting was curtailed from 1994-1998 to encourage population growth. In recent years, high fawn production and good winter survival have allowed the pronghorn population to increase to more than 500 head. Data suggest that higher than normal losses during the 2001-2002 winter combined with liberal doe-fawn harvest have reduced the population. During August 2003 and 2004, ground and aerial surveys were conducted to provide estimates of sex and age ratios. There was little agreement in the ratios between the survey types in 2003 but good agreement between survey types in 2004 (Table 4). In 2004, observed ratios were 1.00 fawns:doe and 0.66 bucks:doe. On ground surveys conducted from 1999-2003, observed ratios have averaged 0.93 fawns:doe and 0.41 bucks:doe.

No depredation complaints were received during the 2004-2005 reporting period.

## Group 4

### Management Units 48, 54, 57

**Management** - In 1989, the Department transplanted 29 pronghorn antelope from the Mud Lake area (Unit 63) to the Shoshone Basin area of Unit 54. In addition, the Nevada Division of Wildlife released pronghorn antelope east of Jackpot, Nevada, near Shoshone Basin in the late 1980s. This interstate population has increased and provides hunting opportunity in Idaho and Nevada.

**Harvest** - A small controlled hunt has been authorized in Unit 54 since 1996. From 1996-2004, 131 hunters harvested 114 antelope and horn lengths have averaged 14.0 inches (Tables 7 and 8).

**Population Surveys** - In Unit 54, no formal population surveys were conducted. Casual observations by hunters and agency personnel indicate the population has expanded its

distribution north of Shoshone Basin to include the area around Nat-Soo-Pah and the foothill areas adjacent to Rock Creek.

In Unit 57, the resident pronghorn population has remained relatively low. A standardized ground survey is conducted annually in September to help monitor herd numbers. In 2004, only 12 antelope were counted compared with 65 antelope in 2003, 27 antelope in 2002, and 66 antelope in 2001. A hunt with 5 permits was authorized from 1996-2001 to allow some opportunity to harvest the mature bucks this small population supports. The hunt was discontinued in 2002 because of low antelope numbers (Tables 7 and 8).

Antelope numbers in Unit 48 have increased in recent years, allowing this unit to be included in Hunt Area 52.

No depredation complaints were received in Units 54 or 57 during the reporting period.

### **Magic Valley Region Management**

From 1987-1992, pronghorn antelope populations in Magic Valley Region increased due to a series of mild winters and improved summer-fall habitat in some units. Hunting opportunity was increased substantially during this period and summer depredation problems were common. Both permit levels and harvest increased more than 500% from 1984 to 1992 (Table 9). The combined effects of drought and the harsh conditions of the 1992-1993 winter resulted in a substantial decline in pronghorn antelope numbers Region-wide, although populations south of Snake River did not experience the magnitude of decline that occurred in units in the northern portion of the Region. Since the 1993 decline, pronghorn numbers have increased in the Camas Prairie area of Units 44, 45, and 52 and in the Little Wood watershed (Unit 49). Antelope numbers have remained low in Units 52A and 53 and have declined slightly in Units 46 and 47. The small pronghorn antelope population in Unit 54 is expanding its distribution north and will continue to be managed to provide quality hunting opportunity.

There is a high demand for pronghorn antelope hunting in the Region as evidenced by the difficult drawing odds for permits. There were 3,412 first-choice applicants for the 265 permits offered in the Region for any-antelope rifle hunts in 2004 (8% drawing odds).

During the past 15 years, fires have removed more than a million acres of sagebrush-dominated habitat in Magic Valley Region. While these fires may have improved spring, summer, and fall pronghorn antelope habitat in some areas, there have been long-term negative effects on winter range and fawning habitat. These fires will likely hinder recovery of pronghorn antelope populations in Units 46, 47, 49, and 52A to the high levels of the late 1980s and early 1990s.

During the 2005-2006 reporting period, the Region will continue to assist with antelope research efforts in southern Idaho that includes Units 46, 47, and 49. The research is designed to help develop standard survey methodologies for estimating sex and age ratios, and to identify factors influencing the wide range of reproductive performance observed in antelope populations.

Table 1. Pronghorn antelope controlled hunt harvest, Magic Valley Region, Group 2, 1988-present.

Hunt area	Year	Permits	Harvest			Male (%)	Success (%)
			Male	Female	Total		
45 <sup>a</sup>	1988	30	22	2	24	92	80
	1989	50	13	13	26	50	52
	1990	50	23	15	38	61	76
	1991	50	18	18	36	50	72
	1992	50	13	9	22	59	44
	1993	50	6	13	19	32	38
	2001	10	7	1	8	88	80
	2002	10	7	0	7	100	70
	2003	9	9	0	9	100	100
	2004	9	8	0	8	100	89
46	1988	50	40	4	44	91	88
	1989	75	60	5	65	92	87
	1990	75	33	20	53	62	71
	1991	100	35	43	78	45	78
	1992	160	53	69	122	43	76
	1993	160	48	58	106	45	66
	1994	110	48	38	86	56	78
	1995	110	45	31	76	59	69
	1996	160	34	54	88	39	55
	1997	160	45	47	92	49	58
	1998	160	47	55	102	46	64
	1999	110	53	37	90	59	82
	2000	110	28	35	63	44	57
	2001	82	42	20	62	68	76
47	2002	77	30	23	53	57	69
	2003	78	43	20	63	68	81
	2004	81	46	23	69	78	85
	1988	20	3	2	5	60	25
	1989	20	4	1	5	80	25
	1990	40	8	1	9	89	23
	1991	40	12	5	17	71	43
	1992	40	11	1	12	92	30
	1993	40	14	3	17	82	43
	1994	40	9	2	11	82	28
1995	40	9	4	13	69	33	
1996	40	10	0	10	100	25	
1997	40	9	1	10	90	25	
1998	40	10	1	11	91	28	
1999	40	12	4	16	75	40	
2000	40	11	1	12	92	30	
2001	65	13	0	13	100	20	
2002	32	8	4	12	67	38	

Table 1. Continued.

Hunt area	Year	Permits	Harvest			Male (%)	Success (%)	
			Male	Female	Total			
49	2003	37	12	3	15	80	41	
	2004	64	19	6	25	76	39	
	1988	110	83	13	96	86	87	
	1989	110	70	13	83	84	75	
	1990	150	84	30	114	74	76	
	1991	150	86	33	119	72	79	
	1992	175	108	18	126	86	72	
	1993	175	72	45	117	62	67	
	1994	100	41	26	67	61	67	
	1995	100	49	17	66	74	66	
	1996	50	30	3	33	91	66	
	1997	50	39	7	46	85	92	
	1998	50	36	6	42	86	84	
	1999	50	27	14	41	66	82	
	2000	50	28	8	36	78	72	
	2001	50	31	15	46	67	92	
	2002	46	30	7	37	81	80	
	2003	45	34	4	38	89	84	
	52 <sup>b</sup>	2004	45	33	8	41	80	91
		1988	30	22	4	26	85	87
1989		30	16	3	19	84	63	
1990		30	20	3	23	87	77	
1991		30	22	3	25	88	83	
1992		30	15	8	23	65	77	
1993		30	7	8	15	47	50	
1994		15	12	0	12	100	80	
1995		15	9	1	10	90	67	
1999		10	8	0	8	100	80	
2000		20	13	1	14	93	70	
2001		25	12	2	14	86	56	
2002		24	20	2	22	91	92	
2003		17	13	0	13	100	76	
52A <sup>c</sup>	2004	39	26	2	28	93	72	
	1988	30	19	6	25	76	83	
	1989	60	39	8	47	83	78	
	1990	60	40	8	48	83	80	
	1991	60	44	4	48	92	80	
	1992	150	58	63	121	48	81	
	1993	150	17	13	30	57	20	
	1994	25	8	2	10	80	40	
	1995	25	6	1	7	86	28	
	2000	20	14	1	15	93	75	
	2001	23	14	3	17	82	74	



Table 1. Continued.

Hunt area	Year	Permits	Harvest			Male (%)	Success (%)
			Male	Female	Total		
53 <sup>d</sup>	2002	19	2	2	4	50	21
	2003	20	14	2	16	88	80
	2004	22	9	1	10	90	45
	1988	30	27	3	30	90	100
	1989	50	35	5	40	88	80
	1990	50	38	9	47	81	94
	1991	80	27	23	50	54	63
	1992	90	30	32	62	48	69
	1993	90	14	18	32	44	36
	1994	30	11	3	14	79	47
	1995	30	15	1	16	94	53
	1996	30	10	4	14	71	47
	1997	30	8	4	12	67	40
	1998	30	8	4	12	67	40
	1999	30	14	6	20	70	67
	2000	30	5	1	6	83	20

<sup>a</sup> Hunt Area 45 was closed from 1994-2000.

<sup>b</sup> Hunt Area 52 was closed from 1996-1998.

<sup>c</sup> Hunt Area 52A was closed from 1996-1999.

<sup>d</sup> Hunt Area 53 was closed in 2001 and added to Hunt Area 52A in 2002.

Table 2. Pronghorn antelope archery harvest, Magic Valley Region, Group 2, 2001-present.

Hunt area	Year	Hunters	Harvest			Male (%)	Success (%)
			Male	Female	Total		
45	2001	36	7	1	8	88	23
	2002	45	12	0	12	100	27
	2003	70	9	1	10	90	14
	2004	100	15	5	20	75	20
46	2001	95	28	9	37	76	39
	2002	121	35	5	40	88	33
	2003	145	37	13	50	74	34
	2004	148	46	11	57	81	38
47	2001	19	2	2	4	50	22
	2002	26	6	0	6	100	23
	2003	29	0	1	1	0	3
	2004	17	2	0	0	100	12
49	2001	41	11	3	14	79	34
	2002	67	5	1	6	83	9
	2003	61	7	4	11	64	18
	2004	60	9	1	10	90	17
52	2004	23	0	0	0	0	0
52A	2001	18	5	0	5	100	28
	2002	18	1	1	2	50	11
	2003	21	4	0	4	100	19
	2004	30	2	2	4	50	13
53	2002	7	0	0	0	0	0
	2003	11	0	0	0	0	0
	2004	8	1	0	1	100	13

Table 3. Pronghorn antelope horn length for controlled hunts, Magic Valley Region, Group 2, 1991-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)
45 <sup>a</sup>	1991	20	4	12.9
	1992	20	8	12.7
	1993	20	6	12.9
	2001	10	7	12.5
	2002	10	7	12.3
	2003	10	9	13.1
	2004	10	8	12.8
	46	1991	50	30
1992		60	24	12.2
1993		60	20	12.0
1994		60	38	12.2
1995		60	41	11.4
1996		60	18	11.4
1997		60	31	13.1
1998		60	29	13.5
1999		60	53	12.3
2000		60	24	13.4
2001		60	42	11.5
2002		60	35	12.5
2003		60	32	12.4
2004		60	44	10.9
47	1991	40	9	10.9
	1992	40	3	12.2
	1993	40	6	12.6
	1994	40	8	11.4
	1995	40	8	12.6
	1996	40	6	6.5
	1997	40	6	11.5
	1998	40	8	12.3
	1999	40	12	10.9
	2000	40	9	15.2
	2001	65	13	11.4
	2002	40	8	11.5
	2003	40	12	11.0
	2004	40	18	9.5
49	1991	150	43	11.2
	1992	175	47	12.0
	1993	175	29	11.3
	1994	100	35	12.5
	1995	100	43	10.0
	1996	50	21	9.9
	1997	50	30	10.8

Table 3. Continued.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)	
52 <sup>b</sup>	1998	50	27	11.0	
	1999	50	27	11.4	
	2000	50	23	13.4	
	2001	50	31	10.8	
	2002	50	30	11.5	
	2003	50	32	9.9	
	2004	50	32	11.0	
	1991	30	11	12.7	
	1992	15	5	10.4	
	1993	15	2	13.0	
	1994	15	9	12.0	
	1995	15	7	12.0	
	1999	10	8	12.3	
	2000	20	13	11.6	
	2001	25	12	12.5	
	52A <sup>c</sup>	2002	25	22	11.4
2003		45	31	12.4	
2004		45	26	10.0	
1991		60	20	13.2	
1992		75	26	11.6	
1993		75	8	10.9	
1994		25	6	13.8	
1995		25	5	10.6	
2000		20	11	12.4	
2001		25	14	10.7	
2002		25	2	11.5	
2003		45	31	12.5	
2004		25	9	10.8	
53 <sup>d</sup>		1991	50	13	11.7
		1992	30	13	11.5
		1993	30	5	12.5
	1994	30	8	14.0	
	1995	30	14	11.1	
	1996	30	7	10.6	
	1997	30	6	10.6	
	1998	30	7	10.7	
	1999	30	14	11.4	
	2000	30	4	12.5	

<sup>a</sup> Hunt Area 45 was closed from 1994-2000.

<sup>b</sup> Hunt Area 52 was closed from 1996-1998.

<sup>c</sup> Hunt Area 52A was closed from 1996-1999.

<sup>d</sup> Hunt Area 53 was closed in 2001 and added to Hunt Area 52A in 2002.

Table 4. Pronghorn antelope sex and age composition surveys, Magic Valley Region, August 2003-2004.

Year	Unit(s)	Survey method	Sample size	Bucks: 100 does	Fawns: 100 does
2003	44, 45, 52 - Camas Prairie	Fixed-wing	351	39	52
		Helicopter	347	97	76
		Ground	306	27	98
	46/47 - Jarbidge	Fixed-wing	205	51	50
		Ground	206	47	50
	49 - Little Wood	Helicopter	404	34	73
Ground		217	45	77	
2004	44, 45, 52 - Camas Prairie	Helicopter	432	76	103
		Ground	334	66	100
	46/47 - Jarbidge	Helicopter	291	68	55
		Ground	184	43	61
	49 - Little Wood	Helicopter	518	40	111
		Ground	352	34	96

Table 5. Pronghorn antelope controlled hunt harvest, Magic Valley Region, Group 3, 1987-present.

Hunt area	Year	Permits	Harvest			Male (%)	Success (%)
			Male	Female	Total		
44	1987	20	20	0	20	100	100
	1988	20	15	2	17	88	85
	1989	30	11	16	27	41	90
	1990	30	8	15	23	35	77
	1991	30	13	13	26	50	87
	1992	50	18	24	42	43	84
	1993	50	16	17	33	48	66
	1994	20	15	1	16	94	80
	1995	20	14	1	15	93	75
	1996	20	17	1	18	94	90
	1997	20	17	3	20	85	100
	1998	40	34	2	36	94	90
	1999	80	32	32	64	50	80
	2000	120	27	50	77	35	64
	2001	120	35	59	94	37	78
	2002	123	29	76	105	28	85
2003	126	25	75	100	25	79	
2004	134	39	52	91	43	68	

Table 6. Hunter-harvested pronghorn antelope horn length, Magic Valley Region, Group 3, 1991-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)
44	1991	10	5	13.2
	1992	20	6	11.0
	1993	20	6	13.1
	1994	20	12	10.3
	1995	20	12	11.5
	1996	20	11	10.1
	1997	20	12	10.5
	1998	40	22	12.2
	1999	40	31	10.7
	2000	40	24	11.9
	2001	40	35	13.2
	2002	40	29	11.9
	2003	40	25	12.4
	2004	50	38	10.7

Table 7. Pronghorn antelope controlled hunt harvest, Magic Valley Region, Group 4, 1996-present.

Hunt area	Year	Permits	Harvest			Male (%)	Success (%)
			Male	Female	Total		
54	1996	10	9	0	9	100	90
	1997	10	10	0	10	100	100
	1998	10	9	0	9	100	90
	1999	10	9	0	9	100	90
	2000	10	9	0	9	100	90
	2001	15	8	2	10	80	67
	2002	22	19	1	20	95	91
	2003	21	18	1	19	95	90
	2004	23	18	1	19	95	83
57 <sup>a</sup>	1996	5	4	0	4	100	80
	1997	5	5	0	5	100	100
	1998	5	3	0	3	100	60
	1999	5	4	0	4	100	80
	2000	5	5	0	5	100	100
	2001	5	2	0	2	100	40

<sup>a</sup> Hunt Area 57 was closed in 2002 due to low antelope numbers.

Table 8. Hunter-harvested pronghorn antelope horn length, Magic Valley Region, Group 4, 1996-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)
54	1996	10	9	13.9
	1997	10	5	14.7
	1998	10	6	14.7
	1999	10	9	13.6
	2000	10	9	14.8
	2001	15	8	13.1
	2002	25	19	13.2
	2003	25	17	14.3
	2004	25	18	13.4
	57 <sup>a</sup>	1996	5	3
1997		5	5	12.2
1998		5	2	14.5
1999		5	4	14.7
2000		5	5	11.7
2001		5	2	13.8
2002				

<sup>a</sup> Hunt Area 57 was closed in 2002 due to low antelope numbers.

Table 9. Pronghorn antelope controlled hunt harvest, Magic Valley Region, 1976-present.

Year	Permits available	Harvest			Male (%)	Success (%)
		Male	Female	Total		
1976	120	55	19	74	74	62
1977	120	69	8	77	90	64
1978	100	65	18	83	78	83
1979	110	73	16	89	82	81
1980	160	87	35	120	73	75
1981	216	111	69	180	62	83
1982	120	84	27	111	76	92
1983	115	92	11	103	89	90
1984	120	81	5	86	94	72
1985	160	91	43	134	68	84
1986	190	118	28	146	81	77
1987	240	166	39	205	81	85
1988	320	231	36	267	87	83
1989	415	251	66	317	79	76
1990	485	254	101	355	72	73
1991	540	257	142	399	64	74
1992	745	306	224	530	58	71
1993	745	194	175	369	53	50
1994	310	144	72	216	67	70
1995	340	147	56	203	72	60
1996	315	114	62	176	65	56
1997	315	133	62	195	68	62
1998	335	147	68	215	68	64
1999	335	158	93	251	63	75
2000	445	140	100	240	58	54
2001	420	164	92	256	64	61
2002	400	122	115	237	51	59
2003	420	185	108	293	63	70
2004	465	197	96	293	67	63



**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Pronghorn Antelope Surveys and Inventories</u>
<b>PROJECT:</b>	<u>W-170-R-29</u>	<b>STUDY NAME:</b>	<u>Big Game Population Status, Trends, Use, and Associated Habitat Studies</u>
<b>SUBPROJECT:</b>	<u>5</u>		
<b>STUDY:</b>	<u>1</u>		
<b>JOB:</b>	<u>7</u>		
<b>PERIOD COVERED:</b>	<u>July 1, 2004 to June 30, 2005</u>		

**SOUTHEAST REGION**

**Abstract**

Group 2 - Fifty any-antelope permits were issued for Unit 68 in 2004. Sixty-one percent of hunters in the controlled hunt reported harvesting a pronghorn antelope, slightly less than the success rate in 2003. Four female and 24 male pronghorn antelope were harvested. Harvested males had an average maximum horn length of 12.2 inches. Archery hunters reported taking 3 antelope. Population information is limited for the unit because of low density and wide dispersion.

**Climatic Conditions**

The 2004-2005 winter snow pack in Southeast Region was below the 30-year average, with the greatest snowfall occurring during late December and early January. Spring rains provided increased herbaceous growth throughout the Region. No supplemental feeding of antelope was done, and no depredations were reported.

**Group 2**

**Management Unit 68**

**Harvest** - The Unit 68 any-antelope permit level (50) remained the same in 2004 as in 2003 (Table 1). Mandatory hunter report cards were used to estimate harvest, participation, and horn length. Hunter success was 61% in 2004, a slight decrease from 2003. All 50 permits were issued.

Thirty-one archery hunters reported hunting an average of 5 days per hunter and harvesting 3 antelope (2 male, 1 female).

Mean maximum horn length for the 2004 harvest was 12.2 inches (Table 2), meeting the 12.0-inch objective established in the 1991-1995 Pronghorn Antelope Management Plan.

**Population Surveys** - In the past, little population data has been available on size and trend of this pronghorn antelope herd. Subjective observations by Department personnel and other observers suggest the population increased from the most recent low reached during spring 1993 through 2001; however, significant losses may have occurred during winter 2001-2002.

Approximately 70-80 antelope are believed to have crossed American Falls reservoir on the ice during that winter to the vicinity of the Pocatello Regional Airport. Extensive efforts to haze the animals away from the airport were only partially effective. Observed numbers declined to around 15 by winter 2002. A fencing project to exclude wildlife from the airport property was undertaken in spring 2004.

Past estimates of the pronghorn antelope population on the Big Desert have been obtained through fixed-wing surveys using line-transect methodology based on Burnham et al. (1980) and modified by Johnson and Lindzey (1990). Line-transect surveys in Unit 68 were flown in autumn 1987 and in spring 1988, 1990, and 1991.

Population estimates calculated for the Big Desert have varied greatly. Confidence limits for the population estimates have been unacceptably wide due to the low density of pronghorn antelope in the area and their unpredictable distribution.

The application of line-transect surveys and use of the TRANSECT II program for pronghorn antelope in areas that have low-level, dispersed populations such as the Big Desert has definite limitations (Laake et al. 1978, White 1986). The technique can still provide a systematic method to survey pronghorn antelope over large areas; however, the inability to increase sample sizes easily and cost-efficiently prevents generation of population estimates with acceptable confidence limits.

An aerial survey for pronghorn antelope was conducted during August 1999 within Unit 68. The intent of the survey was to collect distribution and minimum known count data for pronghorn antelope. Strip transects, each 1,500 m, were flown north-south across the unit. A total of 7.5 hours of flight time was used. Six groups of pronghorn antelope were located with a total count of 64.

**Translocation** - In December of 2004, Southeast Region assisted the Utah Division of Wildlife Resources in capturing 56 antelope near Torrey, Utah. These animals were transported to DAU 68 in Southeast Region for release. The 56 antelope transferred were composed of 36 adults (16 male, 19 female), 6 yearlings (3 males, 3 females), and 14 fawns (6 males, 8 females). Ten of the 56 antelope released were fitted with radio collars; currently, 7 of 10 are still alive.

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Table 1. Pronghorn antelope harvest, Southeast Region, Group 2, 1982-present.

Hunt area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
68	1982	50	36	5	41	88	82
	1983	50	32	16	48	67	96
	1984	50	37	3	40	93	80
	1985	50	35	7	42	83	84
	1986	50	44	4	48	92	96
	1987	75	59	10	69	86	92
	1988	75	59	3	62	95	83
	1989	350	72	214	286	25	82
	1990	225	58	101	159	36	71
	1991	300	82	84	166	49	55
	1992	300	73	65	138	53	46
	1993	100	29	6	35	83	35
	1994	50	16	3	19	84	38
	1995	50	16	4	20	80	40
	1996	50	17	5	22	77	44
	1997	50	19	0	19	100	38
	1998	50	19	1	20	95	40
	1999	50	22	1	23	96	46
	2000	50	29	4	33	88	66
	2001	50	30	5	35	86	70
	2002	50	25	9	34	74	68
	2003	50	29	5	34	85	68
	2004	50	24	4	28	86	61

Table 2. Hunter-harvested pronghorn antelope horn length, Southeast Region, Group 2, 1992-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)
68	1992	100	30	12.4
	1993	100	12	11.8
	1994	50	12	13.7
	1995	50	13	12.3
	1996	50	10	10.8
	1997	50	12	12.3
	1998	50	14	12.4
	1999	50	20	12.8
	2000	50		11.5
	2001	50		12.6
	2002	50		11.1
	2003	50	27	10.9
	2004	50	24	12.2

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Antelope Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-29</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>6</u>	<b>STUDY NAME:</b>	<u>Big Game Population Status,</u>
<b>STUDY:</b>	<u>1</u>		<u>Trends, Use, and Associated</u>
<b>JOB:</b>	<u>7</u>		<u>Habitat Studies</u>
<b>PERIOD COVERED:</b> <u>July 1, 2004 to June 30, 2005</u>			

**UPPER SNAKE REGION**

**Abstract**

Group 2 - A composition survey was conducted in Units 51 and 58 in August 2004. Permit numbers remained the same for all hunt areas for the 2004 season. Harvest estimates and horn length data were collected by a mandatory mail-in report of pronghorn tag buyers that was followed by a telephone survey sample of non-responders. The average horn length was below the 12-inch management plan objective for all hunts. No pronghorn depredation complaints were received in Group 2 units during this reporting period.

Group 3 - A composition survey was conducted in Hunt Area 63-2 in August 2004. No population surveys in other Group 3 units have been done in recent years. Permit numbers remained the same for all hunt areas for the 2004 season. Harvest estimates and horn length data were collected by a mandatory mail-in report of pronghorn tag buyers that was followed by a telephone survey sample of non-responders. No pronghorn depredation complaints were received in Group 3 units during this reporting period.

**Climatic Conditions**

Summer 2004 received frequent showers that resulted in good forage conditions throughout summer and fall. Winter temperatures were milder than normal and snow accumulation was lighter than normal for the 2004-2005 winter.

**Region-wide Harvest**

Controlled hunt permit numbers remained the same (425) for all hunt areas in 2004 (Table 1). Pronghorn harvest in 2004 (281) was nearly identical to 2003 (283) in the Upper Snake Region. These estimates do not include landowner appreciation permits.

## Group 2

### Management Units 50, 51, 58, 59, 59A

**Management** - These mountain-valley units support the most productive pronghorn herds in the Region. The Bureau of Land Management and U.S. Forest Service manage most of the land with limited private cultivated land occurring along the major stream corridors. Pronghorn occurring in these units are seasonally migratory and frequently migrate into Unit 63 during winter months.

Minor depredations on hay and grain crops are common during summer, but landowners tolerate most problems when they receive assistance from the Department. Major depredation complaints are received during extremely dry years when pronghorn congregate on irrigated fields. Under these conditions, the Department has authorized additional depredation hunts and paid for crop and fence damage.

**Harvest** - One of the objectives of the 1991-1995 pronghorn plan for this group of units is to maintain an average horn length of 12 inches in the firearm either-sex harvest. This information was collected by telephone survey from 1994-2000. From 2001-2004, the harvest estimate (Table 2) and horn length estimate (Table 3) were collected by a mandatory report of tag buyers that was followed by a telephone survey of a sample of non-responders. These estimates do not include permits, harvest estimates, or horn length estimates for landowner appreciation permits. The 12-inch average minimum horn length objective was not met for any of the hunt areas in 2004 (Table 3). Reported horn length sample size remains smaller than desired for precision estimates. Archery horn-length measurements exceeded the 12-inch management object for Unit 59 only.

**Population Surveys** - Herd composition and trend surveys were conducted in Units 37/51 and 30A/58 during August 2004 (Table 4). A helicopter with pilot and 2 observers was used to survey Unit 37 south of Double Springs Pass Road, Unit 51 north of Wet Creek and west of the Howe-May-Ellis Road, Unit 30A south of Eighteen Mile Creek, and Unit 58 north of the road to the Nicholia Ranch east of Highway 28. These areas include the most productive summer pronghorn habitat in these units. The objective was to classify 300 pronghorn in each survey area. Data collected for pronghorn groups observed included sex and age classification, activity when first detected, habitat type, and UTM location.

A total of 338 pronghorn were classified in the Unit 37/51 area with buck:doe:fawn ratios of 46:100:37 (Table 4). The buck:doe ratio was higher than that observed for Units 37/51 in 2003, but the fawn:doe ratio was lower.

For Units 30A/58, a total of 346 pronghorn were classified with buck:doe:fawn ratios of 36:100:29 (Table 4). Both the buck:doe and fawn:doe ratios were lower than they were for Units 30A/58 in 2003.

It is difficult to compare the past 2 years of surveys with prior surveys because survey methodologies and areas surveyed were not the same.

**Depredation** - No depredation complaints were received from any Group 2 units during this reporting period.

**Translocation** - In December 2004, 90 pronghorn were translocated to Unit 58 from Loa, Utah. Of 89 pronghorn released (1 died in transit) 47 were male (36 adult, 2 yearling, 9 fawn) and 42 were female (27 adult, 4 yearling, 10 fawn). Ten of these were radio-marked (1 adult male, 8 adult female, 1 yearling female) and relocated weekly during winter and spring 2005. The radio-marked pronghorn appeared to intermix with resident pronghorn on low sagebrush fans south of Eightmile Canyon in Unit 58 until snows forced the pronghorn onto big sagebrush on the Idaho National Laboratory (INL). On 20 May, 3 of the radio-marked pronghorn were still on INL where they wintered; a mortality signal was received from 1 radio on INL in lower Birch Creek; and the other 7 radio-marked pronghorn were on the fans south of Eightmile Canyon in Birch Creek.

### **Group 3**

#### **Management Units 60, 60A, 61, 63**

**Management** - These units provide important pronghorn habitat but are difficult to manage. Units 60 and 60A have productive summer range, but access to traditional winter range from these units was blocked when Interstate 15 was built. Under current conditions, the herd increases during light to moderate winters but is decimated during hard winters.

**Habitat Conditions** - Pronghorn habitat in the eastern portion of Unit 61 is restricted to summer range on the Henrys Lake Flat area and adjacent clear-cuts. These pronghorn winter in the Madison Valley of Montana. Summer range is predominantly privately-owned. Some landowners have complained to the Department about pronghorn using their land for foraging but have also posted their land to hunting. Montana experiences some winter depredation problems involving these pronghorn. Therefore, the Region's goal is to manage this herd for non-consumptive value and use sport harvest to prevent it from increasing and causing more severe depredations.

Habitat in the western portion of Unit 61 is primarily confined to the Beaver Creek and Camas Creek drainages and their tributaries. These pronghorn winter southeast of Dillon, Montana, and currently are not causing any winter depredation problems.

Unit 63 provides winter range for pronghorn summering in Group 2 units, and year-round habitat for resident pronghorn. Approximately half the unit is controlled by the U.S. Department of Energy as INL and is closed to hunting. In several areas, irrigated crops are grown on private lands that abut the INL. Consequently, some of the pronghorn summering in Unit 63 cause depredation problems on private lands but are unavailable to sportsmen for harvest. Summer crop depredations occur on other private land in the unit but are easier to control with hunting. Fall and winter depredations on stored hay are common from pronghorn summering in, and migrating from, Group 2 units.



**Harvest** - Permit numbers remained the same for all hunt areas in 2004 (Table 5). The average horn length for reported hunter harvest in 2004 was less than 12 inches for all Group 3 hunts (Table 6). Although the 1991-1995 pronghorn plan does not include a minimum average horn length goal for this group of units, the plan does note as a management consideration that mature buck numbers were below desired levels.

Hunt Area 63-2 is 1 of only 4 pronghorn hunts in the state restricted to muzzleloaders. Muzzleloader hunting interest remains high and since 1994, first-choice applicants have filled all permits.

**Depredation** - No depredation complaints were received from any Group 3 units during this reporting period.

**Population Surveys** - A herd composition survey was conducted in the Unit 63 north of Highway 33 and around private land south of Highway 33 and east of INL in August 2004. A helicopter with pilot and 2 observers was used to conduct the survey. Most of the pronghorn observed were near irrigated alfalfa fields. The objective was to classify 300 pronghorn in the survey area. Data collected for pronghorn groups observed included sex and age classification, activity when first detected, habitat type, and UTM location

A total of 327 pronghorn were classified with buck:doe:fawn ratios of 29:100:72. The buck:doe ratio in 2004 was lower than the 2003 survey, but the fawn:doe ratio was higher in 2004 than 2003. Surveys from this area are very limited (Table 7).

The Environmental Science and Research Foundation, Inc., and, since July 2000, Stoller Corporation, have conducted pronghorn population estimates following methodology described by Johnson and Lindzey (1990). Table 8 shows summer and winter pronghorn population estimates (Transect II; Johnson and Lindzey 1990, Pojar et al. 1995) for INL, 1994-2005. Summer flights were conducted during July or August; winter flights were conducted during January or February.

Pronghorn in Units 60 and 60A appear to have recovered from heavy winter mortality suffered during the hard winters of 1983-1984, 1984-1985, and 1992-1993.

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- POJAR, T. M., D. C. BOWDEN, AND B. R. GILL. 1995. Aerial counting experiments to estimate pronghorn density and herd structure. *Journal of Wildlife Management* 59(1):117-128.

Table 1. Pronghorn antelope harvest, Upper Snake Region, 1977-present.

Year	Permits	Harvest <sup>a</sup>			Male (%)	Success (%)
		Male	Female	Total		
1977	855	440	141	581	76	68
1978	930	502	203	705	71	76
1979	1,030	597	181	778	77	76
1980	1,120	660	164	824	80	74
1981	1,290	870	250	1,120	78	87
1982	1,365	1,025	234	1,259	81	92
1983	2,215	1,009	515	1,524	66	69
1984	2,115	879	354	1,233	71	58
1985	2,000	944	396	1,340	70	67
1986	2,090	1,035	547	1,582	65	76
1987	1,910	979	425	1,404	70	74
1988	2,095	1,156	504	1,660	70	79
1989	2,680	769	1,195	1,964	39	73
1990	2,385	783	1,008	1,791	44	75
1991	1,750	617	668	1,285	48	73
1992	1,555	551	654	1,205	55	65
1993	1,555	454	491	945	48	61
1994	730	379	110	489	78	67
1995	755	362	83	445	81	59
1996	755	354	111	465	76	62
1997	855	255	68	323	79	38
1998	830	353	128	481	73	58
1999	805	375	154	529	71	66
2000	680	328	95	423	78	62
2001	685	344	87	431	80	63
2002	590	293	77	370	79	63
2003	425	245	38	283	87	67
2004	425	231	47	281	82	70

<sup>a</sup> Does not include landowner appreciation permits/harvest.

Table 2. Pronghorn antelope harvest, Upper Snake Region, Group 2, 1995-present.

Hunt area	Year	Permits <sup>a</sup>	Harvest <sup>a</sup>			Male (%)	Success (%)
			Male	Female	Total		
50	1995	180	97	21	118	82	66
	1996	180	79	24	103	77	57
	1997	180	89	22	111	80	62
	1998	180	75	25	100	75	56
	1999	180	72	30	102	71	57
	2000	130	58	22	80	73	62
	2001	120	53	11	64	83	53
	2002	75	46	8	54	85	79
	2003	75	45	6	51	88	80
	2004	75	48	7	55	87	79
51	1995	125	85	4	89	96	71
	1996	125	79	14	93	85	74
	1997	175	89	23	112	79	64
	1998	175	85	29	114	75	65
	1999	175	93	26	119	78	68
	2000	175	88	17	105	84	60
	2001	155	80	20	100	80	65
	2002	105	54	11	65	83	73
	2003	75	48	4	52	92	74
	2004	75	45	4	49	92	71
58	1995	50	26	10	36	72	72
	1996	50	25	10	35	71	70
	1997	50	34	4	38	89	76
	1998	50	29	14	43	67	86
	1999	50	36	1	37	97	74
	2000	50	37	8	45	82	90
	2001	75	51	6	57	89	76
	2002	75	45	4	49	92	70
	2003	50	30	7	37	81	84
	2004	50	33	7	40	83	80
59	1995	100	72	11	83	87	83
	1996	100	75	15	90	83	90
	1997	100	80	4	84	95	84
	1998	100	67	16	83	81	83
	1999	100	61	14	75	81	75
	2000	100	58	14	72	81	72
	2001	100	62	10	72	86	72
	2002	100	54	16	70	77	76
	2003	50	30	3	33	91	69
	2004	50	28	10	39	72	78

<sup>a</sup> Does not include landowner appreciation permits/harvest.

Table 3. Hunter-harvested pronghorn antelope horn lengths, Upper Snake Region, Group 2, 1995-present.

Hunt area	Year	Permits <sup>a</sup>	Sample size	Mean maximum horn length (inches) <sup>a</sup>
50	1995	180	64	11.9
	1996	180	39	11.7
	1997	180	53	10.9
	1998	180	52	11.5
	1999	180	72	11.2
	2000	130	102	11.1
	2001	120	53	10.4
	2002	75	46	10.8
	2003	75	40	11.6
	2004	75	48	10.6
51	1995	125	73	12.1
	1996	125	41	12.2
	1997	175	64	12.1
	1998	175	63	13.3
	1999	175	93	11.8
	2000	175	138	10.5
	2001	155	80	10.5
	2002	105	49	11.9
	2003	75	45	11.7
	2004	75	45	11.8
58	1995	50	20	11.6
	1996	50	15	11.3
	1997	50	28	13.2
	1998	50	19	12.4
	1999	50	36	14.3
	2000	50	42	9.5
	2001	75	51	11.0
	2002	75	45	11.1
	2003	50	29	12.3
	2004	50	33	11.3
59	1995	100	40	11.5
	1996	100	30	10.6
	1997	100	45	11.6
	1998	100	42	12.8
	1999	100	61	12.1
	2000	100	73	10.7
	2001	100	62	10.6
	2002	100	54	10.6
	2003	50	28	10.9
	2004	50	28	8.5

<sup>a</sup> Does not include landowner appreciation permits/harvest.

Table 4. Pronghorn antelope surveys in Units 37/51 and 30A/58, Upper Snake Region, 1973-present.

Unit(s)	Year	Bucks	Does	Fawns	Total	Bucks:100 does	Fawns:100 does	
37/51	1973	90	235	125	450	38.3	53.2	
	1974	43	109	86	238	39.4	78.9	
	1975	58	171	105	334	33.9	61.4	
	1976	97	145	98	340	66.9	67.6	
	1977	113	288	170	571	39.2	59.0	
	1978	107	354	203	664	30.2	57.3	
	1979	114	301	178	593	37.9	59.1	
	1980	94	293	152	539	32.1	51.9	
	1981	172	504	299	975	34.1	59.3	
	1982	176	500	232	908	35.2	46.4	
	1983	134	495	284	913	27.1	57.4	
	1984	309	830	462	1,601	37.2	55.7	
	1986	241	596	342	1,179	40.4	57.4	
	1989 <sup>a</sup>				4,062			
	1996 <sup>b</sup>	309	1,565	506	2,380	19.7	32.3	
	2001 <sup>c</sup>	149	417	137	703	35.7	32.9	
	2003 <sup>d</sup>	68	232	96	396	29.3	41.4	
	2004 <sup>d</sup>	85	185	68	338	45.9	36.8	
	30A/58	1973	54	132	84	270	40.9	63.6
		1974	73	164	127	364	44.5	77.4
1975		58	167	124	349	34.7	74.3	
1976		80	127	76	283	63.0	59.8	
1977		61	130	79	270	46.9	60.8	
1978		80	153	146	379	52.3	95.4	
1979		73	136	126	335	53.7	92.6	
1980		96	147	134	377	65.3	91.2	
1981		81	135	90	306	60.0	66.7	
1982		139	282	156	577	49.3	55.3	
1984		107	336	158	601	31.8	47.0	
1986		114	345	149	608	33.0	43.2	
2000		94	230	102	426	40.9	44.3	
2000 <sup>e</sup>		147	321	144	612	45.8	44.9	
2003 <sup>f</sup>	68	175	58	301	38.9	33.1		
2004 <sup>f</sup>	75	210	61	346	35.7	29.0		

<sup>a</sup> Line-transect estimate.

<sup>b</sup> Pojar et al. estimate.

<sup>c</sup> Modified Pojar et al. estimate.

<sup>d</sup> Composition survey of the area south of Double Springs Pass Road in Unit 37 and the area north of Wet Creek and west of the Howe-May-Ellis Road in Unit 51.

<sup>e</sup> Population estimate for all of Unit 58.

<sup>f</sup> Composition survey of Unit 30A south of Eighteen Mile Creek and the area north of Scott Canyon and east of Highway 28 in Unit 58.

Table 5. Pronghorn antelope harvest, Upper Snake Region, Group 3, 1995-present.

Hunt area	Year	Permits	Harvest <sup>a</sup>			Male (%)	Success (%)
			Male	Female	Total		
60A	1995	75	15	14	29	52	39
	1996	75	20	8	28	71	37
	1997	75	19	28	47	40	63
	1998	50	17	6	23	74	46
	1999	50	22	11	33	67	66
	2000	50	24	9	33	73	66
	2001	50	26	10	36	72	72
	2002	50	32	7	39	82	89
	2003	25	16	2	18	89	78
	2004	25	19	3	22	86	88
61	1995	50	8	7	15	53	30
	1996	50	5	11	16	31	32
	1997	50	15	9	24	63	48
	1998	50	1	12	13	8	26
	1999	25	12	10	22	55	88
	2000	25	2	4	6	33	24
	2001	25	9	7	16	56	64
	2002	25	8	9	17	47	74
	2003	25	13	5	18	72	82
	2004	25	9	3	13	69	62
63	1995	175	59	16	75	79	43
	1996	175	71	29	100	71	57
	1997	225	95	23	118	81	52
	1998	225	79	26	105	75	47
	1999	225	79	32	111	71	60
	2000	150	61	21	82	74	63
	2001	160	63	23	86	73	61
	2002	160	29	13	42	69	31
	2003	125	63	11	74	85	63
	2004	125	49	13	63	78	58

<sup>a</sup> Does not include landowner appreciation permits/harvest.

Table 6. Hunter-harvested pronghorn antelope horn lengths, Upper Snake Region, Group 3, 1995-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches) <sup>a</sup>
60A	1995	75	13	9.9
	1996	75	10	8.9
	1997	75	13	10.1
	1998	50	14	10.4
	1999	50	22	8.9
	2000	50	37	9.1
	2001	50	26	10.0
	2002	50	32	9.9
	2003	25	16	10.9
	2004	25	19	9.8
61	1995	50	6	7.2
	1996	50	3	10.7
	1997	50	8	10.9
	1998	50	1	3.0
	1999	25	12	9.8
	2000	25	21	8.3
	2001	25	9	6.0
	2002	25	8	9.7
	2003	25	11	9.4
	2004	25	9	9.3
63	1995	175	33	11.7
	1996	175	31	11.1
	1997	225	44	10.8
	1998	225	38	11.3
	1999	225	79	11.8
	2000	150	115	11.6
	2001	160	63	10.8
	2002	160	54	10.8
	2003	125	60	10.7
	2004	125	49	10.4

<sup>a</sup> Does not include landowner appreciation permits/harvest.

Table 7. Pronghorn antelope surveys in Units 59/59A and 63, Upper Snake Region, 1974-present.

Unit(s)	Year	Bucks	Does	Fawns	Total	Bucks:100 does	Fawns:100 does
59/59A	1974	23	91	78	192	25.3	85.7
	1975	63	132	77	272	47.7	58.3
	1976	110	189	154	453	58.2	81.5
	1977	105	158	94	357	66.5	59.5
	1978	86	202	173	461	42.6	85.6
	1979	97	221	230	548	43.9	104.1
	1980	53	130	104	287	40.8	80.0
	1981	68	162	149	379	42.0	92.0
	1982	129	251	171	551	51.4	68.1
	1984	105	295	235	635	35.6	79.7
	1986	99	281	269	649	35.2	95.7
	2002	37	194	69	330	19.1	20.1
	2002 <sup>a</sup>	42	230	89	390	18.3	38.7
	63	1983 <sup>b</sup>	32	175	84	291	18.3
2002 <sup>c</sup>					2,111		
2003 <sup>d</sup>		45	141	70	256	31.9	59.6
2004 <sup>d</sup>		47	163	117	327	28.8	71.8

<sup>a</sup> Population estimate for all of Units 59 and 59A.

<sup>b</sup> Conducted during mid-August with a Hiller 12-E helicopter. Flights were conducted during calm and clear weather only, and early morning and evening work periods are emphasized. Each population was flown until a minimum of 135 does were counted, or no more animals could be located (Autenreith 1982).

<sup>c</sup> Line-transect estimate.

<sup>d</sup> Composition survey of Unit 63 north of Highway 33 and around the agricultural lands south and east of Mud Lake-Terreton was surveyed with 2 observers and pilot using a Bell G-47 helicopter 4 August 2003.



Table 8. Estimates of pronghorn on INL, Upper Snake Region, 1994-present.

Year	Summer			Winter		
	Number Observed	Number Groups	Population estimate	Number Observed	Number Groups	Population estimate
1994 <sup>a</sup>	123	39	250±138			
1995 <sup>a</sup>	198		474±260	1,093	23	
1996 <sup>b</sup>	256	8	1,247±1,212			
1997 <sup>a</sup>	64	28	401±190	1,986	82	3,286±692
1998 <sup>a</sup>				911	36	3,161±997
1999 <sup>a</sup>	52	23	479±112	1,398	21	2,939±1,226
2000 <sup>a</sup>	199	58	556±151	1,190	74	3,717±702
2001 <sup>a</sup>	98	29	1,307±165	1,341	36	4,126±1,311
2002 <sup>a</sup>	51	12	246±98	866	19	7,005±3,624
2003 <sup>a</sup>	94	24	185±79	702	45	2,315±542
2004 <sup>a</sup>	113	27	216±55	432	50	3,052±907
2005 <sup>a</sup>				797	55	2,195±786

<sup>a</sup> Line-transect estimate.

<sup>b</sup> Pojar et al. estimate.

## PROGRESS REPORT SURVEYS AND INVENTORIES

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Pronghorn Antelope Surveys and Inventories</u>
<b>PROJECT:</b>	<u>W-170-R-29</u>	<b>STUDY NAME:</b>	<u>Big Game Population Status, Trends, Use, and Associated Habitat Studies</u>
<b>SUBPROJECT:</b>	<u>7</u>		
<b>STUDY:</b>	<u>I</u>		
<b>JOB:</b>	<u>7</u>		
<b>PERIOD COVERED:</b>	<u>July 1, 2004 to June 30, 2005</u>		

### SALMON REGION

#### Abstract

There were 129 pronghorn antelope harvested in the Salmon Region in 2004, including 17 animals taken under archery ( $n = 11$ ) and landowner appreciation ( $n = 6$ ) permits. Controlled hunt harvest (112) decreased by 16 animals from 2003 (Table 1), primarily as a result of conversion to traditional muzzleloader hunting in Unit 30A (-19 animals). Harvest in 2004 remained well below harvest levels prior to the mid-1990s and was the lowest in 35 years. Reductions in recent harvest reflect significant decreases in permits available throughout the Salmon Region since the early 1990s. Success for active rifle hunters in controlled hunts was 70%; bucks comprised 84% of harvested pronghorn. Average horn lengths did not meet minimum 12-inch criterion in any hunt areas, but sample sizes were small.

All doe/fawn permits were eliminated in 1998, compared to 100 issued in 1997 and 825 in seasons during 1992-1993. Either-sex permits remained constant at 520 from 1990-1997. In 1998, either-sex hunting was eliminated in Unit 21A (10 permits), reducing total permits to 510. In 1999, hunts in Units 29, 36A, and 37A were combined, and permits were reduced in most Salmon Region hunts. Hunt Area 36A was closed in 2001. In 2002, 3 separate hunts in Units 37 and 37A were combined and permit numbers were reduced. In 2004, the any-weapon season in Unit 30A was converted to a traditional muzzleloader hunt to maintain hunting opportunity. Because of changes in hunt areas (combination and elimination), comparisons and summaries based on pronghorn antelope-plan groups over time are less meaningful than in previous years. Therefore, for purposes of this section, assignment of GMUs to groups is modified to represent current hunt areas and group-specific comparisons are limited. Under current pronghorn densities, most hunting opportunities in Salmon Region would likely be classified into Group 1.

As part of a cooperative research project (IDFG and University of Idaho), aerial surveys to obtain herd composition data were conducted in parts of Units 30A and 37. We classified 277 pronghorn during flights on 28 and 30 July 2004. Overall sex and age ratio was 30 fawns:100 females:48 males. The yearling male:100 female ratio of 17 was higher than expected based on the fawn ratio (26) from the previous year and may reflect misclassification of some adult bucks as yearlings. Approximately 460 pronghorn were observed incidentally during surveys of other ungulates in Units 21A, 28, 30, 30A, and 36B.

## **Group 1**

### **Management Units 28, 36B, 37 (Part)**

Combination and elimination of all or part of some units has reduced the area of Management Group 1. Only Hunt Area 36B (all of Unit 36B and extreme southeastern Unit 28) remains clearly distinguishable as a Group 1 area. Standard controlled hunt harvest from this hunt was 7 pronghorn in 2004, all of which were males (Table 2). Compared to 2003, harvest from this hunt area decreased by 6 animals. Reported mean horn length was 10.1 inches, well below plan criterion of 12 inches (Table 3).

A hunt for any pronghorn in Unit 21A was eliminated in 1998. Hunts 21A-2 (doe/fawn) and 36B-2 were terminated in 1994 and 1996, respectively. Permits in Hunt 37-3 were reduced from 75 to 25 in 1996; the hunt was subsequently eliminated in 1998. Hunts 36A-1 and 36A-2 were combined and permits were reduced in 1999; all controlled hunting in Unit 36A was eliminated in 2001. Number of permits in Hunt 37-1 was reduced in 1999. All hunts in Units 37 and 37A were combined in 2002 with a concurrent reduction in total permits.

## **Group 2**

### **Management Units 21A (Part), 29, 30, 36A, 37 (Part), 37A**

Hunt combinations now incorporate all of Units 29, 30, 37, and 37A in Group 2, as well as extreme southern Unit 21A. Hunters harvested 94 animals in 3 hunts in these units (Table 4). For comparable open hunt areas, number harvested was 9 more than in 2003. Males comprised 83% of the harvest. Mean horn lengths were below pronghorn antelope-plan criterion of 12 inches in all hunt areas, but very close (11.9) to criteria in 1 hunt area (Table 5).

As the objective to reduce populations and depredation problems was reached, all doe/fawn permits were eliminated in these units (Table 4). Specifically, in 1996, 3 doe/fawn hunts were eliminated (29-3, 29-4, and 37A-3). Doe/fawn permits were reduced in 2 other hunts in 1996 (36A-3 and 37-4) and the hunts were eliminated in 1998. Hunts within Units 29, 36A, and 37A were combined in 1999 with concurrent permit reductions of 50-75%. Permits in Hunt Area 37-2 were reduced by 75% in 1999. All controlled pronghorn hunting in Unit 36A was eliminated in 2001. All hunts in Units 37 and 37A were combined in 2002 with a concurrent reduction in total permits.

## **Group 3**

### **Management Unit 30A**

Consolidation of hunt areas left Unit 30A as the only distinguishable unit in Group 3. Harvest in the single hunt area was 11 in 2004, a decrease of 19 from 2003, concurrent with restricting hunters to traditional muzzleloading equipment (Table 6). Hunters reported harvesting 8 bucks and 3 does. Average horn length (9.6 inches) was well below the goal of 12 inches, but likely resulted in part from reduced selectivity by hunters with short-range weapons (Table 7).

Table 1. Pronghorn antelope controlled hunt harvest, Salmon Region, 1969-present.

Year	Permits	Harvest			Male (%)	Success <sup>a</sup> (%)
		Male	Female	Total		
1969	855	385	241	626	62	73
1970	855	414	232	646	64	76
1971	855	402	188	590	68	69
1972	885					
1973	875	353	204	557	63	64
1974	835	371	180	551	67	66
1975	765	296	157	453	65	59
1976	725	238	120	358	66	49
1977	610	260	111	371	70	61
1978	460	256	95	351	73	76
1979	445	270	88	358	75	80
1980	445	283	61	344	82	77
1981	495	350	53	403	87	81
1982	565	414	61	475	87	84
1983	670	469	89	558	84	83
1984	745	486	90	576	84	77
1985	745	426	137	563	76	76
1986	760	460	136	596	77	78
1987	760	435	153	588	74	77
1988	760	470	133	603	78	79
1989	968	464	309	773	60	80
1990	774	341	271	612	56	79
1991	995	429	373	802	53	81
1992	1,345	416	561	977	43	73
1993	1,345	372	499	871	43	65
1994	1,010	321	342	663	48	66
1995	915	286	200	486	59	53
1996	620	270	114	384	70	62
1997	620	240	107	347	69	56
1998	510	162	73	235	69	51
1999	245	87	36	123	71	57
2000	245	108	40	148	73	70
2001	220	115	24	139	83	73
2002	195	104	24	128	81	76
2003	195	105	22	127	82	73
2004	195	93	19	112	83	63

<sup>a</sup> Before 1998, success calculated as number harvested divided by number of permits available.

Table 2. Pronghorn antelope controlled hunt harvest, Salmon Region, Group 1, 1993-present.

Hunt area	Year	Permits	Harvest			Male (%)	Success <sup>a</sup> (%)
			Male	Female	Total		
21A	1993	30	3	12	15	20	50
	1994	10	3	1	4	75	40
	1995	10	9	0	9	100	90
	1996	10	2	2	4	50	40
	1997	10	7	0	7	100	70
36A	1993	15	4	4	8	50	53
	1994	15	8	2	10	80	67
	1995	15	6	3	9	67	60
	1996	15	4	1	5	80	33
	1997	15	6	0	6	100	40
36B	1998	15	4	2	6	67	43
	1993	50	18	12	30	60	60
	1994	50	15	10	25	60	50
	1995	50	17	9	26	65	52
	1996	25	16	1	17	94	68
	1997	25	15	0	15	100	60
	1998	25	17	0	17	100	73
	1999	25	11	7	18	61	79
	2000	25	10	0	10	100	42
	2001	25	14	2	16	88	73
37-1	2002	25	8	4	12	75	55
	2003	25	13	0	13	100	57
	2004	25	7	0	7	100	30
	1993	175	50	60	110	45	63
	1994	150	51	46	97	53	65
	1995	150	44	27	71	62	47
	1996	100	43	16	59	73	59
	1997	100	33	23	56	59	56
	1998	75	21	13	34	62	51
	1999	25	5	7	12	42	58
2000	25	11	3	14	79	77	
2001	25	13	2	15	87	67	

<sup>a</sup> Before 1998, success calculated as number harvested divided by number of permits available.

Table 3. Hunter-harvested pronghorn antelope horn length, Salmon Region, Group 1, 1993-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)
21A	1993	10	2	13.2
	1994	10	2	14.5
	1995	10	9	12.9
	1996	10	2	15.0
	1997	10	5	13.4
36A	1993	15	3	12.9
	1994	15	5	12.4
	1995	15	5	11.8
	1996	15	3	10.0
	1997	15	4	13.4
36B	1998	15	4	11.5
	1993	25	13	11.4
	1994	25	13	13.5
	1995	25	12	14.3
	1996	25	11	13.4
	1997	25	9	12.4
	1998	25	11	13.4
	1999	25	11	12.0
	2000	25	8	12.2
	2001	25	14	12.5
37	2002	25	7	12.4
	2003	25	11	12.6
	2004	25	7	10.1
	1993	75	26	12.4
	1994	75	35	14.0
	1995	75	34	13.6
	1996	75	21	12.3
	1997	75	23	14.3
	1998	75	15	10.8
	1999	25	5	15.7
2000	25	10	12.3	
2001	25	12	10.8	

Table 4. Pronghorn antelope controlled hunt harvest, Salmon Region, Group 2, 1993-present.

Hunt area	Year	Permits	Harvest			Male (%)	Success <sup>a</sup> (%)	
			Male	Female	Total			
29	1993	150	41	46	87	47	58	
	1994	100	30	32	62	48	62	
	1995	75	27	17	44	61	59	
	1996	50	26	5	31	84	62	
	1997	50	12	8	20	60	40	
	1998	50	9	7	16	56	33	
	1999	50	12	11	23	52	47	
	2000	50	13	12	25	52	62	
	2001	50	16	7	23	70	56	
	2002	40	18	6	24	75	77	
	2003	40	18	9	27	67	77	
	2004	40	23	7	31	74	84	
	30	1993	130	24	63	87	28	67
		1994	80	29	27	56	52	70
1995		55	23	18	41	56	75	
1996		30	21	6	27	78	90	
1997		30	22	1	23	96	77	
1998		30	26	2	28	93	93	
1999		30	22	0	22	100	77	
2000		30	26	2	28	93	100	
2001		30	23	0	23	100	88	
2002		30	23	2	25	92	83	
2003		30	16	2	18	89	67	
2004		30	20	1	21	95	81	
36A		1993	150	34	59	93	37	62
		1994	100	32	20	52	62	52
	1995	100	23	22	45	51	45	
	1996	75	12	12	24	50	32	
	1997	75	21	16	37	57	49	
	1998	50	12	4	16	75	35	
	1999	25	5	0	5	100	29	
	2000	25	3	6	9	33	47	
	37	1993	225	86	87	173	50	77
		1994	200	71	96	167	43	84
1995		200	59	46	105	56	53	
1996		150	72	49	121	60	81	
1997		150	49	38	87	56	58	
1998		100	20	15	35	57	39	
1999		25	7	2	9	78	47	
2000		25	10	5	15	67	71	
2001		25	13	5	18	72	75	
2002		60	33	8	41	80	82	
2003	60	30	9	40	77	74		

Table 4. Continued.

Hunt area	Year	Permits	Harvest			Male (%)	Success <sup>a</sup> (%)
			Male	Female	Total		
37A	2004	60	35	8	43	81	74
	1993	150	45	51	96	47	64
	1994	125	30	39	69	43	55
	1995	125	28	23	51	55	41
	1996	75	26	11	37	70	49
	1997	75	24	9	33	73	44
	1998	75	16	13	29	55	45
	1999	25	5	3	8	63	42
	2000	25	8	3	11	73	56
	2001	25	9	3	12	75	71

<sup>a</sup> Before 1998, success calculated as number harvested divided by number of permits available.



Table 5. Hunter-harvested pronghorn antelope horn length, Salmon Region, Group 2, 1993-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)	
29	1993	50	15	12.5	
	1994	50	22	14.0	
	1995	50	23	12.0	
	1996	50	15	11.5	
	1997	50	8	10.4	
	1998	50	7	12.1	
	1999	50	12	9.9	
	2000	50	12	11.8	
	2001	50	16	10.9	
	2002	40	16	10.9	
	2003	40	15	11.9	
	2004	40	23	10.9	
	30	1993	30	16	12.2
		1994	30	16	12.7
1995		30	17	13.1	
1996		30	15	11.0	
1997		30	20	12.0	
1998		30	17	12.0	
1999		30	22	11.9	
2000		30	18	12.2	
2001		30	21	12.5	
2002		30	21	13.1	
2003		30	16	12.3	
2004		30	20	11.9	
36A		1993	50	9	13.5
		1994	50	23	13.0
	1995	50	20	12.3	
	1996	50	7	11.1	
	1997	50	17	13.4	
	1998	50	9	13.8	
	1999	25	5	12.5	
	2000	25	3	12.6	
37	1993	100	30	11.8	
	1994	100	40	13.2	
	1995	100	32	12.3	
	1996	100	28	10.3	
	1997	100	27	12.4	
	1998	100	12	11.8	
	1999	25	7	11.0	
	2000	25	8	10.9	
	2001	25	12	13.1	
	2002	60	31	12.8	

Table 5. Continued.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)
37A	2003	60	28	12.8
	2004	60	35	11.2
	1993	75	18	12.3
	1994	75	25	11.1
	1995	75	24	11.7
	1996	75	16	12.4
	1997	75	17	11.7
	1998	75	11	12.1
	1999	25	5	11.3
	2000	25	7	10.8
	2001	25	8	11.4

Table 6. Pronghorn antelope controlled hunt harvest, Salmon Region, Group 3, 1993-present.

Hunt area	Year	Permits	Harvest			Male (%)	Success <sup>a</sup> (%)
			Male	Female	Total		
29	1993	150	38	72	110	35	73
	1994	100	30	44	74	41	74
	1995	75	27	22	49	55	65
	1996	50	28	7	35	80	70
	1997	50	28	8	36	78	72
	1998	50	15	13	28	54	66
30A	1993	120	29	33	62	47	52
	1994	80	22	25	47	47	59
	1995	60	23	13	36	64	60
	1996	40	20	4	24	83	60
	1997	40	23	4	27	85	68
	1998	40	22	3	25	88	71
	1999	40	20	6	26	77	71
	2000	40	27	9	36	75	92
	2001	40	27	5	32	84	87
	2002	40	22	4	26	85	74
2003	40	28	2	30	93	79	
2004 <sup>b</sup>	40	8	3	11	73	31	

<sup>a</sup> Before 2000, success calculated as number harvested divided by number of permits available.

<sup>b</sup> Converted to traditional muzzleloading equipment only in 2004.

Table 7. Hunter-harvested pronghorn antelope horn length, Salmon Region, Group 3, 1993-present.

Hunt area	Year	Permits	Sample size	Mean maximum horn length (inches)	
29	1993	50	17	11.0	
	1994	50	26	12.8	
	1995	50	23	12.2	
	1996	50	17	11.1	
	1997	50	21	11.2	
	1998	50	13	10.2	
	30A	1993	40	15	11.2
		1994	40	16	12.1
1995		40	19	10.1	
1996		40	13	11.6	
1997		40	20	11.7	
1998		40	15	12.3	
1999		40	20	10.3	
2000		40	20	10.8	
2001		40	26	10.8	
2002		40	20	11.6	
2003	40	26	11.6		
2004	40	8	9.6		

**APPENDIX A**  
**IDAHO**  
**2004 SEASON**  
**ANTELOPE RULES**

## 2004 ANTELOPE HUNTING SEASONS

**Doe or fawn only:** Only antelope without a black "cheek patch" or with horns less than 3 inches long may be taken during doe or fawn only antelope seasons.

Antelope archery tags may be purchased for use in any archery antelope hunt. Controlled hunt permits and tags issued for antelope controlled hunts may be used only in the hunt for which the permittee was drawn.

Any person who purchases an archery antelope tag who is subsequently drawn for a controlled hunt must return the unused archery tag to an IDFG office to exchange it for the controlled hunt tag at a cost of \$3.50.

**Any person who receives a controlled hunt permit and tag for antelope is prohibited from hunting in any general season archery antelope hunt.**

### EVIDENCE OF SEX

See page 11.

### Attention Antelope Archery Hunters!

Don't give your sport a black eye. Did you know that leaving blind material is considered littering? And, digging pits on federal land is a violation of federal law? For information on how to construct a legal blind, contact your local Bureau of Land Management office.

### GENERAL ANTELOPE ARCHERY SEASONS - Archery Permit Required (Either sex may be taken)

Unit(s)	2004 SEASON DATES
---------	-------------------

21A, 28, 29, 30, 30A, 36, 36A, 36B, 37, 37A, 40, 41, 42, 44, 45, 46, 47, 48, 49, 50, 51, 52, 52A, 53, 58, 59, 59A, 60, 60A, 61, 63 (that portion south of Highway 33), 68.	Aug 15 - Sep 15
--	-----------------

*Motorized Vehicle Restriction Units 29, 30, 30A, 36A, 37A, 45, 47, 48, 49, 50, 51, 52, 53, 58, 59, 59A; See note 1, Page 50*

**MANDATORY REPORT REQUIREMENTS:** All antelope hunters are required to fill out a Harvest Report within 10 days after harvest, or within 10 days of the close of the hunting season.

## 2004 CONTROLLED HUNTS (1,565 PERMITS) EITHER SEX ANTELOPE

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4001	Sep 25 - Oct 24	29	40	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>
4002	Sep 25 - Oct 24	30* (see pg 51)	30	<i>Motorized Vehicle Restriction Unit 30, See note 1, Page 50</i>
4003	Sep 25 - Oct 24	36B* (see pg 51)	25	
4004	Sep 25 - Oct 24	37* (see pg 51)	60	<i>Motorized Vehicle Restriction Units 29, 37A, See note 1, Page 50</i>
4005	Sep 25 - Oct 24	39	25	
4006	Sep 25 - Oct 24	40	150	
4007	Sep 25 - Oct 24	42* (see pg 51)	200	
4008	Sep 25 - Oct 24	44* (see pg 51)	50	<i>Motorized Vehicle Restriction Unit 45, See note 1, Page 50</i>
4009	Sep 25 - Oct 24	45	10	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>
4010	Sep 25 - Oct 24	46-1	60	
4011	Sep 25 - Oct 24	49	50	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>
4012	Sep 25 - Oct 24	50	75	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>
4013	Sep 25 - Oct 24	51* (see pg 51)	75	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>
4014	Sep 25 - Oct 24	52*	20	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>
4015	Sep 25 - Oct 24	52A	25	
4016	Sep 25 - Oct 24	54	25	
4017	Sep 25 - Oct 24	58	50	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>

(Continued)

\* See antelope controlled hunt area descriptions. This area includes other units or parts of other units.

ANTELOPE

**2004 CONTROLLED HUNTS - CONTINUED**  
**EITHER SEX ANTELOPE**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4018	Sep 25 - Oct 24	59* (see pg 51)	50	<i>Motorized Vehicle Restriction, See note 1, Page 50</i>
4019	Sep 25 - Oct 24	60A* (see pg 51)	25	
4020	Sep 25 - Oct 24	63-1	50	
4021	Sep 25 - Oct 24	68	50	

**2004 CONTROLLED HUNTS**  
**DOE OR FAWN ANTELOPE**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4022	Oct 5 - Oct 24	44* (see pg 51)	100	<i>Motorized Vehicle Restriction Unit 45, See note 1, Page 50</i>
4023	Oct 5 - Oct 24	46-2* (see pg 51)	25	<i>Motorized Vehicle Restriction Unit 47, See note 1, Page 50</i>

**2004 EITHER SEX ANTELOPE**  
**MUZZLELOADER CONTROLLED HUNTS - Muzzleloader Permit Required**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4024	Sep 25 - Oct 24	30A	40	<i>Traditional Muzzleloader ONLY, Motorized Vehicle Restriction, See note 1, Page 50</i>
4025	Sep 25 - Oct 24	41	40	
4026	Sep 25 - Oct 24	47	75	<i>Traditional Muzzleloader ONLY, Motorized Vehicle Restriction, See note 1, Page 50</i>
4027	Aug 25 - Oct 24	63-2	75	

**2004 EITHER SEX ANTELOPE**  
**SHORT-RANGE WEAPON CONTROLLED HUNTS**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4028	Sep 25 - Oct 24	61	25	<i>Limited Access</i>

**2004 EITHER SEX ANTELOPE**  
**YOUTH CONTROLLED HUNTS**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4029	Sep 25 - Oct 24	32* (see pg 51)	15	<i>Motorized Vehicle Restriction, See note 1, Page 50 See note 2, Page 50</i>
4030	Sep 25 - Oct 24	52*	25	<i>Motorized Vehicle Restriction, See note 1, Page 50 See note 2, Page 50</i>

**Notes:**

- 1 — Motorized vehicle use as an aid to hunting for wildlife is restricted to established roadways open to motorized vehicle traffic capable of travel by full-sized automobiles. A full-sized automobile shall be defined as any motorized vehicle with a gross vehicle weight in excess of 1500 pounds. See page 28.
- 2 — YOUTH HUNT: ONLY hunters 12 - 17 years of age with a valid hunting license may apply for this hunt.


\* See antelope controlled hunt area descriptions. This area includes other units or parts of other units.

## ANTELOPE CONTROLLED HUNT AREA DESCRIPTIONS

- Hunt Area 29** — All of Unit 29 except the Poison Creek drainage.
- Hunt Area 30** — All of Unit 30 and that portion of Unit 21A south and east of Carmen Creek Road.
- Hunt Area 30A** — All of Unit 30A.
- Hunt Area 32** — All of Units 32 and 32A.
- Hunt Area 36B** — All of Unit 36B, and that portion of Unit 28 upstream from and including the Iron Creek drainage.
- Hunt Area 37** — All of Units 37 and 37A, and that part of Unit 29 in the Poison Creek drainage.
- Hunt Area 39** — That portion of Unit 39 south and east of Highway 21.
- Hunt Area 40** — All of Unit 40.
- Hunt Area 41** — That portion of Unit 41 east of State Highway 51.
- Hunt Area 42** — That portion of Unit 41 west of State Highway 51 and all of Unit 42.
- Hunt Area 44** — All of Unit 44 and that portion of Unit 45 within Camas Creek drainage.
- Hunt Area 45** — All of Unit 45 except that portion within Camas Creek drainage.
- Hunt Area 46-1** — All of Unit 46.
- Hunt Area 46-2** — All of Units 46 and 54 and that portion of Unit 47 east of Salmon Falls Creek.
- Hunt Area 47** — All of Unit 47.
- Hunt Area 49** — All of Unit 49.


- Hunt Area 50** — All of Unit 50.
- Hunt Area 51** — All of Unit 51 and that portion of Unit 63 within Butte County including that portion of this hunting area within one-half mile inside the boundary of the Idaho National Engineering and Environmental Laboratory (INEEL) adjacent to agricultural lands.
- Hunt Area 52** — All of Units 48 and 52.
- Hunt Area 52A** — All of Units 52A and 53 (See Craters of the Moon closure, page 9).
- Hunt Area 54** — All of Unit 54.
- Hunt Area 58** — All of Unit 58 outside the Idaho National Engineering and Environmental Laboratory (INEEL) boundary.
- Hunt Area 59** — All of Units 59 and 59A.
- Hunt Area 60A** — All of Units 60 and 60A, and that portion of Unit 61 west of Hotel Creek.
- Hunt Area 61** — That portion of Unit 61 east of Hotel Creek.
- Hunt Area 63-1** — That portion of Unit 63 south of State Highway 33, and including that portion of this hunt area within one-half mile inside the east boundary of the Idaho National Engineering and Environmental Laboratory (INEEL) and which is adjacent to agricultural lands.
- Hunt Area 63-2** — That portion of Unit 63 north of State Highway 33 and including that portion of this hunt area within one-half mile inside the boundary of the Idaho National Engineering and Environmental Laboratory (INEEL) and which is adjacent to agricultural lands, EXCLUDING the Camas National Wildlife Refuge which is CLOSED.
- Hunt Area 68** — All of Unit 68. (Caution: See Craters of the Moon closure, page 10.)

ANTELOPE




### IDAHO FISH AND GAME

Department of Fish and Game



- HUNTING
- FISHING
- WILDLIFE
- EDUCATION
- NEWS / PUBLICATIONS
- TECHNICAL / RESEARCH
- ABOUT FISH AND GAME



UPDATES

Nonresident Deer And Elk Tags Still Available

LINKS

- Idaho Wildlife Magazine (Winter 2002)
- Report a Poacher
- Commission Meeting (3/25/04)
- Support Idaho's Nongame Wildlife

**Web Site:**  
<http://fishandgame.idaho.gov>

- Applications
- Harvest Data
- Rules Booklets
- Fishing Reports
- Idaho Record Fish
- Idaho Big Game Records
- Latest Commission News
- Controlled Hunt Summaries
- Online License Purchases
- Online Controlled Hunt Applications

... and much, much more!

**email: [idfinfo@idfg.state.id.us](mailto:idfinfo@idfg.state.id.us)**



Submitted by:

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Approved by: IDAHO DEPARTMENT OF FISH AND GAME

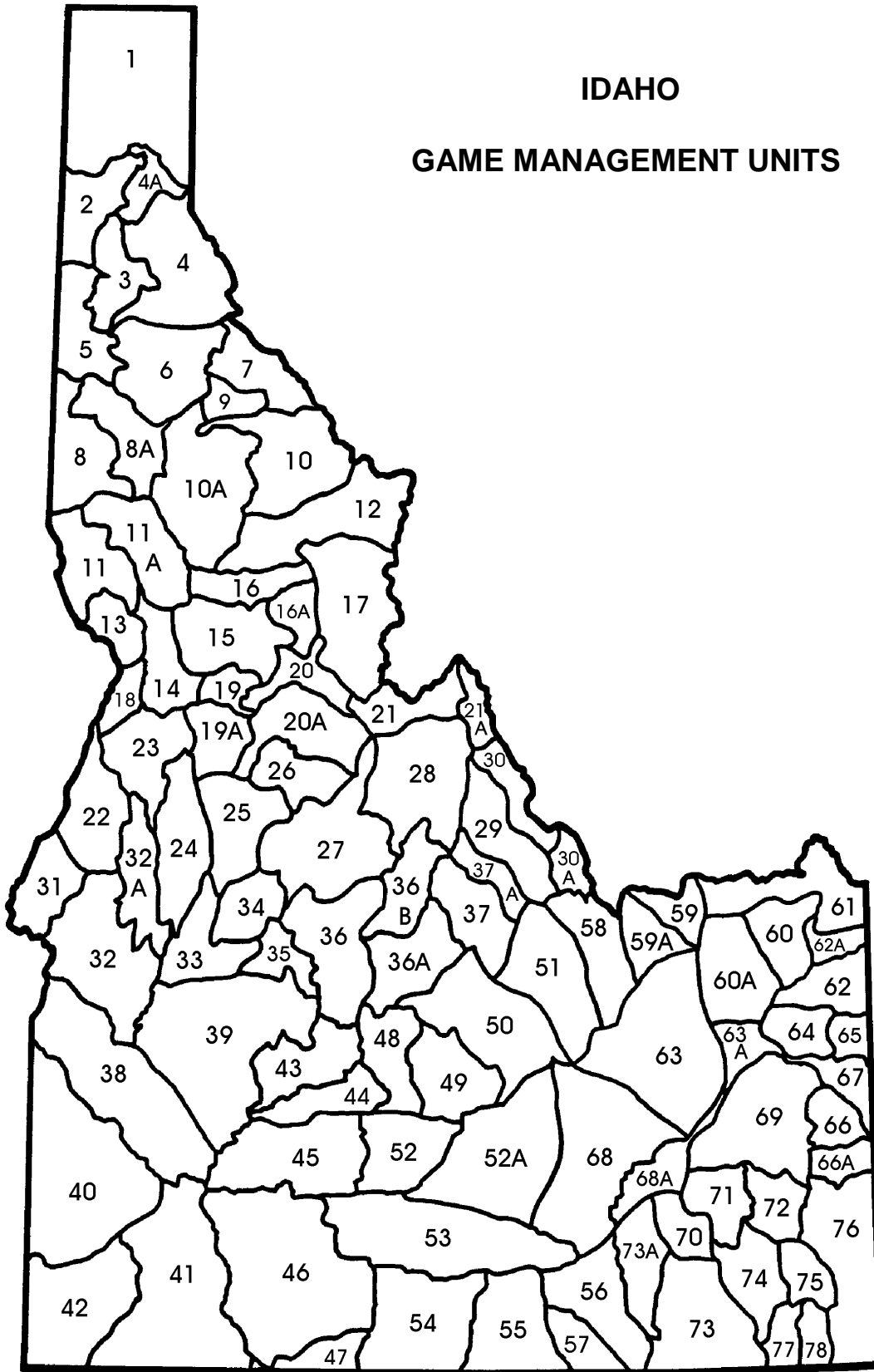
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Dale E. Towell  
Wildlife Program Coordinator  
Federal Aid Coordinator

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James W. Unsworth, Chief  
Bureau of Wildlife



# IDAHO

## GAME MANAGEMENT UNITS



## FEDERAL AID IN WILDLIFE RESTORATION

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sale of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a formula based on each state's geographic area and the number of paid hunting license holders in the state. The Idaho Department of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be responsible, ethical hunters. Seventy-five percent of the funds for this project are from Federal Aid. The other 25% comes from license-generated funds.

