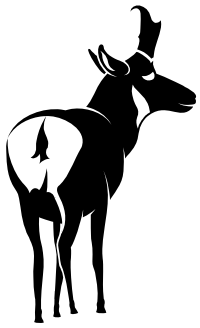
IDAHO DEPARTMENT OF FISH AND GAME

Steven M. Huffaker, Director

Project W-170-R-26

Job Progress Report



PRONGHORN ANTELOPE

Study I, Job 7

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July 1, 2001 to June 30, 2002

September 2002
Boise, Idaho

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STATE:	Idaho	**JOB TITLE:**	Antelope Surveys and Inventories
PROJECT:	W-170-R-26		
SUBPROJECT:	3-7	**STUDY NAME:**	Big Game Population Status, Trends, Utilization, and Associated Habitat Studies
STUDY:	I		
JOB:	7		

PERIOD COVERED: July 1, 2001 to June 30, 2002

STATEWIDE

Abstract

A total of 12,645 hunters (12,260 resident hunters and 385 nonresident hunters) applied for 1,795 controlled pronghorn antelope permits offered in 2001. There were 5 fewer permits offered in 2001 than in 2000. Thirty-six different hunts were offered in the Southwest, Magic Valley, Southeast, Upper Snake, and Salmon regions. In addition, a general archery pronghorn antelope season was offered from 15 August through 15 September in 27 units. In 2001, 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. Thirty-five permits were offered in 2001 for youth hunters (under age 16) to take pronghorn antelope.

An estimated 1,584 of the 1,795 (88%) controlled hunt permittees actually hunted pronghorn antelope. Hunters harvested 1,118 pronghorn antelope in 4,618 days of hunting. General season archery tags for pronghorn antelope were purchased by 1,088 hunters. An estimated 822 (76%) of the tag purchasers hunted and spent 3,447 days afield and harvested 245 antelope.

State 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 habitat 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 78% in 2001. A history of pronghorn antelope harvest is presented in Table 1. The 2001 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 opportunity 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 have 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 historic pronghorn antelope habitat, but currently support few or no pronghorn.

Table 1. 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		

Table 1. Continued.

Season	Year	Hunters	Harvest	Success (%)	Days hunted
	1977		1,250		
	1978		1,345		
	1979		1,430		
	1980		1,498		
	1981		1,837		
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
	1997-1999[a]				
	2000	772	189	24	3,800
	2001	822	245	30	3,450
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

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

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

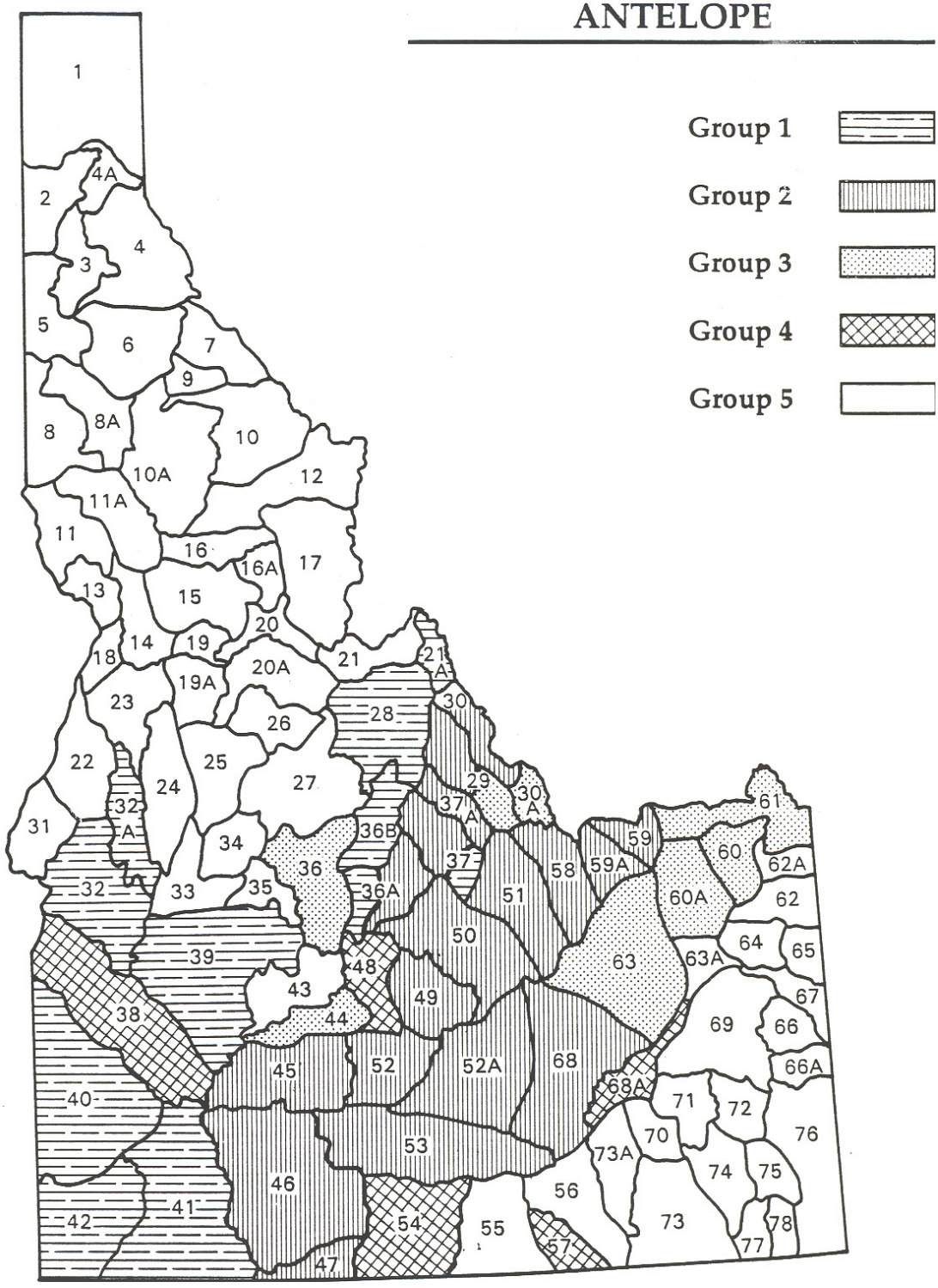

Figure 1. Pronghorn management groups in Idaho.

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Antelope Surveys and Inventories
PROJECT:	W-170-R-26		
SUBPROJECT:	3	**STUDY NAME:**	Big Game Population Status, Trends, Utilization, and Associated Habitat Studies
STUDY:	I		
JOB:	7		

PERIOD COVERED: July 1, 2001 to June 30, 2002

SOUTHWEST REGION

Abstract

Group 1: A total of 397 permits were issued and 257 pronghorn antelope were harvested in controlled hunts in 2001. Hunter success averaged 65%. Average horn length was at the minimum management objective of 12 inches in Units 32, 39, 40, 41, and 42.

An estimated 322 hunters hunted 1,189 days and harvested an estimated 117 antelope (36% 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 the this area during the reporting period.

Group 1

Management Units 32, 39, 40, 41, 42

Management

No pronghorn antelope population surveys were conducted during this year. Pronghorn antelope observations incidental to bighorn sheep surveys and other activities seem to indicate a static population.

Harvest

Based upon the harvest survey, controlled hunt harvest increased from 230 pronghorn antelope in 2000 to 257 in 2001 (Table 1). The muzzleloader hunt in Unit 41 had a success rate of 49% with a harvest of 18 pronghorn antelope. The success rate in the any-weapon controlled hunts was 68% with a harvest of 239 pronghorn antelope. Average horn length was 12.5 inches, exceeding the minimum objective of 12 inches for Units 32, 39, 41, and 42.

An estimated 322 hunters hunted 1,189 days and harvested an estimated 117 antelope (36% success rate) during the 15 August – 15 September general archery season in units 40, 41, and 42.

Table 1. Summary of controlled hunt pronghorn antelope harvest, Group 1, Southwest Region, 1992-2001.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
32	2000	10	6	2	8	75	80
	2001	10	7	0	7	100	70
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
40	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
41	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
42	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

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Antelope Surveys and Inventories
PROJECT:	W-170-R-26		
SUBPROJECT:	4	**STUDY NAME:**	Big Game Population Status, Trends, Utilization, and Associated Habitat Studies
STUDY:	I		
JOB:	7		

PERIOD COVERED: July 1, 2001 to June 30, 2002

MAGIC VALLEY REGION

Abstract

Group 2: Pronghorn populations in Units 49, 52, and 52A have increased over the past 3-4 years after 7 years of low and relatively stable populations. Pronghorn numbers in Units 46-47 appear to have declined slightly and numbers in Unit 53 remain low. Harvest has been substantially curtailed since 1994 to encourage population growth. Permit levels in 2001 were only 54% of 1993 levels. Observed reproductive performance in August 2001 was above the long-term averages in both Unit 46 (0.57 fawns/doe) and Unit 49 (0.83 fawns/doe). Mean horn lengths of harvested bucks has been consistently below the 12-inch minimum objective only in Unit 49. Observed buck ratios from 1991-2001 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 1.00 fawns/doe from 1996-2000, the highest in the region. The population currently numbers more than 300 pronghorn antelope. A ratio of 0.69 bucks/doe (n = 235) was observed in September 2001. The doe/fawn hunt was increased from 80 to 100 permits in 2001 to help slow population growth.

Group 4: Units 54 and 57 have relatively small numbers of pronghorn antelope and have been managed for quality opportunity. Hunts have been offered in both units since 1996. From 1996-2000, 62 hunters in Unit 54 have harvested 56 pronghorn with a mean maximum horn length of 14.1 inches. In Unit 57, 29 hunters have taken 23 bucks with a mean maximum horn length of 13.8 inches.

Group 2

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

Pronghorn antelope populations in most Group 2 units declined substantially during the 1992-1993 winter. Hunts and permit levels have been adjusted accordingly to encourage population recovery. Following the 1993 decline, pronghorn antelope hunts were eliminated in Units 45,

52, and 52A, and doe/fawn hunts were eliminated in all units except Unit 46. Overall, the number of permits offered in Group 2 units in 2001 was only 54% of 1993 levels. Hunter success in any-antelope hunts in 2001 ranged from 28% in the Unit 47 traditional muzzleloader hunt to 89% in Unit 45 and averaged 70% for all hunts combined. The youth-only hunt in Unit 52 was continued for the third year. Fourteen of 24 youth hunters that participated harvested pronghorn antelope. The hunt in Unit 53 was closed in 2001 because of low pronghorn numbers and poor hunter success (Table 1). Bowhunters harvested an estimated 54 pronghorn (88% bucks) in Group 2 units in 2001 with 69% of the archery harvest coming from Unit 46.

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 2001 were above the 12-inch objective in Units 45 and 52, below but near objective in Unit 46, and below objective in Units 49 and 52A. Only in Unit 49 has mean horn length consistently been below objective (Table 2).

Since 1994, pronghorn populations have increased moderately in Units 45, 49, 52, and 52A because of improved fawn production coupled with mild winters. Pronghorn numbers in Units 46 and 47 have declined during the past 4 years and the cause of the decline is uncertain. Pronghorn numbers have remained low in Unit 53. The severe winter of 2001-2002 is believed to have resulted in higher than normal mortality, but the overall effect on pronghorn populations is still undetermined.

Sex and age composition data are collected annually on ground surveys during August in Units 46, 47, and 49. Observed fawn/doe ratios in Unit 49 in 1999, 2000, and 2001 were 0.93, 0.88, and 0.83 fawns/doe, respectively. These observed ratios are higher than the 1976-2000 mean of 0.80 fawns/doe. In August 1993, following the substantial winter losses the previous winter, observed fawn production in Unit 49 was only 0.38 fawns/doe, and from 1993-1998, production was below average (0.68 fawns/doe). Observed fawn production in Unit 46 is generally lower than in Unit 49. In Unit 46, 0.57 fawns/doe (n = 137) was observed in 2001, which is higher than the 1982-2000 mean of 0.48 fawns/doe.

An objective in the 1991-1995 Pronghorn Antelope Plan is to maintain an August ratio of 0.40 bucks/doe. From 1991-2001, observed August buck to doe ratios have averaged 0.37 bucks/doe in Unit 46 and 0.32 bucks/doe in Unit 49.

Eight depredation complaints were received during the 2001-2002 reporting period. Four complaints in Unit 45 and one in Unit 47 involved pronghorn use of growing crops. Three complaints were received in Unit 53 for pronghorn use of haystacks.

Group 3

Management Unit 44

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 more than 300 pronghorn antelope summering on the Camas Prairie. However, depredation complaints have been minimal during the past 13 years despite drought conditions during 7 of those years. No depredation complaints were received during the 2001-2002 reporting period.

Pronghorn antelope 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. It is believed that higher than average mortality occurred during the 2001-2002 winter but the effect on the population is undetermined. During September 2001, 235 pronghorn antelope were classified on the Camas Prairie and ratios of 0.69 bucks and 0.92 fawns/doe were observed. From 1996-2000, observed ratios averaged 1.00 fawns/doe and 0.37 bucks/doe.

In 2001, 40 permits were maintained in the any-antelope hunt and the doe/fawn hunt was expanded from 80 to 100 permits to help slow population growth. From 1991-2001, hunter success in the any-antelope hunt has averaged 90% (Table 3). The mean maximum horn length reported by hunters in 2001 was 13.2 inches. Mean horn length has been below the 12-inch plan objective in 7 of the past 11 years (Table 4).

Group 4

Management Units 48, 54, 57

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. A 10-permit any-antelope hunt has been authorized in Unit 54 since 1996. From 1996-2001, 62 hunters harvested 56 pronghorn antelope and horn lengths have averaged 14.1 inches (Tables 5 and 6).

In Unit 57, the resident pronghorn population has remained relatively low. On a casual ground survey conducted on 8 September 2001, 66 pronghorn were counted (15 bucks, 46 does, and 15 fawns). During winter, there are reports of nearly 100 head in the west side of the unit. A hunt with 5 permits has been authorized since 1996 to allow some opportunity to harvest the mature bucks this small population supports. Since the hunt began in 1996, 29 hunters have taken 23 bucks and horn lengths have averaged 13.8 inches (Tables 5 and 6).

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. Populations south of the Snake River did not experience the magnitude of decline that occurred in units in the northern portion of the region. Pronghorn antelope numbers have increased substantially in the Camas Prairie area of Units 44, 45, and 52, while there have been small to moderate increases in other units. Pronghorn antelope population increases are expected in Unit 49 based on the excellent fawn production observed in Unit 49 during the past 3 years. The small pronghorn antelope populations in Units 54 and 57 have remained relatively stable in recent years and will continue to be managed to provide quality hunting opportunity. In Units 46 and 47, pronghorn numbers appear to have declined during the past several years.

There is a high demand for pronghorn antelope hunting in the region as evidenced by the difficult drawing odds for permits. There were 2,657 applicants for the 230 permits offered in the region for any-antelope rifle hunts in 2001. Drawing odds averaged 1 in 11 for those hunts. Ninety-four percent of the 420 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.

Population surveys during the 2002-2003 reporting period will be limited to ground surveys conducted during August to estimate age and sex ratios on the Camas Prairie (Unit 44, 45, and 52) and in Units 46 and 49.

Table 1. Summary of pronghorn antelope harvest, Group 2 units, Magic Valley Region, 1992-2001.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
45	1992	50	13	9	22	59	44
	1993	50	6	13	19	32	38
	2001	10	7	1	8	88	80
46	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	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
49	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
52	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
	1996	10	8	0	8	100	80
	1999	10	8	0	8	100	80
	2000	20	13	1	14	93	70

Table 1. Continued.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
	2001	25	12	2	14	86	56
52A	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	25	14	3	17	82	68
	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

Table 2. Summary of hunter-harvested pronghorn antelope horn length, Group 2 units, Magic Valley Region, 1992-2001.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
45	1992	20	8	12.7
	1993	20	6	12.9
	2001	10	7	12.5
46	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
47	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
49	1992	175	47	11.9
	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
	1998	50	27	11.0
	1999	50	27	11.4
	2000	50	23	13.4
	2001	50	31	10.8
52	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

Table 2. Continued.

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

Table 3. Summary of pronghorn antelope harvest, Group 3 units, Magic Valley Region, 1992-2001.

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

Table 4. Summary of hunter-harvested pronghorn antelope horn length, Group 3 units, Magic Valley Region, 1991-2001.

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

Table 5. Summary of pronghorn antelope harvest, Group 4 units, Magic Valley Region, 1996-2001.

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
57	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

Table 6. Summary of hunter-harvested pronghorn antelope horn length, Group 4 units, Magic Valley Region, 1996-2001.

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
57	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

Table 7. Summary of pronghorn antelope harvest, Magic Valley Region, 1992-2001.

		Harvest				
Year	Permits	Male	Female	Total	% Male	% Success
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

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Antelope Surveys and Inventories
PROJECT:	W-170-R-26		
SUBPROJECT:	5	**STUDY NAME:**	Big Game Population Status, Trends, Utilization, and Associated Habitat Studies
STUDY:	I		
JOB:	7		

PERIOD COVERED: July 1, 2001 to June 30, 2002

SOUTHEAST REGION

Abstract

Fifty any-antelope permits were issued for Unit 68 in 2001. Seventy-four percent of hunters harvested a pronghorn antelope, compared to 77% in 2000. Five female and 30 male pronghorn antelope were harvested. Harvested males had an average maximum horn length of 12.6 inches. Population information is limited for the unit because of low density and wide dispersion. An aerial survey was conducted during August 1999. The intent of the survey was to collect distribution and minimum known count data.

Group 2

Management Unit 68

The Unit 68 any-antelope permit level remained the same in 2001 as in 2000 (Table 1). A telephone survey of tag holders was again conducted to estimate harvest, participation, and horn length. Hunter success (74%) in 2001 was lower than in 2000 (77%). An estimated 47 hunters hunted a total of 141 days for an average of 3.0 days/hunter as compared to 3.2 days/hunter in 2000. Mean maximum horn length for the 2001 harvest was 12.6 inches (Table 2), near the 12.0-inch objective established in the 1991-1995 Pronghorn Antelope Management Plan.

In the past, little quantitative data has been available on population trend of this pronghorn antelope herd. Subjective observations by Department personnel suggest the population has increased from the most recent low reached during spring 1993. 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. There were 1,500-meter strip transects 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 2001, but no depredation problems were reported.

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 50 antelope crossed the ice on American Falls Reservoir and found their way to the Pocatello Airport. Several unsuccessful attempts were made to move the antelope. It is unknown where these antelope will move to.

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LAAKE, J. L., K. P. BURNHAM, AND D. R. ANDERSON. 1979. User's manual for Program TRANSECT. Utah State University Press, Logan. 26 pp.

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Table 1. Summary of pronghorn antelope harvest, Group 2, the Southeast Region, 1992-2001.

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

Table 2. Summary of mean maximum male horn length reported by successful pronghorn antelope hunters[a] by unit within Group 2, the Southeast Region, 1992-2001.

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

[a] Information prior to 1994 was provided by hunter report cards; subsequent data collected through telephone survey.

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Antelope Surveys and Inventories
PROJECT:	W-170-R-26		
SUBPROJECT:	6	**STUDY NAME:**	Big Game Population Status, Trends, Utilization, and Associated Habitat Studies
STUDY:	I		
JOB:	7		

PERIOD COVERED: July 1, 2001 to June 30, 2002

UPPER SNAKE REGION

Abstract

Group 2: A population survey was conducted in 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. No significant winter mortality has been observed in these units since winter 1992-1993. Permit numbers were reduced from 30 to 20 in Hunt Area 50-3 and from 50 to 30 for the late hunt in Hunt Area 50-2. Permit numbers in Hunt Area 58 were increased from 50 to 75 and permit numbers for all other hunts remained the same as they were in 2000. 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. There was 1 pronghorn depredation complaint in Group 2 units during this reporting period.

Group 3: There have been no population surveys in Group 3 units 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. No significant winter mortality has been noted in these units since winter 1992-1993. Three pronghorn depredation complaints on stacked hay occurred during the winter 2001-2002 in the Dubois to Monteview area of Hunt Area 63-2. One depredation complaint of pronghorn feeding with horses was also received near Roberts during the 2001-2002 winter. These are pronghorn that summer in Hunt Area 60A.

Group 2

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

These mountain valley units support the most productive pronghorn antelope herds in the region. Most of the land is managed by the Bureau of Land Management or Forest Service with limited private cultivated land occurring along the major stream corridors. Pronghorn antelope

occurring in these units are seasonally migratory and, during severe winters, are forced into Unit 63.
Minor depredations on hay and grain crops are common during summer, but most are tolerated by landowners when they receive assistance from the Department. Major depredation complaints are received during extremely dry years when pronghorn antelope congregate on irrigated fields. Under these conditions, the Department has been forced to authorize additional depredation hunts and pay for crop and fence damage.

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, 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. None of the hunts met the minimum average horn length for the 2001 season. Reported horn length sample size remains smaller than desired for precision estimates.

A herd composition and trend survey was conducted in Unit 51 during August 2001 (Table 3). Methodology described by Pojar et al. (1995) was followed except that the search unit size was increased to ensure that antelope were observed in most search units. Unit 51 was divided into 32 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. Three subunits were classified as high-density, 7 medium-density, and 21 low-density. All high-density, 4 medium-density, and 10 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 454 antelope were observed, resulting in a population estimate of 703 ± 192 (149 bucks, 417 does and 137 fawns) with a buck:doe:fawn ratio of 36:100:33. We recalculated the estimate after re-stratifying those search units surveyed, resulting in a more precise estimate of 566 ± 52. The true population estimate probably lies between these 2 estimates. The raw counts for Unit 51 from 1973 to 1986, and the 1989 line-transect and 1996 Pojar et al. estimates are presented in Table 3.

Pronghorn were distributed on the native range similar to the way they were during the early half of the 1980s, but group sizes were smaller and there appeared to be fewer territorial bucks. Foothill habitat and moist habitat associated with Summit Creek supported most of the pronghorn observed. However, unlike the early 1980s, very few pronghorn were observed on or adjacent to the irrigated hay and grain fields. This was noticeable from both the ground observations and aerial survey and was unexpected, especially considering the dry conditions this year.

It is difficult to compare the 2001 estimate with prior estimates because survey methodologies were not conducted the same way. From 1973 through 1986, the unit was divided north and south of Wet Creek and Badger Creek and a helicopter with 2 observers was used to survey the

important pronghorn habitat in both areas. Areas from past surveys known to support no or few pronghorn were not surveyed. Actual counts were used as the population estimate. In 1989, a fixed-wing line-transect survey estimate (Johnson and Lindzey 1990) was used and in 1996, a helicopter quadrant survey estimate (Pojar et al. 1995) was used. In 2001, 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 2001 methodology is comparable to that used in Unit 58 in 2000.

Although total population estimates are not comparable, the buck:doe:fawn estimates should be comparable with the other helicopter surveys (no classification was done on the line-transect survey). The buck:doe ratio in 2001 was similar to previous surveys, but the fawn:doe ratio was down considerably from the 1970s and 1980s surveys, but similar to the 1996 survey. The fawn:doe ratio was also below the 45 fawns:100 does observed in Unit 58 during the 2000 survey. The reason for the lower fawn:doe ratio is unknown, but it 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 58 during August 2000 (Table 4). 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. Unit 58 was divided into 21 search units of approximately 25 mi^2 and stratified into either high- ($\geq$15 pronghorn) or low-density (<15 pronghorn) search units from ground observations. Seven of 8 high-density search units were surveyed and 5 of 13 low-density search units 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.

The 2000 raw count is comparable to the raw counts conducted during the early half of the 1980s. Counts done during the 1980s concentrated on the area from Lone Pine north to Gilmore Summit on the west side of the valley and from Timber Canyon to Gilmore Summit on the east side of the valley. The raw counts for Unit 58 from 1973 to 1986 are presented in Table 4 for comparison.

Herd composition and population trend surveys have not been conducted in the rest of the Group 2 units for several years.

The Department received 1 depredation complaint of about 65 pronghorn damaging a haystack in the Howe area during the 2001-2002 winter. Panels were provided to the landowner.

Although the 2001-2002 winter appeared to be more severe than most winters, the Department did not receive reports of unusual winter mortality. Significant winter mortality has not been observed in these units since winter 1992-1993.

Group 3

Management Units 60, 60A, 61, 63

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.

Pronghorn habitat in the eastern portion of Unit 61 is restricted to summer range on the Henry's 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.

Permit numbers were increased from 50 to 60 in Hunt Area 63-1 in 2001 because pronghorn numbers appeared to be up. Permit numbers for all other hunt areas remained the same for 2001 as they were for 2000 (Table 5).

Three pronghorn depredation complaints were received on stacked hay in Hunt Area 63-2 during winter 2001-2002. Fencing, hazing, and scare-away devices were used to reduce depredations on stacked hay by an estimated 300 pronghorn in the Dubois area, and 50-70 pronghorn at 2 different locations in the Monteview area. These are pronghorn that summer in Units 59 and 59A. Hazing and baiting were used to address another depredation complaint involving 33 pronghorn in the Roberts area feeding with horses. These are pronghorn that summer in Units 60 and 60A.

Pronghorn in Units 60, 60A, and 61 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 2001 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 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.

Consistent 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 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). Forty-seven pronghorn were counted in the area surveyed in Unit 63 (6 bucks and 73 unclassified) for a mean density of 1.04 pronghorn/km^2 (s_x = 6.58). It was estimated that there were 654 km^2 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 protocol reported 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 7 shows summer and winter pronghorn population estimates (Transect II, Johnson and Lindzey 1990) for the INEEL 1994-2002. Summer flights were conducted during July or August; winter flights were conducted during January or February.

Conditions during the 1992-1993 winter were severe for pronghorn wintering in Units 60A and 63 and supplemental feeding occurred. However, significant winter mortality has not been observed since then.

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

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Table 1. Summary of pronghorn harvest, Group 2, Upper Snake Region, 1997-2001.

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

Table 2. Summary of hunter-harvested pronghorn horn lengths, Group 2, Upper Snake Region, 1997-2001.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
50	1997	180	53	11.2
	1998	180	52	11.4
	1999	180	72	11.0
	2000	130	102	11.1
	2001	120	53	10.4
51	1997	175	64	12.2
	1998	175	63	13.0
	1999	175	93	11.8
	2000	175	138	10.5
	2001	155	80	10.5
58	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
59	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

Table 3. Summary of Unit 51 pronghorn surveys, 1973-2001.

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 4. Summary of Unit 58 pronghorn surveys, 1973-2000.

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 5. Summary of pronghorn harvest, Group 3, Upper Snake Region, 1997-2001.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
60A	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
61	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
63	1997	225	95	23	118	81	52
	1998	225	79	26	105	75	47
	1999	225	79	32	111	71	49
	2000	150	61	21	82	74	55
	2001	160	63	23	86	73	54

Table 6. Summary of hunter-harvested pronghorn horn lengths, Group 3, Upper Snake Region, 1997-2001.

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

Table 7. Pronghorn estimates on the INEEL, 1994-2002.

	Summer			Winter		
	Number		Population	Number		Population
Year	Observed	Groups	Estimate	Observed	Groups	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				866	19	7,005±3,624

Table 8. Summary of pronghorn harvest, Upper Snake Region.

		Harvest				
Year	Permits	Male	Female	Total	% Male	% Success
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

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Antelope Surveys and Inventories
PROJECT:	W-170-R-26		
SUBPROJECT:	7	**STUDY NAME:**	Big Game Population Status, Trends, Utilization, and Associated Habitat Studies
STUDY:	I		
JOB:	7		

PERIOD COVERED: July 1, 2001 to June 30, 2002

SALMON REGION

Abstract

There were 158 pronghorn antelope harvested in the Salmon Region in 2001, including 19 animals taken under archery (n = 12) and landowner appreciation (n = 7) permits. Controlled hunt harvest (138) decreased slightly (-6%) from 2000 (Table 1). Harvest in 2001 was still well below recent harvest levels and represented the second lowest harvest in 33 years. Reductions in recent harvest reflect significant decreases in permits available throughout the Salmon Region since the early 1990s. Hunter success in controlled hunts was 71%; bucks comprised 83% of harvested pronghorn. Average horn lengths met the minimum 12-inch criterion in 3 of 7 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. 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.

No aerial surveys specific to pronghorn antelope were conducted during the reporting period. However, approximately 491 pronghorn antelope were observed incidentally during surveys of other ungulates in Units 28, 29, 30, 30A, 36A, 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 Areas 36B (all of Unit 36B and extreme southeastern Unit 28) and 37-1

(southern 1/3 of Unit 37) are distinguishable as Group 1 areas. Standard controlled hunt harvest from these hunts was 31 pronghorn antelope in 2001, including 27 males (Table 2). Compared to 2000, harvest from these hunt areas increased by 7 animals. Reported mean horn length was above plan criterion of 12.0 inches in Hunt Area 36B, but below (10.8 inches) in Area 37-1 (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, 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.

Group 2

Management Units 21A (part), 29, 30, 36A, 37 (part), 37A

Hunt combinations now incorporate all of Units 29, 30, and 37A in Group 2, as well as extreme southern Unit 21A and the northern two-thirds of Unit 37. Hunters harvested 76 animals in 4 hunts in these units (Table 4). For comparable open hunt areas, number harvested was essentially unchanged (-3) from 2000. Males comprised 80% of the harvest. Mean horn lengths were above pronghorn antelope-plan criterion of 12.0 inches in 2 of 4 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.

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 32 in 2001, a decrease of 4 from 2000 (Table 6). Hunters reported harvesting 27 bucks, identical to the previous year. However, average horn length (10.8 inches) was again well below the goal of 12.0 inches (Table 7).

Table 1. Pronghorn antelope controlled harvest, Salmon Region, 1992-present.

		Harvest				
Year	Permits	Male	Female	Total	% Male	% Success
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	46
1999	245	87	36	123	71	50
2000	245	108	40	148	73	60
2001	220	115	24	139	83	63

Table 2. Pronghorn antelope controlled harvest, Group 1, Salmon Region, 1992-present.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
21A	1992	30	8	11	19	42	63
	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	1992	15	13	0	13	100	87
	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
	1998	15	4	2	6	67	40
36B	1992	50	15	14	29	52	58
	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
	2000	25	10	0	10	100	40
	2001	25	14	2	16	88	64
37	1992	175	58	74	132	44	75
	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

Table 3. Hunter-harvested pronghorn antelope horn lengths, Group 1, Salmon Region, 1992-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
21A	1992	10	4	11.6
	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	1992	15	8	13.0
	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
	1998	15	4	11.5
36B	1992	25	9	11.9
	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	1992	75	33	13.4
	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. Pronghorn antelope controlled harvest, Group 2, Salmon Region, 1992-present.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
29	1992	150	33	73	106	31	71
	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
30	1992	130	30	66	96	31	74
	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
36A	1992	150	51	58	109	47	73
	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	1992	225	91	93	184	49	82
	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

Table 4. Continued.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
37A	1992	150	42	43	85	49	57
	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

Table 5. Hunter-harvested pronghorn antelope horn lengths, Group 2, Salmon Region, 1992-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
29	1992	50	14	10.4
	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
30	1992	30	13	12.8
	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
36A	1992	50	16	13.2
	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	1992	100	42	12.4
	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

Table 5. Continued.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
37A	1992	75	25	10.7
	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 harvest, Group 3, Salmon Region, 1992-present.

Hunt Area	Year	Permits	Harvest			% Male	% Success
			Male	Female	Total		
29	1992	150	46	74	120	38	80
	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	1992	120	29	55	84	35	70
	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

Table 7. Hunter-harvested pronghorn antelope horn lengths, Group 3, Salmon Region, 1992-present.

Hunt Area	Year	Permits	Sample Size	Mean Maximum Horn Length (inches)
29	1992	50	25	10.7
	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	1992	40	22	10.5
	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

APPENDIX A

2001 Idaho Antelope Season Structure

2001 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 the tag for a 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 10.

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)	2001 SEASON DATES
21A, 28, 29, 30, 30A, 36, 36B, 37 37A, 40, 41, 42, 45, 46, 47, 49, 50 51, 52A, 58, 59, 59A, 60, 60A, 61, 63 (that portion south of Highway 33), 68.	Aug 15 - Sept 15

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 8.**

2001 EITHER SEX ANTELOPE CONTROLLED HUNTS (1795 PERMITS)

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4001	Sept 25 - Oct 24	29	50	
4002	Sept 25 - Oct 24	30	30	
4003	Sept 25 - Oct 24	30A	40	
4004	Sept 25 - Oct 24	36B*	25	
4005	Sept 25 - Oct 24	37-1	25	
4006	Sept 25 - Oct 24	37-2	25	
4007	Sept 25 - Oct 24	37A	25	
4008	Sept 25 - Oct 24	39	20	
4009	Sept 25 - Oct 24	40	150	
4010	Sept 25 - Oct 24	42*	200	
4011	Sept 25 - Oct 24	44*	40	
4012	Sept 25 - Oct 24	45	10	
4013	Sept 25 - Oct 24	46	60	
4014	Sept 25 - Oct 24	49*	50	
4015	Sept 25 - Oct 24	50-1	50	
4016	Sept 25 - Oct 24	50-2	50	
4017	Sept 25 - Oct 24	50-3	20	
4018	Sept 25 - Oct 24	51-1	75	
4019	Sept 25 - Oct 24	51-2*	50	
4020	Oct 25 - Nov 30	51-2*	30	
4021	Sept 25 - Oct 24	52A	25	
4022	Sept 25 - Oct 24	54	15	
4023	Sept 25 - Oct 24	57*	5	

2001 EITHER SEX ANTELOPE CONTROLLED HUNTS - CONTINUED

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4024	Sept 25 - Oct 24	58	75	
4025	Sept 25 - Oct 24	59*	100	
4026	Sept 25 - Oct 24	60A*	50	
4027	Sept 25 - Oct 24	63-1	60	
4028	Sept 25 - Oct 24	68	50	

2001 DOE OR FAWN ANTELOPE CONTROLLED HUNTS

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4029	Oct 5 - Oct 24	44	100	
4030	Oct 5 - Oct 24	46	25	

2001 EITHER SEX ANTELOPE MUZZLELOADER CONTROLLED HUNTS

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4031	Sept 25 - Oct 24	41	40	
4032	Sept 25 - Oct 24	47	65	*Traditional Muzzleloader only—see pages 10 & 12.*
4033	Aug 25 - Oct 24	63-2	100	

2001 EITHER SEX ANTELOPE SHORT-RANGE WEAPON CONTROLLED HUNTS

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4034	Sept 25 - Oct 24	61	25	*Limited Access*

2001 EITHER SEX ANTELOPE YOUTH CONTROLLED HUNTS

Hunt No.	Season Dates	Controlled Hunt Areas	Permits	Notes
4035	Sept 25 - Oct 24	32*	10	*Applicants must have been 15 or younger on January 1, 2001*
4036	Sept 25 - Oct 24	52	25	*Applicants must have been 15 or younger on January 1, 2001*

Notes:

* — 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 the 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 37-1 — That portion of Unit 37 south of the Doublespring Pass-Goldburg Road.

Hunt Area 37-2 — That portion of Unit 37 north of the Doublespring Pass-Goldburg Road.

Hunt Area 37A — All of Unit 37A and that portion 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 the Camas Creek drainage.

Hunt Area 45 — All of Unit 45 exept that portion within the Camas Creek drainage.

Hunt Area 46 — All of Unit 46.

Hunt Area 47 — All of Unit 47.

Hunt Area 49 — All of Unit 49 and that portion of Unit 50 in the Copper Creek and Cottonwood Creek drainages west of the Craters of the Moon National Monument..

Hunt Area 50-1 — That portion of Unit 50 north of Antelope Creek and west of U.S. 93.

Hunt Area 50-2 — That portion of Unit 50 southeast of Antelope and Pass creeks but EXCLUDING the Copper Creek and Cottonwood Creek drainages west of Craters of the Moon National Monument.

Hunt Area 50-3 — That portion of Unit 50 north of Pass Creek and east of U.S. 93.

Hunt Area 51-1 — That portion of Unit 51 north of Badger Creek Road and north of the Wet Creek-Pass Creek Road.

Hunt Area 51-2 — That portion of Unit 51 south of Badger Creek Road and south of the Wet Creek-Pass Creek Road and that portion of Unit 63 within Butte County including that portion of this hunt 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 Unit 52A. (Caution: See Craters of the Moon closure, page 11.)

Hunt Area 54 — All of Unit 54.

Hunt Area 57 — All of Unit 57 and that portion of Unit 56 west of Interstate 84.

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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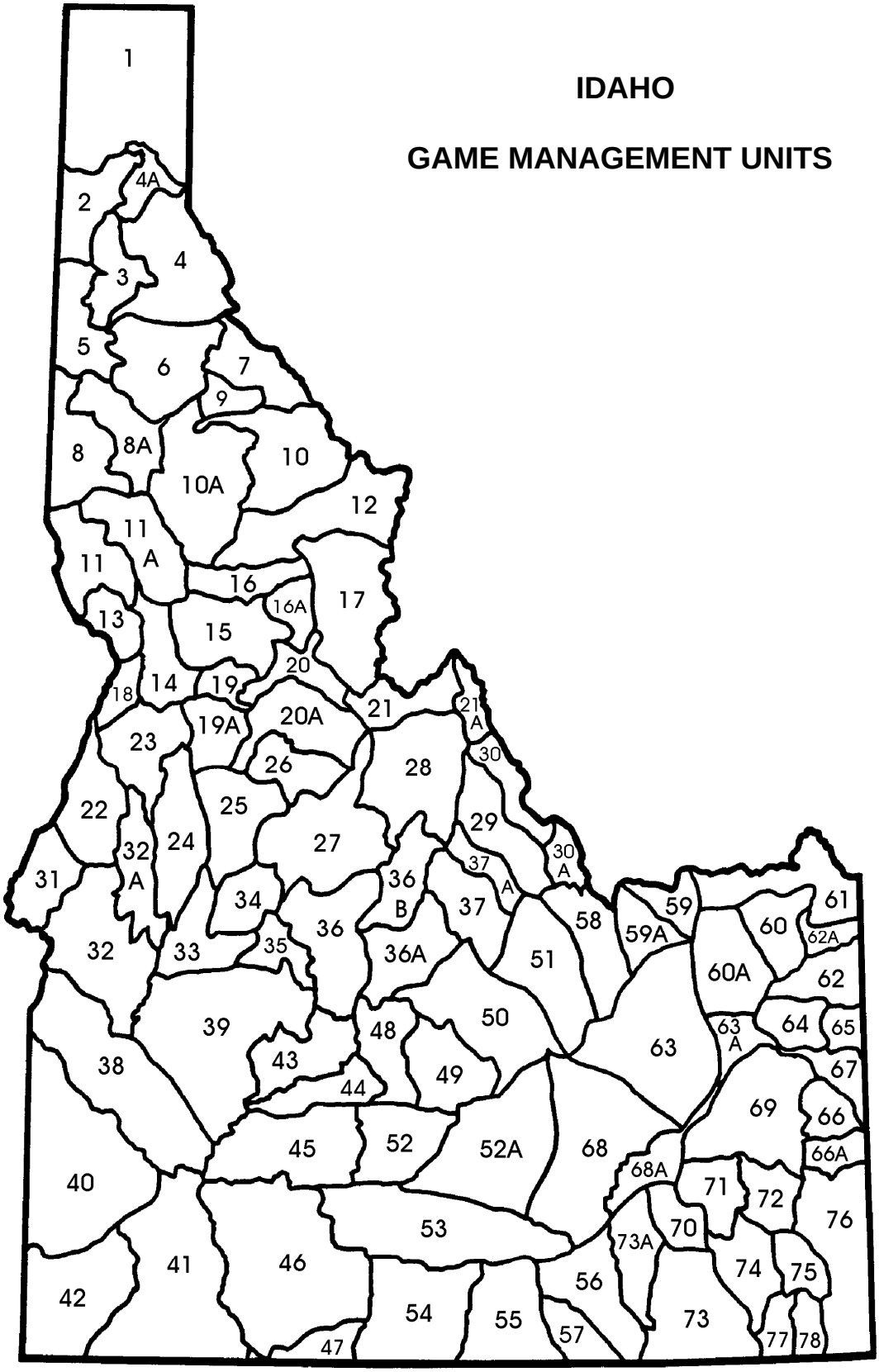
GAME MANAGEMENT UNITS



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.