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Steven M. Huffaker, Director

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Progress Report



PRONGHORN ANTELOPE

Study I, Job 7

July 1, 2002 to June 30, 2003

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**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Antelope Surveys and</u>
PROJECT:	<u>W-170-R-27</u>		<u>Inventories</u>
SUBPROJECT:	<u>3-7</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Trends, Use, and Associated</u>
JOB:	<u>7</u>		<u>Habitat Studies</u>
PERIOD COVERED: <u>July 1, 2002 to June 30, 2003</u>			

STATEWIDE

Summary

A total of 13,439 hunters (12,901 resident hunters and 538 nonresident hunters) applied for 1,690 controlled pronghorn antelope permits offered in 2002. There were 105 fewer permits offered in 2002 than in 2001. Thirty different hunts were offered in the Southwest, Magic Valley, Southeast, Upper Snake, and Salmon regions. In addition, 1,126 hunters participated in general archery pronghorn antelope seasons offered from 15 August through 15 September in 28 units. In 2002, the either-sex controlled hunts opened on 25 September and ran through 24 October. Two doe/fawn hunts opened 5 October and ran through 24 October, and 3 either-sex muzzleloader hunts were also offered. Two opened 25 September and extended through 24 October, and one opened 25 August and ran through 24 October. Forty permits were offered in 2002 for youth hunters (12-17 years of age) to take pronghorn antelope.

An estimated 1,500 of the 1,690 (89%) controlled hunt permittees actually hunted pronghorn antelope. Hunters harvested 1,076 pronghorn antelope (816 males, 260 females) in 4,554 days of hunting. General season archery tags for pronghorn antelope were purchased by 1,187 hunters. An estimated 1,126 (95%) of the tag purchasers hunted and spent 5,448 days afield and harvested 263 pronghorn antelope (203 males, 60 females).

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 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 76% in 2002. A history of pronghorn antelope harvest is presented in Table 1. The 2002 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 2 hunts include maintaining a preseason buck:doe ratio of greater than 40:100.

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 prohibit harvest at this time. Portions of Group 5 units were historically pronghorn antelope habitat, but currently support few or no pronghorn antelope.

Table 1. Summary of pronghorn antelope estimated harvest history in Idaho, 1935-present.

Season	Year	Hunters	Harvest	Success (%)	Days hunted	
General	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		
1975			1,314			
1976			1,380			
1977			1,250			

Table 1. Continued.

Season	Year	Hunters	Harvest	Success (%)	Days hunted
Archery	1978		1,345		
	1979		1,430		
	1980		1,498		
	1981		1,837		
	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
	Controlled	1997-1999 ^a			
2000		772	189	24	3,800
2001		822	245	30	3,450
2002		1,126	263	23	5,448
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
Extra doe/fawn	1989	1,400	1,200	81	3,200
	1990	1,300	1,100	80	3,400
Total	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	3,500	75	12,500
	1990	4,000	3,180	80	11,300
	1991	3,770	2,950	78	10,500
	1992	4,580	3,150	69	14,000
	1993	4,290	2,470	58	14,500
	1994	3,970	1,835	46	15,700
	1995	2,960	1,495	51	10,600
	1996	2,840	1,415	50	11,200
	1997 ^a	2,128	1,305	61	7,200
	1998 ^a	1,917	1,153	55	6,600
	1999 ^a	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	

^a Due to budget limitations, no survey was conducted to estimate the number of pronghorn antelope harvested by archery hunters during the general season.

ANTELOPE

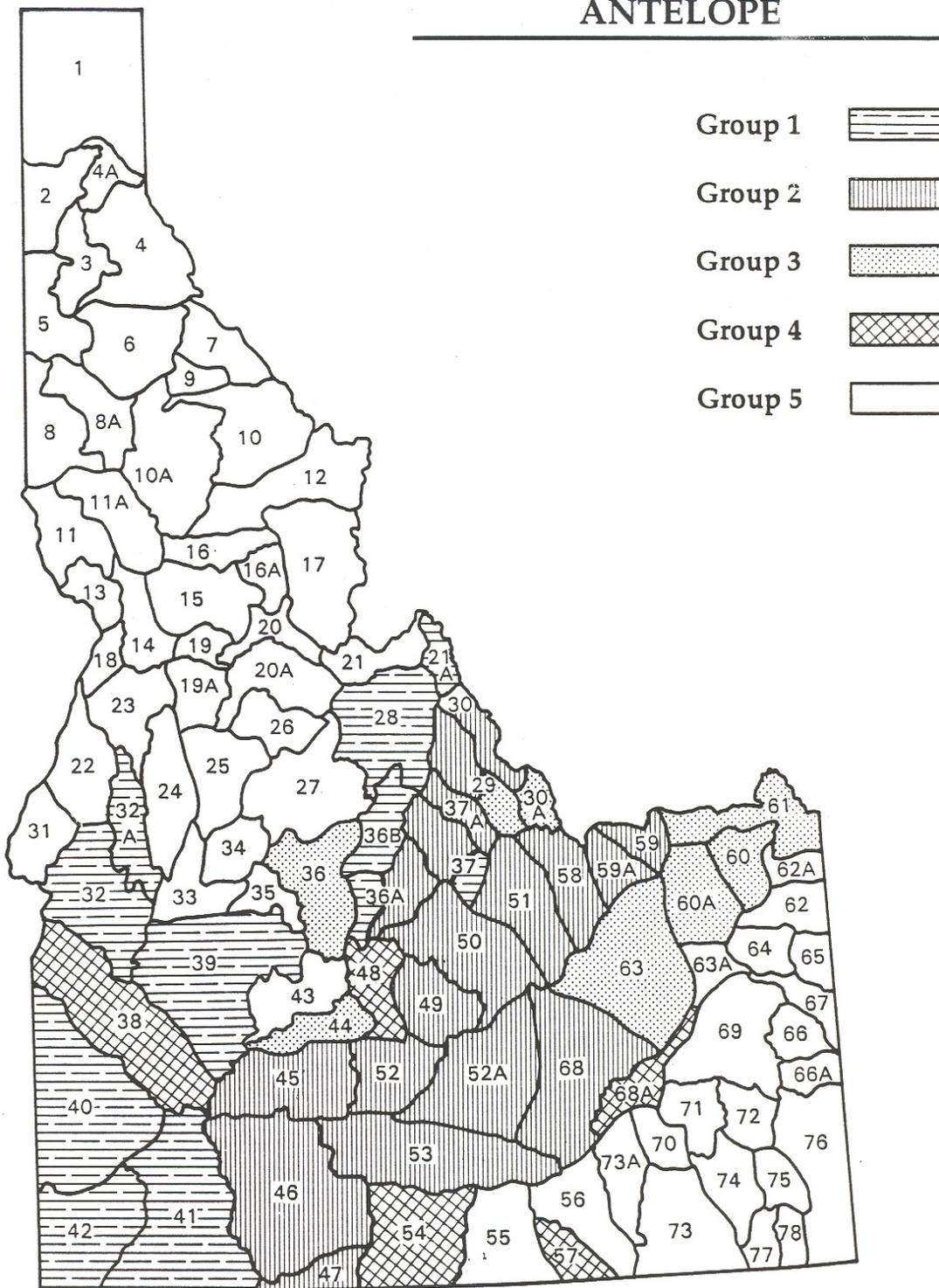


Figure 1. Pronghorn antelope management groups in Idaho.

**PROGRESS REPORT
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STATE:	<u>Idaho</u>	JOB TITLE:	<u>Antelope Surveys and</u>
PROJECT:	<u>W-170-R-27</u>		<u>Inventories</u>
SUBPROJECT:	<u>3</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>1</u>		<u>Trends, Use, and Associated</u>
JOB:	<u>7</u>		<u>Habitat Studies</u>
PERIOD COVERED: <u>July 1, 2002 to June 30, 2003</u>			

SOUTHWEST REGION

Abstract

Group 1 - A total of 430 permits were issued and 279 pronghorn antelope were harvested in controlled hunts in 2002. Hunter success averaged 65%. Average horn length met or exceeded the minimum management objective of 12 inches in Units 32, 39, 41, and 42. Average horn length in Unit 40 was slightly below the minimum objective (average = 11.4 inches, $n = 69$).

An estimated 424 hunters hunted 1,801 days and harvested an estimated 127 antelope (30% 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

Southwest Region wildlife staff experimented with a fixed-wing line-transect survey to estimate pronghorn numbers in Units 41 and 42. Observers spotted 1,543 pronghorn during 5 survey flights. Analysis of results is in progress. Incidental observations of pronghorn during bighorn sheep surveys and other activities suggest a static population.

Harvest

Based upon the harvest survey, controlled hunt harvest increased from 257 pronghorn antelope in 2001 to 279 in 2002 (Table 1). The muzzleloader hunt in Unit 41 had a success rate of 39% with a harvest of 13 pronghorn antelope. The success rate in the any-weapon controlled hunts was 62% with a harvest of 244 pronghorn antelope. The minimum average horn length objective of 12 inches was exceeded in Units 32, 39, 41, and 42, but fell below objective in Unit 40 (average = 11.4 inches, $n = 69$).

An estimated 424 hunters hunted 1,801 days and harvested an estimated 127 antelope (30% success rate) during the 15 August – 15 September general archery season in Units 40, 41, and 42.

Group 4

Management Unit 38

No hunts or surveys took place in this area during the reporting period. One lone male antelope was captured from a farm near Kuna, Idaho, and translocated to Unit 40.

Table 1. Summary of pronghorn antelope harvest in the Southwest Region, Group 1, 1993-present.

Hunt Area	Year	Permits	Harvest ^a			% 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
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	91
40	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	66
41	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	39
42	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	66

^a Information prior to 1994 and after 2000 was provided by hunter report cards, interim year's data collected through telephone survey.

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PROJECT:	<u>W-170-R-27</u>		<u>Inventories</u>
SUBPROJECT:	<u>4</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Trends, Use, and Associated</u>
JOB:	<u>7</u>		<u>Habitat Studies</u>
PERIOD COVERED: <u>July 1, 2002 to June 30, 2003</u>			

MAGIC VALLEY REGION

Abstract

Group 2 - Pronghorn populations in Units 49 and 52 have increased over the past 4-5 years after 7 years of low and relatively stable populations. 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 2002 were only 45% of 1993 levels. Observed reproductive performance in August 2002 was above the long-term average in Unit 46 (0.82 fawns/doe) and similar to the long-term average in Unit 49 (0.80 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 1991-2002 have averaged 0.37 and 0.32 bucks/doe in Units 46 and 49, respectively.

Group 3 - Pronghorn antelope numbers in Unit 44 have increased substantially in recent years. Fawn production measured during August surveys averaged 0.92 fawns/doe from 1996-2002; the highest in the region. The population is currently estimated at approximately 300 head and declined during the reporting period because of liberal doe/fawn harvest. A ratio of 0.51 bucks/doe ($n = 165$) was observed in September 2002.

Group 4 - Units 54 and 57 have relatively small numbers of pronghorn antelope and have been managed for quality opportunity. From 1996-2002, 84 hunters in Unit 54 have harvested 76 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 2002 was only 45% of 1993 levels. Hunter success in any-antelope hunts in 2002 ranged from 21% in Unit 52A to 96% in the Unit 52 youth-only season and averaged 64% for all hunts combined (Table 1). The popular youth-only hunt in Unit 52 was continued for the fourth year. Twenty-two of 23 youth hunters that participated harvested an antelope. The hunt in Unit 53 was closed in 2001 because of low pronghorn numbers and poor hunter success. In 2002, Unit 53 was reopened to hunting as part of Hunt Area 52A.

Two hundred eighty-five bowhunters harvested an estimated 66 pronghorn (89% bucks) in Group 2 units in 2002 for a 23% success rate. Sixty-one percent of the archery harvest was from Unit 46 where bowhunters take more pronghorn bucks than rifle hunters.

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 2002 were meeting or very close to meeting the 12-inch objective in all Group 2 units. Only in Unit 49 has mean horn length consistently been below objective (Table 2).

Population Surveys

Sex and age composition data are collected annually on ground surveys during August in Units 46, 47, and 49. The observed fawn/doe ratio in Unit 49 was 0.80 fawns/doe in 2002; similar to the 1976-2002 average of 0.80 fawns/doe. In Unit 46, only a small sample of 127 pronghorn were classified with an observed ratio of 0.82 fawns/doe; the highest reproductive performance ever documented from that pronghorn population. From 1982-2002, observed August fawn/doe ratios in Unit 46 have averaged 0.50 fawns/doe.

An objective in the 1991-1995 Pronghorn Antelope Plan is to maintain an August ratio of 0.40 bucks/doe. From 1991-2002, observed August buck to doe ratios have averaged 0.37 bucks/doe in Unit 46 and 0.32 bucks/doe in Unit 49.

Only 1 depredation complaint was received during the 2002-2003 reporting period. This complaint was from Unit 47 and involved pronghorn use of growing alfalfa.

Group 3
Management Unit 44

Management

Unit 44 is the only Group 3 unit in the Magic Valley Region. During the late 1970s to mid-1980s, depredation complaints on the Camas Prairie (Units 44 and 45) were common and the management objective was to maintain the pronghorn antelope population below 100 head. Currently, there are approximately 300 antelope summering on the Camas Prairie. However, depredation complaints have been minimal during the past 14 years despite indicating an increased landowner tolerance for antelope. No depredation complaints were received during the 2002-2003 reporting period.

Harvest

In 2002, 40 permits were maintained in the any-antelope hunt and 100 permits were maintained in the doe/fawn hunt. From 1992-2002, hunter success in the any-antelope hunt has averaged 81% (Table 3). The mean maximum horn length reported by hunters in 2002 was 11.9 inches. Mean horn length has met the 12-inch plan objective in 5 of the past 11 years (Table 4).

Population Surveys

Camas Prairie pronghorns suffered high losses on the Camas Prairie 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 300 head. Data suggest that higher-than-normal losses during the 2001-2002 winter combined with liberal doe/fawn harvest have reduced the population. During September 2002, 165 pronghorn were classified on the Camas Prairie and ratios of 0.53 fawns and 0.51 bucks per doe were observed. On ground surveys conducted from 1999-2001, an average of 275 pronghorn were classified and fawn ratios averaged 1.04 fawns/doe.

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 1996-2002, 84 hunters harvested 76 antelope (Table 5) and horn lengths have averaged 14.0 inches (Table 6).

Population Surveys

In Unit 57, the resident pronghorn population has remained relatively low. On a ground survey conducted on 9 September 2002, only 27 pronghorn were counted; down from 66 pronghorn counted 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.

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 the 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 7). 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 the 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 has remained relatively stable in recent years 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 2,780 applicants for the 235 permits offered in the region for any-antelope rifle hunts in 2002. Drawing odds averaged 1:12.2 for those hunts. Eighty-eight percent of the 400 total permits offered in the region were issued to hunters.

During the past 15 years, fires have removed more than a million acres of sagebrush-dominated habitat in the 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 2003-2004 reporting period, the region will assist with an antelope research project that will include Units 46 and 47, the Camas Prairie, and Unit 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. Summary of pronghorn antelope harvest in the Magic Valley Region, Group 2, 1993-present.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
45 ^a	1993	50	6	13	19	32	38
	2001	10	7	1	8	88	80
	2002	10	7	0	7	100	70
46	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
	2002	77	30	23	53	57	69
47	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
49	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
52 ^b	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

Table 1. Continued.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
52A ^c	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
	2002	19	2	2	4	50	21
	53 ^d	1993	90	14	18	32	44
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

^a Hunt Area 45 was closed from 1994-2000.

^b Hunt Area 52 was closed from 1996-1998.

^c Hunt Area 52A was closed from 1996-1999.

^d Hunt Area 53 was closed in 2001 and reopened in 2002 as part of Hunt Area 52A.

Table 2. Summary of hunter-harvested pronghorn antelope horn length in the Magic Valley Region, Group 2, 1993-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
45 ^a	1993	20	6	12.9
	2001	10	7	12.5
	2002	10	7	12.3
46	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
	47	1993	40	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
49		1993	175	29
	1994	100	35	12.5
	1995	100	43	10.0
	1996	50	21	9.9
	1997	50	30	10.8
	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
52 ^b	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
	2002	25	22	11.4

Table 2. Continued.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
52A ^c	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
53 ^d	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

^a Hunt Area 45 was closed from 1994-2000.

^b Hunt Area 52 was closed from 1996-1998.

^c Hunt Area 52A was closed from 1996-1999.

^d Hunt Area 53 was closed in 2001 and reopened in 2002 as part of Hunt Area 52A.

Table 3. Summary of pronghorn antelope harvest in the Magic Valley Region, Group 3, 1993-present.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
44	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

Table 4. Summary of hunter-harvested pronghorn antelope horn length in the Magic Valley Region, Group 3, 1993-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
44	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

Table 5. Summary of pronghorn antelope harvest in the 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
57 ^a	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

^a Hunt Area 57 was closed in 2002 due to low antelope numbers.

Table 6. Summary of hunter-harvested pronghorn antelope horn length in the 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
57 ^a	1996	5	3	16.0
	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

^a Hunt Area 57 was closed in 2002 due to low antelope numbers.

Table 7. Summary of pronghorn antelope harvest in the Magic Valley Region, 1993-present.

Year	Permits	Harvest			% Male	% Success
		Male	Female	Total		
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

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Antelope Surveys and</u>
PROJECT:	<u>W-170-R-27</u>		<u>Inventories</u>
SUBPROJECT:	<u>5</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>1</u>		<u>Trends, Use, and Associated</u>
JOB:	<u>7</u>		<u>Habitat Studies</u>
PERIOD COVERED: <u>July 1, 2002 to June 30, 2003</u>			

SOUTHEAST REGION

Abstract

Group 2 - Fifty any-antelope permits were issued for Unit 68 in 2002. Sixty-eight percent of hunters in the controlled hunt reported harvesting a pronghorn antelope, compared to 70% in 2001. Nine female and 25 male pronghorn antelope were harvested. Harvested males had an average maximum horn length of 11.1 inches. Archery hunters reported taking 2 antelope. Population information is limited for the unit because of low density and wide dispersion.

Group 2

Management Unit 68

Harvest

The Unit 68 any-antelope permit level remained the same in 2002 as in 2001 (Table 1). Hunter report cards were used to estimate harvest, participation, and horn length. Hunter success (68%) in 2002 was 2% lower than in 2001 (70%). Forty-nine permits were issued, and 48 reported hunting for a total of 202 days; 4.2 days per hunter, compared to 3.0 days/hunter in 2001.

Twenty-eight archery hunters reported hunting 178 days, 6.4 days/hunter, and harvesting 2 male antelope.

Mean maximum horn length for the 2001 harvest was 11.1 inches (Table 2), below 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, but significant losses may have occurred during winter 2001-2002. 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 the spring of 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 still can 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.

Use of irrigated agricultural fields adjacent to sagebrush rangeland by pronghorn antelope was noted during summer 2002, but no depredation problems were reported.

Climatic Conditions

The 2001-2002 winter snow pack in the Southeast Region was slightly below average, but early storms in December forced most antelope populations to the southern edge of the desert, near or on agricultural fields. This led the Department to feed approximately 300 antelope just outside of Aberdeen. For the first time in recorded history, approximately 70 antelope are believed to have crossed the ice on American Falls Reservoir and found their way to the area near the Pocatello Airport. Several unsuccessful attempts were made to move the antelope. Observed numbers declined to around 15 by winter 2002.

Winter conditions in 2002-2003 were exceptionally mild throughout southeast Idaho. No supplemental feeding of antelope was done, and no depredations were reported. Antelope were only occasionally seen in the vicinity of the Pocatello airport until May 2003, when approximately 12-15, including several fawns, were reported.

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Table 1. Summary of pronghorn antelope harvest in the Southeast Region, Group 2, 1993-present.

Hunt Area	Year	Permits	Harvest ^a			% Male	% Success
			Male	Female	Total		
68	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

^a Information prior to 1994 and after 2000 was provided by hunter report cards, interim year's data collected through telephone survey.

Table 2. Summary of hunter-harvested pronghorn antelope horn length in the Southeast Region, Group 2, 1993-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches) ^a
68	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

^a Information prior to 1994 and after 2000 was provided by hunter report cards, interim year's data collected through telephone survey.

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Antelope Surveys and</u>
PROJECT:	<u>W-170-R-27</u>		<u>Inventories</u>
SUBPROJECT:	<u>6</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>1</u>		<u>Trends, Use, and Associated</u>
JOB:	<u>7</u>		<u>Habitat Studies</u>
PERIOD COVERED: <u>July 1, 2002 to June 30, 2003</u>			

UPPER SNAKE REGION

Abstract

Group 2 - A population survey was conducted in Units 59/59A in August 2002, Unit 51 in August 2001, and Unit 58 in August 2000. Population surveys in other Group 2 units have not been conducted in recent years. Although the 2001-2002 winter appeared to have harsher wintering conditions than most years, the Department did not receive reports of above normal winter mortality until farmers began spring fieldwork. Some farmers, especially in the Table Butte-Montevue area reported finding bones and carcasses in and near their fields. Permit numbers were reduced from 120 to 75 in Hunt Area 50. Permit numbers in Hunt Area 51 were decreased from 155 to 105, and permit numbers for all other hunts remained the same as they were in 2001. 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 - There have been no population surveys in Group 3 units in recent years. The 2001-2002 winter had harder wintering conditions than most years, and the Department received reports from farmers and ranchers of bones and carcasses around and in fields in the spring in the Table Butte-Montevue area. No pronghorn depredation complaints were received in Group 3 units during this reporting period.

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, during severe winters, migrate into Unit 63.

Minor depredations on hay and grain crops are common during the summer, but landowners tolerate most 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 through 2000. In 2001 and 2002, the harvest estimate (Table 1) and horn length estimate (Table 2) 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 the permits, harvest estimates, or horn length estimates for the landowner appreciation permits. The 12-inch average minimum horn length objective was not met for any of the hunts in the 2002 season (Table 2). Reported horn length sample size remains smaller than desired for precision estimates. Archery horn-length measurements exceeded the 12-inch management objective for all management units except Units 59 and 59A.

Population Surveys

A herd composition and trend survey was conducted in Units 59/59A during August 2002 (Table 3). Methodology described by Pojar et al. (1995) was followed except that the search unit size was increased to ensure that pronghorn were observed in most search units. Units 59/59A were divided into 23 search subunits based on drainages, roads, and watershed divides. The subunits were stratified into high, medium, or low density based on ground observations made over the 2 weeks prior to the survey. Four subunits were classified as high-density, 10 medium-density, and 9 low-density. All high-density, 8 medium-density, and 3 low-density subunits were surveyed. Data collected for pronghorn groups observed included sex and age classification, activity when first detected, habitat type, and UTM location. An Excel spreadsheet program was written to convert raw counts to total estimates with 90% confidence intervals.

A total of 330 pronghorn were observed, resulting in a population estimate of 390 ± 75 (42 bucks, 230 does, 89 fawns) with a buck:doe:fawn ratio of 18:100:39. The raw counts for Units 59/59A from 1974 to 2002 are presented in Table 3.

Pronghorn distribution was different than occurred during the early 1980s. Pronghorn were widely distributed in small groups in lower Crooked Creek, the Deep Creek bench, Eddie Bench, and lower elevation range between Indian Creek and the old Butte Highway. A few pronghorn also occurred in the Modoc Creek drainage. The higher elevation native range in the Fritz Creek, Divide Creek, Limestone Gulch, Irving Creek, and Eddie Creek areas and areas around hayfields had few if any pronghorn.

It is difficult to compare the 2002 estimate with prior estimates because survey methodologies were not conducted the same way. From 1974 through 1986, a helicopter and 2 observers was

used to survey the important pronghorn habitat in Units 59/59A. Areas from past surveys known to support no or few pronghorn were either not surveyed or just flown over to make sure no large groups of pronghorn were using the area. Actual counts were used to determine buck:doe:fawn ratios and to monitor population trend. In 2002, each subunit surveyed was flown in transects designed to cover the entire subunit. None of these methods are directly comparable to each other. However, the 2002 methodology is comparable to that used in Unit 51 in 2001 and Unit 58 in 2000.

Although total population estimates are not comparable, the buck:doe:fawn estimates should be comparable with earlier helicopter surveys. The buck:doe ratio and fawn:doe ratio in 2002 were lower than any previous survey. The fawn:doe ratio was also below the 32 fawns:100 does observed in Unit 51 during the 2001 survey and the 45 fawns:100 does observed in Unit 58 during the 2000 survey. The reasons for the lower fawn:doe ratio on the 2000s surveys relative the 1970s and 1980s surveys are unknown, but low fawn:doe ratios may explain why the pronghorn population has not rebounded as quickly as expected during the 1990s.

A herd composition and trend survey was conducted in Unit 51 during August 2001 (Table 4) and in Unit 58 during August 2000 (Table 5). Herd composition and population trend surveys have not been conducted in Unit 50 for several years.

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

Climatic Conditions

Winter 2001-2002 was more severe than most winters and the Department received reports from farmers finding bones and carcasses of pronghorn in and around fields in the Table Butte-Montevue area in the spring when fieldwork began. The 2002-2003 winter was exceptionally mild.

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 drainage and its 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 a resident population. Approximately half the unit is controlled by the U.S. Department of Energy as the Idaho National Engineering and Environmental Laboratory (INEEL) and is closed to hunting. In several areas, irrigated crops are grown on private lands that abut the INEEL. Consequently, some of the pronghorn summering in Unit 63 frequently 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.

Harvest

Permit numbers for all hunt areas remained the same for 2002 as they were for 2001 (Table 6).

No pronghorn depredation complaints were received during this reporting period.

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.

The average horn length for reported hunter harvest in 2002 was less than 12 inches for all Group 3 hunts (Table 7). 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 3 pronghorn hunts in the state restricted to muzzleloaders. Muzzleloader interest has increased over the past few years and since 1994, first-choice applicants have filled all permits.

Pronghorn controlled harvest for the Upper Snake Region appears in Table 8.

Population Surveys

Herd composition counts and population trend surveys have not been conducted in these units in recent years. A line-transect trend survey was attempted in Unit 63 in 1990. The wide confidence interval suggested this method was not suitable for census of pronghorn in this area. The primary variable producing the wide confidence interval was low population density.

In July 1996, pronghorn were surveyed using the method described by Pojar et al. (1995) in that part of Unit 63 south of Highway 33 outside of the INEEL and the adjacent 3.22 km inside the east and south border of INEEL (Hunt Area 63-1). Seventy-nine pronghorn were counted in the

area surveyed in Unit 63 (6 bucks, 73 unclassified) for a mean density of 1.04 pronghorn/km² ($s_x = 6.58$). It was estimated that there were 654 km² surveyed in Unit 63. The estimated number of pronghorn occurring in the area surveyed in Unit 63 during summer 1996 was 682 ± 1,008.

The Environmental Science and Research Foundation, Inc., conducted a pronghorn survey on the INEEL in August 1996 following the method described by Pojar et al. (1995). Two hundred fifty-two pronghorn were observed. The total pronghorn estimate on the INEEL was 1,247 ± 1,212 (90% CI). The buck:doe ratio was 16:100 and the fawn:doe ratio was 8:100.

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 9 shows summer and winter pronghorn population estimates (Transect II, Johnson and Lindzey 1990) for the INEEL, 1994-2003. Summer flights were conducted during July or August; winter flights were conducted during January or February.

Climatic Conditions

Conditions during the 2001-2002 winter were severe for pronghorn wintering in Units 60A, 63A and 63. Farmers in the Table Butte-Montevue area reported finding some pronghorn carcasses and bones in and around their hayfields in spring 2002. The winter of 2002-2003 was exceptionally mild.

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Table 1. Summary of pronghorn antelope harvest in the Upper Snake Region, Group 2, 1998-present.

Hunt Area	Year	Permits	Harvest ^a			% Male	% Success
			Male	Female	Total		
50	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
51	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
58	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
59	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

^a Information from 1998-2000 was collected through a telephone survey; after 2000, data was provided by hunter report cards. Does not include landowner appreciation permits or harvest estimates.

Table 2. Summary of hunter-harvested pronghorn antelope horn length in the Upper Snake Region, Group 2, 1998-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches) ^a
50	1998	180	52	11.4
	1999	180	72	11.0
	2000	130	102	11.1
	2001	120	53	10.4
	2002	75	46	10.8
51	1998	175	63	13.0
	1999	175	93	11.8
	2000	175	138	10.5
	2001	155	80	10.5
	2002	105	49	11.9
58	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
59	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

^a Information from 1998-2000 was collected through a telephone survey; after 2000, data was provided by hunter report cards. Does not include landowner appreciation permits or harvest estimates.

Table 3. Summary of pronghorn antelope surveys in Units 59 and 59A, 1974-present.

Year	Bucks	Does	Fawns	Total	Bucks/100 Does	Fawns/100 Does
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 ^a	42	230	89	390	18.3	38.7

^a Population estimate for all of Units 59 and 59A.

Table 4. Summary of pronghorn antelope surveys in Unit 51, 1973-present.

Year	Bucks	Does	Fawns	Total	Bucks/100 Does	Fawns/100 Does
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 ^a	-	-	-	4,062	-	-
1996 ^b	309	1,565	506	2,380	19.7	32.3
2001 ^c	149	417	137	703	35.7	32.9

^a Line-transect estimate.

^b Pojar et al. estimate.

^c Modified Pojar et al. estimate.

Table 5. Summary of pronghorn antelope surveys in Unit 58, 1973-present.

Year	Bucks	Does	Fawns	Total	Bucks/100 Does	Fawns/100 Does
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 ^a	147	321	144	612	45.8	44.9

^a Population estimate for all of Unit 58.

Table 6. Summary of pronghorn antelope harvest in the Upper Snake Region, Group 3, 1998-present.

Hunt Area	Year	Permits	Harvest ^a			% Male	% Success
			Male	Female	Total		
60A	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
61	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
63	1998	225	79	25	104	76	54
	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

^a Information from 1998-2000 was collected through a telephone survey; after 2000, data was provided by hunter report cards. Does not include landowner appreciation permits or harvest estimates.

Table 7. Summary of hunter-harvested pronghorn antelope horn length in the Upper Snake Region, Group 3, 1998-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches) ^a
60A	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
61	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
63	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

^a Information from 1998-2000 was collected through a telephone survey; after 2000, data was provided by hunter report cards. Does not include landowner appreciation permits or harvest estimates.

Table 8. Summary of pronghorn antelope harvest in the Upper Snake Region, 1998-present.

Year	Permits	Harvest ^a			% Male	% Success
		Male	Female	Total		
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	68

^a Does not include landowner appreciation permits or harvest estimates.

Table 9. Estimates of pronghorn antelope on the INEEL, 1994-present.

Year	Summer			Winter		
	Number Observed	Number Groups	Population Estimate	Number Observed	Number Groups	Population Estimate
1994	123	39	250±138	-	-	-
1995	198	-	474±260	1,093	23	-
1996	256	8	1,247±1,212	-	-	-
1997	64	28	401±190	1,986	82	3,286±692
1998	-	-	-	911	36	3,161±997
1999	52	23	479±112	1,398	21	2,939±1,226
2000	199	58	556±151	1,190	74	3,717±702
2001	98	29	1,307±165	1,341	36	4,126±1,311
2002	51	12	246±98	866	19	7,005±3,624
2003	-	-	-	702	45	2,315±542

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Antelope Surveys and</u>
PROJECT:	<u>W-170-R-27</u>		<u>Inventories</u>
SUBPROJECT:	<u>7</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Trends, Use, and Associated</u>
JOB:	<u>7</u>		<u>Habitat Studies</u>
PERIOD COVERED:	<u>July 1, 2002 to June 30, 2003</u>		

SALMON REGION

Abstract

There were 144 pronghorn antelope harvested in the Salmon Region in 2002, including 16 animals taken under archery ($n = 6$) and landowner appreciation ($n = 10$) permits. Controlled hunt harvest (128) decreased again in 2002; down 8% from 2001 (Table 1). Harvest in 2002 remained well below recent harvest levels and represented the second lowest harvest in 34 years. Reductions in recent harvest reflect significant decreases in permits available throughout the Salmon Region since the early 1990s. Success for active hunters in controlled hunts was 76%; bucks comprised 81% of harvested pronghorn. Average horn lengths met minimum 12-inch criterion in 3 of 5 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 to 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. 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 units to groups is modified to represent current hunt areas and group-specific comparisons are limited. Under current pronghorn densities, most hunting opportunities in the Salmon Region would likely be classified into Group 1.

No aerial surveys specific to pronghorn antelope were conducted during the reporting period. However, approximately 1,149 pronghorn antelope were observed incidentally during surveys of other ungulates in Units 21A, 29, 30, 30A, 36B, 37, and 37A.

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 12 pronghorn antelope in 2002; including 8 males (Table 2). Compared to 2001, harvest from this hunt area decreased by 4 animals. Reported mean horn length was above plan criterion of 12.0 inches (Table 3).

A hunt for any pronghorn antelope in Unit 21A was eliminated in 1998. Hunts 21A-2 (doe/fawn) and 36B-2 were terminated in 1994 and 1996. 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 90 animals in 3 hunts in these units (Table 4). For comparable open hunt areas, number harvested was essentially unchanged (-1) from 2001. Males comprised 82% of the harvest. Mean horn lengths were above pronghorn antelope-plan criterion of 12.0 inches in 2 of 3 hunt areas (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 26 in 2002, a decrease of 6 from 2001 (Table 6). Hunters reported harvesting 22 bucks, 5 less than the previous year. However, average horn length (11.6 inches) approached the goal of 12 inches (Table 7).

Table 1. Summary of pronghorn antelope harvest in the Salmon Region, 1993-present.

Year	Permits	Harvest			Male (%)	Success ^a (%)
		Male	Female	Total		
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	46
1999	245	87	36	123	71	50
2000	245	108	40	148	73	60
2001	220	115	24	139	83	63
2002	195	104	24	128	81	66

^a Success calculated as number harvested divided by number of permits available.

Table 2. Summary of pronghorn antelope harvest in the Salmon Region, Group 1, 1993-present.

Hunt Area	Year	Permits	Harvest			Male (%)	Success ^a (%)
			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	40
	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	68
	1999	25	11	7	18	61	72
37	2000	25	10	0	10	100	40
	2001	25	14	2	16	88	64
	2002	25	8	4	12	75	55
	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	45
	1999	25	5	7	12	42	48
2000	25	11	3	14	79	56	
2001	25	13	2	15	87	60	

^a Success calculated as number harvested divided by number of permits available.

Table 3. Summary of hunter-harvested pronghorn antelope horn length in the 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
37	2000	25	8	12.2
	2001	25	14	12.5
	2002	25	7	12.4
	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. Summary of pronghorn antelope harvest in the Salmon Region, Group 2, 1993-present.

Hunt Area	Year	Permits	Harvest			Male (%)	Success ^a (%)
			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	32
	1999	50	12	11	23	52	46
	2000	50	13	12	25	52	50
	2001	50	16	7	23	70	46
	2002	40	18	6	24	75	60
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	73
	2000	30	26	2	28	93	93
	2001	30	23	0	23	100	77
	2002	30	23	2	25	92	83
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	32
	1999	25	5	0	5	100	20
	2000	25	3	6	9	33	36
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	35
	1999	25	7	2	9	78	36
	2000	25	10	5	15	67	60
	2001	25	13	5	18	72	72
	2002	60	33	8	41	80	68

Table 4. Continued.

Hunt Area	Year	Permits	Harvest			Male (%)	Success ^a (%)
			Male	Female	Total		
37A	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	39
	1999	25	5	3	8	63	32
	2000	25	8	3	11	73	44
	2001	25	9	3	12	75	48

^a Success calculated as number harvested divided by number of permits available.

Table 5. Summary of hunter-harvested pronghorn antelope horn length in the 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
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
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	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. Summary of pronghorn antelope harvest in the Salmon Region, Group 3, 1993-present.

Hunt Area	Year	Permits	Harvest			Male (%)	Success ^a (%)
			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	56
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	63
	1999	40	20	6	26	77	65
	2000	40	27	9	36	75	90
2001	40	27	5	32	84	80	
2002	40	22	4	26	85	65	

^a Success calculated as number harvested divided by number of permits available.

Table 7. Summary of hunter-harvested pronghorn antelope horn length in the 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

APPENDIX A
2002 Idaho Antelope Season Structure



2002 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**

(Either sex may be taken)

Unit(s)	2002 SEASON DATES
---------	-------------------

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

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. **See page 4.**

2002 CONTROLLED HUNTS (1,795 PERMITS) EITHER SEX ANTELOPE

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4001	Sep 25 - Oct 24	29	40	
4002	Sep 25 - Oct 24	30	30	
4003	Sep 25 - Oct 24	30A	40	
4004	Sep 25 - Oct 24	36B* (see pg 52)	25	
4005	Sep 25 - Oct 24	37* (see pg 52)	60	
4006	Sep 25 - Oct 24	39	50	
4007	Sep 25 - Oct 24	40	150	
4008	Sep 25 - Oct 24	42* (see pg 52)	200	
4009	Sep 25 - Oct 24	44* (see pg 52)	40	
4010	Sep 25 - Oct 24	45	10	
4011	Sep 25 - Oct 24	46	60	
4012	Sep 25 - Oct 24	49	50	
4013	Sep 25 - Oct 24	50	75	
4014	Sep 25 - Oct 24	51* (see pg 52)	75	
4015	Oct 25 - Nov 30	51* (see pg 52)	30	
4016	Sep 25 - Oct 24	52A	25	
4017	Sep 25 - Oct 24	54	25	

(Continued)

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

**2002 CONTROLLED HUNTS - CONTINUED
EITHER SEX ANTELOPE**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4018	Sep 25 - Oct 24	58	75	
4019	Sep 25 - Oct 24	59* (see pg 52)	100	
4020	Sep 25 - Oct 24	60A* (see pg 52)	50	
4021	Sep 25 - Oct 24	63-1	60	
4022	Sep 25 - Oct 24	68	50	

**2002 CONTROLLED HUNTS
DOE OR FAWN ANTELOPE**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4023	Oct 5 - Oct 24	44	100	
4024	Oct 5 - Oct 24	46	25	

**2002 EITHER SEX ANTELOPE
MUZZLELOADER CONTROLLED HUNTS**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4025	Sep 25 - Oct 24	41	40	
4026	Sep 25 - Oct 24	47	40	<i>Motorized vehicle restrictions apply. See note 1.</i>
4027	Aug 25 - Oct 24	63-2	100	

**2002 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>

**2002 EITHER SEX ANTELOPE
YOUTH CONTROLLED HUNTS**

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4029	Sep 25 - Oct 24	32* (see pg 52)	15	<i>Junior license holders only.</i>
4030	Sep 25 - Oct 24	52	25	<i>Junior license holders only.</i>

Note 1 — Motorized vehicle use is restricted to established roadways capable of travel by full-sized automobiles. The use of motorized vehicles on trails and off established roads is prohibited.

* 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 — All of Unit 39.

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 — All of Unit 46.

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 Unit 52.

Hunt Area 52A — All of Units 52A and 53.

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 11.)

Submitted by:

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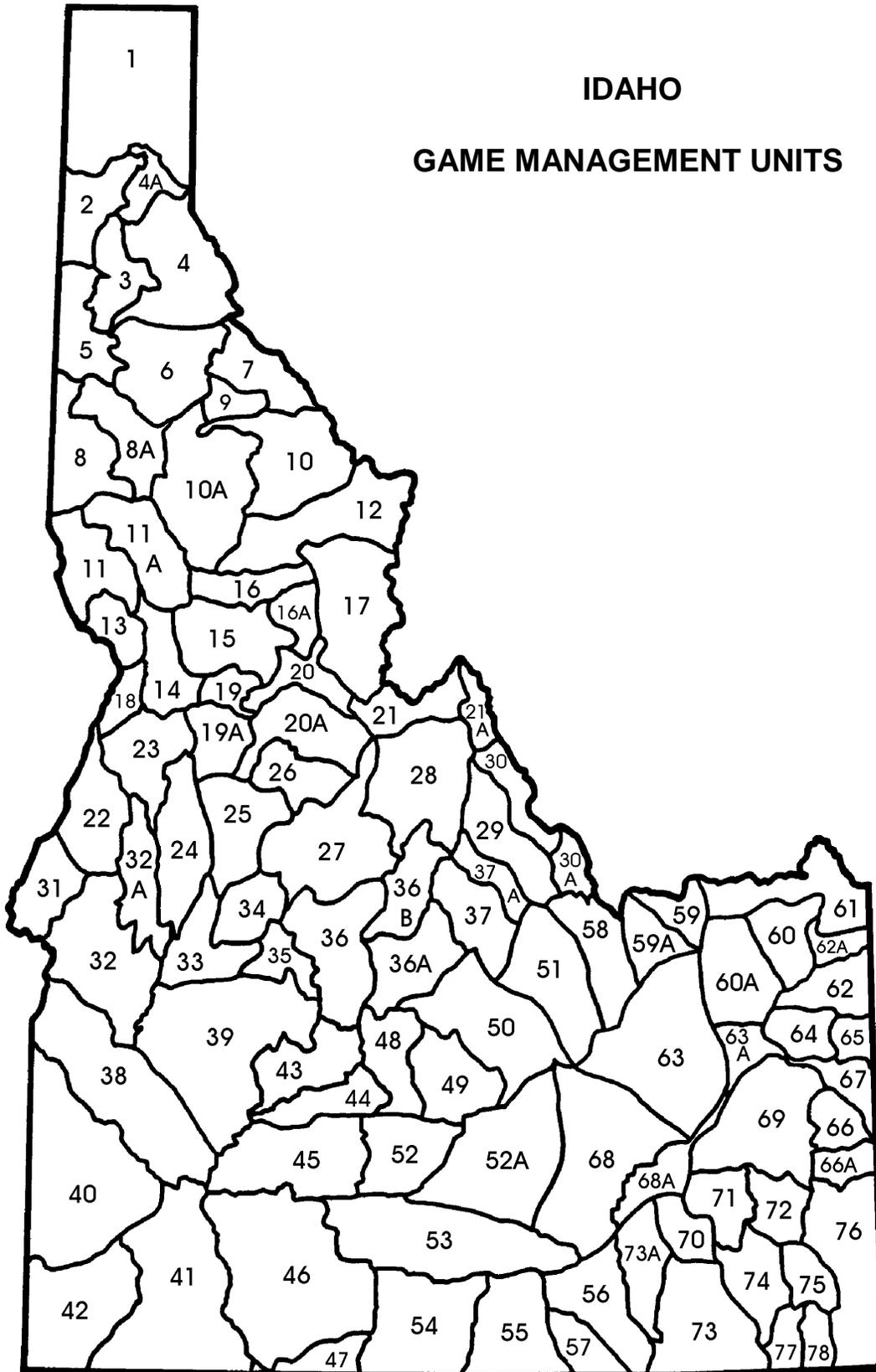
Approved by: IDAHO DEPARTMENT OF FISH AND GAME

Dale E. Toweill
Dale E. Toweill
Wildlife Program Coordinator
Federal Aid Coordinator

James W. Unsworth
James W. Unsworth, Chief
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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.

