

IDAHO DEPARTMENT OF FISH AND GAME

Rod Sando, Director

Project W-170-R-25

Job Progress Report



MOUNTAIN GOAT

Study I, Job 5

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**PROGRESS REPORT
SURVEYS AND INVENTORY**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Mountain Goat Surveys</u>
PROJECT:	<u>W-170-R-25</u>		<u>and Inventories</u>
SUBPROJECT:	<u>1-7</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Utilization, and Associated</u>
JOB:	<u>5</u>		<u>Habitat Studies</u>
PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT - STATEWIDE

ABSTRACT

In 2000 the Idaho Department of Fish and Game identified 17 controlled hunts for mountain goats, offering a total of 56 permits for mountain goat hunters. Due to wildfires on public lands in central Idaho, the opening of several hunts was delayed, and both permits designated for hunt 27-4 were deferred until the 2001 season. The remaining 54 hunters harvested 48 mountain goats, for a harvest success rate of 89% as compared with 86% in 1999 and 84% in 1998.

Mountain goat permits are highly sought by sportsmen. Nonresident hunters may compete with resident hunters for mountain goat permits, but are limited to successfully drawing no more than 1 permit per hunt, and no more than 10% of the total number of permits available each season. There were 509 first-choice applicants for mountain goat permits in 2000 as compared with 486 in 1999; all permits were awarded to first-choice applicants, for a success rate of 11% in the drawing as compared with 11.5% in 1999 and 12.3% in 1998. Nonresident hunters, who comprised 15% of the applicant pool (74 of the 509), were successful in drawing the maximum permitted number of permits (7).

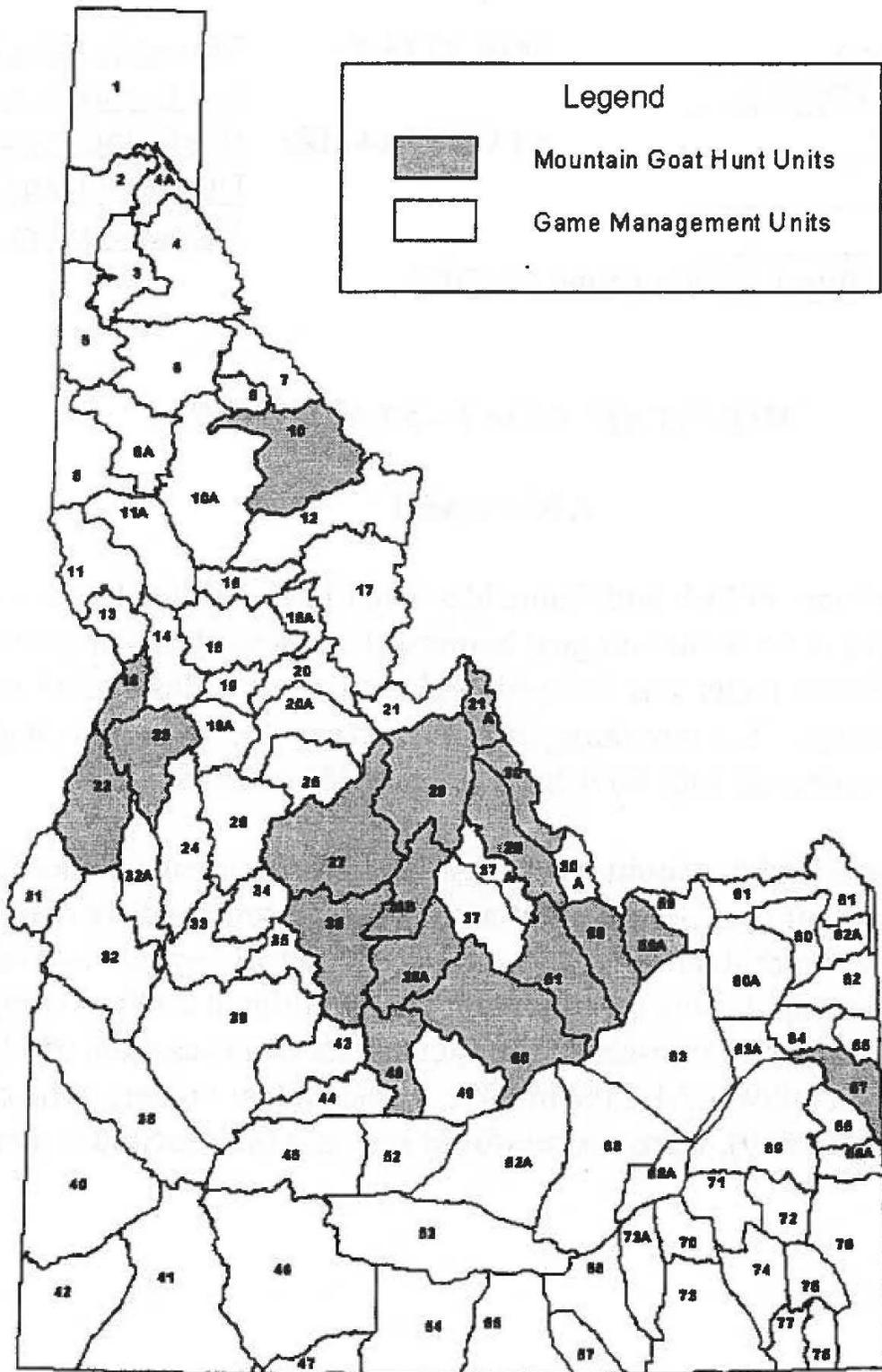


Figure 1. Mountain Goat Management Units in Idaho, 2000.

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PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT – PANHANDLE REGION

ABSTRACT

Mountain goats are not hunted in Idaho's panhandle because populations do not meet management criteria set in the current mountain goat management plan. Aerial surveys this study period indicate populations appear to be increasing slowly. The opportunity exists for reestablishing mountain goats into some parts of the Selkirk Mountains.

UNITS 1, 4A, 9

MANAGEMENT DIRECTION

The Statewide Management Policy for Mountain Goats is to introduce mountain goats into all suitable ranges, maintain or increase all herds, and harvest under a conservative management framework. Harvest is allowed if the total population is at least 50 mountain goats. Harvest shall not exceed 5% of the adult segment of the population except during periods of high recruitment, usually during the early phases of a newly introduced population.

The Pend Oreille population of Unit 4A is specifically identified as having nonconsumptive values, with wildlife viewing as the primary focus of this population. The population in the Little North Fork of the Clearwater River is specifically identified for use as a transplant source rather than management for harvest.

BACKGROUND

Three native populations (Selkirk, West Cabinets, and Little North Fork of the Clearwater River) and one introduced population (Pend Oreille) of mountain goats inhabit the Panhandle Region. All populations are small, and no hunting is currently allowed on any of these populations. The Pend Oreille population of mountain goats has a particularly high public value for watchable wildlife, with excellent access by boat to this yearlong, low elevation range.

Anecdotal information indicates that mountain goat populations in the Panhandle had dropped

substantially prior to 1950. Brandborg (1955) cites personal communications of Forest Service employees in the Selkirk Range who specifically noted a drop in numbers and restriction in distribution during the 1928-1950 period.

Brandborg attributed these declines to increased access to mountain goat habitat, and implicated unregulated hunting. By 1950 general mountain goat seasons were reduced to just 11 days during September. Controlled hunts were used 1952-1955, and 1966-1976, when most mountain goat hunting was closed in the Panhandle. Since then, the allowable mountain goat harvest in the Panhandle Region has ranged from 0 to 2 mountain goats annually. However, 57 mountain goats have been transplanted out of the Panhandle Region since 1961 (Hayden and Spicer 1993).

POPULATION SURVEYS

Winter population surveys were conducted on all four mountain goat populations during this report period. Observations in the Selkirk Mountains (Table 1) were similar to those of the prior (1995) flights, although numbers of adults was slightly lower, and number of kids slightly higher. There has been a near complete loss of mountain goats in the southern and eastern portions of the Selkirk Mountains. Most of the recent population increase is attributable to transplants into the Selkirk Mountains. Subsequent to a count of only 3 mountain goats in the Selkirk Mountains in 1981, a total of 28 mountain goats were transplanted into this range, primarily from Snow Peak. Recent growth of this population is evident in the release areas.

Idaho includes the minor portion of mountain goat range in the West Cabinet Mountains. Here, counts can be substantially affected by localized movements across state and drainage borders, and the main value in surveys is assessing occupancy of winter range and general recruitment trends. A decline of mountain goats in the Wiggletail/Blue Creek areas and a decline in recruitment is apparent and of concern (Table 2).

The Pend Oreille mountain goat population may be experiencing some growth despite low winter recruitment (Table 3). The numbers remain, however, about 60% of those estimated in the mid-1980s. The Green Monarchs, the original transplant site proposed, is essentially devoid of mountain goats, with only occasional sightings.

Mountain goat numbers in the Little North Fork of the Clearwater River have changed little over the past 40 years (Table 4), despite removal of 88 mountain goats since 1960. However, there has been a noticeable change in distribution, with far fewer mountain goats near the trap site (Snow Peak on Canyon Creek) and more in the nearby Foehl Creek drainage.

MANAGEMENT IMPLICATIONS

Regionally, mountain goat numbers are showing an improvement, but progress is slow (Figure 1). Current numbers are likely at least 50% lower than 40-50 years ago, and may be considerably worse when compared to the early 1900s.

Given the successful reestablishment of mountain goats in the Selkirk Mountains where transplants occurred, it may be desirable to transplant additional mountain goats into isolated areas that have

been uninhabited by mountain goats for several decades, particularly the Parker/Canyon Creek, Pack/Myrtle Creek, and Indian/Two Mouth Creek areas. Foehl Creek should be investigated as a potential transplant source to supplement trapping on Snow Peak.

LITERATURE CITED

Brandborg, S. M. 1955. Life history and management of the mountain goat in Idaho. Wildlife Bulletin No. 2. Idaho Department of Fish and Game, Boise, Idaho, USA.

Hayden, J., and D. Spicer. 1993. Pages 3-16 in L.E. Oldenburg (ed.) Mountain Goat. Job Progress Report W-170-R-17. Idaho Department of Fish and Game, Boise, Idaho, USA.

Table 1. Summary of mountain goat surveys in the Selkirk Range, Unit 1.

Inclusive Location	Year	Adults	Kids	Unknown	Total	Kids/100 Adults
Smith to Parker Creek	1955 ^a	0	0	65	65	
	1963	15	3	0	18	20
	1971	0	0	0	0	
	1981	0	0	0	0	
	1988	0	0	0	0	
	1991	2	1	0	3	50
	1995	0	0	0	0	
	2001	0	0	0	0	
	Fisher to Farnham Creek	1955 ^a	0	0	0	0
1963 ^c		0	0	0	0	
1971		0	0	0	0	
1981		0	0	0	0	
1988		0	0	0	0	
1991		0	0	0	0	
1995		3	0	0	3	0
2001		6	1	0	7	17
Indian to Two Mouth Creek		1955 ^a	0	0	50	50
	1963	5	1	0	6	20
	1971	0	0	3	3	
	1981	0	0	0	0	
	1988	1	1	0	2	100
	1991	0	0	0	0	
	1995	0	0	0	0	
	2001	0	0	0	0	
	Lion Creek	1955 ^a	0	0	35	35
1963		0	0	0	0	
1971		0	0	0	0	
1981		0	0	3	3	
1988		4	2	0	6	50
1991		9	1	0	10	11
1995		13	0	0	13	0
2001		5	1	0	6	20
Caribou Creek		1955 ^a	0	0	55	55
	1963	9	2	0	11	22
	1971	0	0	0	0	
	1981	0	0	0	0	

Table 1. Summary of mountain goat surveys in the Selkirk Range, Unit 1 (Continued).

Inclusive Location	Year	Adults	Kids	Unknown	Total	Kids/100 Adults
	1988	6	2	0	8	33
	1991	2	0	0	2	
	1995	14	3	0	17	21
	2001	15	6	0	21	40
Selkirk Population	1955 ^a	0	0	195	^b 195	
	1963	29	6	0	35	21
	1971	0	0	3	3	
	1981	0	0	3	3	
	1988	11	5	0	16	45
	1991	13	2	0	15	15
	1995	30	3	0	33	10
	2001	26	8	0	34	31

^a Summer estimates from ground surveys.

^b Includes 20 mountain goats estimated in the Pack River-Myrtle Creek area and 10 mountain goats on Snowytop Mountain. Both areas were flown 1971 and 2001 winters with neither tracks nor mountain goats observed. The Pack River-Myrtle Creek area was flown winters 1963 and 1981, as well, with no tracks nor mountain goats observed.

^c Not specifically mentioned in the survey.

Table 2. Summary of mountain goat surveys in the West Cabinet Range, Unit 1.

Inclusive Location	Year	Adults	Kids	Unknown	Total	Kids/100 Adults
Wiggletail to W. Fk. Blue Cr.	1971	0	0	0	0	
	1979 ^a	9	2	0	11	
	1981	0	0	0	0	
	1988	23	1	0	24	4
	1991	11	1	0	12	9
	1993	11	2	0	13	18
	1998 ^b	11	3	0	14	27
	2001	3	0	0	3	
Regal to Sam Morris Creek	1971	0	0	0	0	
	1981	0	0	0	0	
	1988	0	0	0	0	
	1991	0	0	0	0	
	1993	2	0	0	2	
	1998 ^b	5	0	0	5	
	2001	2	0	0	2	
East Fork Lightning Creek (Includes Savage and Char)	1971	0	0	5	5	
	1981	3	0	0	3	
	1988	20	3	0	23	15
	1991	4	3	0	7	75
	1993	12	5	0	17	42
	1998 ^b	11	1	0	12	9
	2001	9	1	0	10	11
West Cabinet (Idaho Only)	1971	0	0	5	5	
	1981	3	0	0	3	
	1988	43	4	0	47	9
	1991	15	4	0	19	27
	1993	25	7	0	32	28
	1998 ^b	27	4	0	31	15
	2001	14	1	0	15	7

^a Montana Fish, Wildlife and Parks data, August survey.

^b August survey of summer range.

Table 3. Summary of mountain goat surveys in the Pend Oreille Population, Unit 4A.

Inclusive Location	Year	Adults	Kids	Unknown	Total	Kids/100 Adults
Buttonhook to Lakeside	1973	11	3	0	14	27
	1975 ^a	31	12	0	43	39
	1976	16	3	0	19	19
	1981	30	7	0	37	23
	1985 ^b	42	10	0	52	24
	1991	9	4	0	13	44
	1991 ^c	11	7	0	18	64
	1992	15	2	0	17	13
	1995 ^d	13	2	0	15	15
	2001	27	4	0	31	15
Green Monarchs	1973	2	0	0	2	
	1975 ^a	0	0	0	0	
	1976	4	0	0	4	
	1981	2	0	0	2	
	1991	2	0	0	2	
	1991 ^c	0	0	0	0	
	1992	0	0	0	0	
	1995 ^d	0	0	0	0	
	2001	0	0	0	0	
	Pend Oreille Population	1973	13	3	0	16
1975 ^a		31	12	0	43	39
1976		20	3	0	23	15
1981		32	7	0	39	22
1985 ^b		42	10	0	52	24
1991		11	4	0	15	36
1991 ^c		11	7	0	18	64
1992		15	2	0	17	13
1995 ^d		13	2	0	15	15
2001		27	4	0	31	15

^a Ground survey.

^b Population estimate based on capture/recapture with ground surveys during spring.

^c Ground survey during October.

^d Helicopter survey during August.

Table 4. Summary of mountain goat surveys in the Little North Fork of the Clearwater River, Unit 9.

Inclusive Location	Year	Adults	Kids	Unknown	Total	Kids/100 Adults
Hoodoo Peak to Spotted Louis	1957	2	0	0	2	
	1958	6	0	0	6	
	1961	0	0	0	0	
	1964	2	0	0	2	
	1965	0	0	3	3	
	1966	0	0	1	1	
	1971	0	0	3	3	
	1972	0	0	0	0	
	1976	4	0	0	4	
	1979 ^a	ND	ND	ND	ND	
	1981	4	0	0	4	
	1988	15	5	0	20	33
	1991	4	3	0	7	
	1993	3	0	0	3	
2001	4	2	0	6		
Culdesac to Canyon Creek	1957	53	3	0	56	6
	1958	27	6	0	33	22
	1961	27	3	0	30	11
	1964	41	4	0	45	10
	1965	0	0	49	49	
	1966	0	0	43	43	
	1971	0	0	29	29	
	1972	0	0	18	18	
	1976	24	8	0	32	33
	1979 ^a	32	5	0	37	16
	1981	48	8	0	56	17
	1988	26	2	0	28	8
	1991 ^b	13	3	0	16	23
	1993	23	8	0	31	35
2001	18	6	0	24	33	
Sawtooth Creek	1957	26	7	0	33	27
	1958	17	4	0	21	24
	1961	20	5	0	25	25
	1964	12	1	0	13	8
	1965	0	0	10	10	
	1966	0	0	13	13	
	1971	0	0	4	4	
	1972	0	0	9	9	
	1976	8	0	0	8	
	1979 ^a	ND	ND	ND	ND	
	1981	5	0	0	5	
	1988	7	2	0	9	29
	1991	9	1	0	10	11
	1993	6	2	0	8	33
2001	9	0	0	9		

Table 4. Summary of mountain goat surveys in the Little North Fork of the Clearwater River, Unit 9 (Continued).

Inclusive Location	Year	Adults	Kids	Unknown	Total	Kids/100 Adults
Foehl Creek	1957	0	0	0	0	
	1958	0	0	0	0	
	1961	9	5	0	14	
	1964	17	0	0	17	
	1965	0	0	7	7	
	1966	0	0	0	0	
	1971	0	0	0	0	
	1972	0	0	2	2	
	1976	0	0	0	0	
	1979 ^a	ND	ND	ND	ND	
	1981	3	1	0	4	
	1988	5	0	0	5	
	1991	8	2	0	10	
	1993	12	4	0	16	
2001	16	5	0	21		
Larkin to Devil's Club Creek	1957	2	0	0	2	
	1958	0	0	0	0	
	1961	0	0	0	0	
	1964	0	0	0	0	
	1965	0	0	0	0	
	1966	0	0	0	0	
	1971	0	0	0	0	
	1972	0	0	0	0	
	1976	0	0	0	0	
	1979 ^a	ND	ND	ND	ND	
	1981	0	0	0	0	
	1988	1	0	0	1	
	1991	0	0	0	0	
	1993	1	1	0	2	
2001	0	0	0	0		
Little North Fork Clearwater Population	1957	83	10	0	93	12
	1958	50	10	0	60	20
	1961	56	13	0	69	23
	1964	72	5	0	77	
	1965	0	0	69	69	
	1966	0	0	57	57	
	1971	0	0	36	36	
	1972	0	0	29	29	
	1976	36	8	0	44	22
	1979 ^a	32	5	0	37	16
	1981	60	9	0	69	15
	1988	54	9	0	63	17
	1991 ^b	34+	9+	0	43+	26
	1993	45	15	0	60	33
2001	47	13	0	60	28	

^a Area flown only identified as "Snow Peak." It is unknown what area was actually flown.

^b Weather conditions precluded complete coverage of the Canyon Creek portion of the flight.

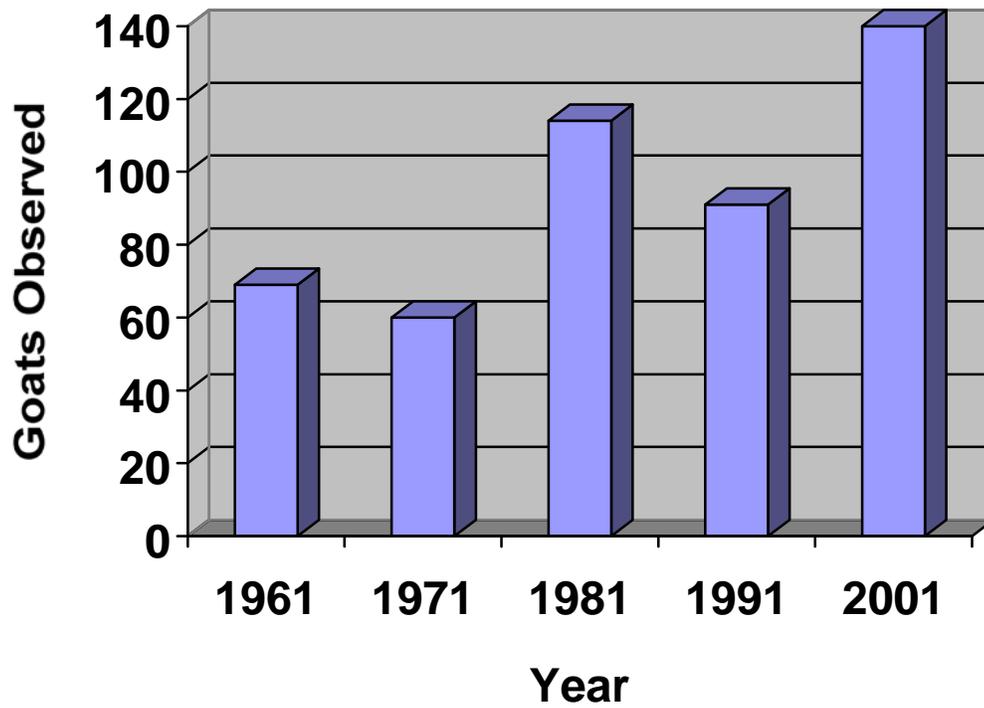


Figure 1. Comparison of aerial surveys for mountain goats in the Panhandle Region, 1961–2001. Note data from 1991 includes only a partial survey of Canyon Creek.

**PROGRESS REPORT
SURVEYS AND INVENTORY**

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PROJECT:	<u>W-170-R-25</u>		<u>and Inventories</u>
SUBPROJECT:	<u>2</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Utilization, and Associated</u>
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PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT – CLEARWATER REGION

ABSTRACT

Current management direction allows for limited-entry hunting of mountain goats with conservative permit levels. Many of the mountain goat hunt areas in the Clearwater Region remain closed because of low population levels or the loss of mountain goats entirely from previously occupied range. Translocation to reestablish or augment populations in these areas is a high priority. During controlled hunts in 2000, 9 permittees harvested 7 mountain goats. During previous years, paintball mark-resight surveys revealed populations of 54 ± 12 adult mountain goats in Hunt Area 10-1, 44 ± 5 adult mountain goats in Hunt Area 10-2, and 177 ± 49 adult mountain goats in Hunt Area 18. During April 2001, 11 mountain goats were captured in Unit 18 and transplanted into Unit 20 (Big Mallard Creek).

**UNITS 10, 12, 15, 16, 16A, 17
CONTROLLED HUNT AREAS 10-1, 10-2**

A list of controlled hunt units, which were closed prior to 1991, can be found in the Clearwater Region portion of the Department's 1986-1991 Mountain Goat Management Plan.

MANAGEMENT DIRECTION

Goals for managing mountain goats in Units 10, 12, 15, 16, 16A, and 17 include increasing populations through conservative hunting levels, trapping and transplanting into vacant habitat or to augment existing populations, maintaining harvest and recreational opportunity, emphasizing nonconsumptive values, inventorying all mountain goat populations at a maximum interval of 5 years, and collecting information on mountain goat diseases.

BACKGROUND

Historically mountain goats were hunted on a general-hunt basis in Idaho north of the Salmon River. As a result some of the easily accessible herds were overhunted or eliminated. From 1966 to present, all mountain goat hunts have been offered as controlled hunts. Hunt areas were originally

quite large, often including several discrete populations of mountain goats. In general, the more accessible populations still received the brunt of the harvest. In 1972, the hunts were divided into smaller, more easily manageable units to control and more evenly distribute hunting pressure.

Permit numbers were reduced from 20 hunts with 51 permits in 1977, to 3 hunts with 6 permits in 1984, and 4 hunts with 12 permits in 1989. In 1999, only 3 hunts with 9 permits were offered in the region (Tables 1 and 7).

POPULATION SURVEYS

Population surveys were not conducted for mountain goats during the reporting period.

During April and May of 2000, we conducted a paintball, mark-resight survey of the Black Mountain (10-1 and 10-2) mountain goat population, with 2 objectives:

1. Obtain a precise population estimate for the entire area, as well as individual hunt area estimates.
2. Evaluate the effect of marking on catchability.

On 19 April 2000, we marked 49 mountain goats with orange paintballs in 4.5 flight hours (10.9 mountain goats/hour). On 20-21 April 2000, we marked 42 mountain goats with yellow paintballs including 21 unmarked mountain goats and 21 mountain goats previously marked with orange, in 6.6 flight hours (6.4 mountain goats/hour). We conducted the resight survey on 1 May 2000 in 3.7 flight hours. In addition, 4.6 hours of ferry time were required for two round trips.

This provided the data needed to perform Cormack's test of catchability bias and 2 data sets to derive mark-resight population estimates. On the second marking event (applying yellow marks), we observed marked (orange) and unmarked mountain goats, thus providing the first data set for an estimate. The second data were derived from the final resight survey. We used Petersen's algorithm modified following Seber (1982).

Hunt Area	Survey	Total Goats Observed	Marked Goats Observed	Total Number of Marked Goats	Estimate (90% C.I.)
Both	First	43	21	49	101±18
Both	Second	33	24	70	98±13
10-1	Second	16	10	33	54±12
10-2	Second	17	14	37	44± 5

The data suggest a significant decline in the Black Mountain mountain goat population since the last survey in 1996 (Table 1). At that time we observed 136 mountain goats over both hunt areas and presumably some mountain goats were missed during the survey. Thus, at a minimum, the

population declined 27% over 4 years. Given this trend, the decision was made to continue existing harvest levels, but to suspend transplant removals.

The data provide the needed information to conduct Cormack’s test of catchability bias, which is our most significant reservation about this technique. The assumptions of Petersen’s estimator can be grouped into 3 categories: 1) Equal catchability, 2) Marks and Resights were independently and identically distributed, and 3) Marks were observed/recorded properly. At the Seven Devils, we were concerned about our ability to meet #3 because we had trouble distinguishing purple marks from other dark spots. Our use of bright orange paint precluded this problem. The orange marks are unmistakable. We probably violated #2 to a small extent, although it is unlikely that such a deviation caused a significant bias. Significant violation of the first assumption was a significant possibility. Painted mountain goats might have lower capture likelihoods than unmarked mountain goats. So, we collected this data to evaluate any departure from #1, with the following results:

	<u>Second Period</u>		<u>Resight Survey</u>			
	<u>Unmarked</u>	<u>Orange</u>	<u>Unmarked</u>	<u>Orange</u>	<u>Yellow</u>	<u>Both Colors</u>
*Expected Number	21.4	20.6	9.6	9.2	7.3	6.9
Observed Number	22	21	9	10	7	7

*Number of mountain goats with/without various marks expected to be observed, given the total observed number, under the null model (no catchability bias).

We failed to reject the null hypothesis of no catchability bias ($Z = -0.173$, $P = 0.863$). Observed and expected values agreed very closely. Even with no bias, some variation is expected due to chance. Such close agreement of observed and expected values strongly implies a lack of catchability bias.

HARVEST CHARACTERISTICS

Harvest levels have changed little during the last 10-year period. During 2000, 3 of 4 permittees were successful in hunts 10-1 and 10-2 (Table 5). Drawing odds for the Unit 10 hunts have averaged 1 in 12 over the past 10 years. Unit 12 was closed to mountain goat hunting in 1997 due to the decline in mountain goat numbers revealed by the 1996 survey.

TRAPPING AND TRANSPLANTING

Since 1962, mountain goats have been trapped on Black Mountain (the Clearwater Region) and Snow Peak (the Panhandle Region) to provide stock for transplants within the state. The region began capturing mountain goats in the Seven Devils range in 1999 with helicopter darting. Eighty-six mountain goats have been transplanted at Clearwater Region sites from 1962 to 2001 (Table 6). Plans to trap mountain goats at Black Mountain in 2000 were cancelled because of the population decline revealed by the 2000 survey.

HABITAT AND CLIMATIC CONDITIONS

Mountain goat habitat in Units 10, 12, 15, 16, 16A, and 17 is located mainly along the Idaho-Montana border and in rocky cliffs of the North Fork Clearwater, Lochsa, and Selway River drainages. Nearly all of the areas that support mountain goats are under U. S. Forest Service (USFS) ownership and management. Some commercial timberlands are located near mountain goat habitat; however, the majority of mountain goat habitat is in designated Wilderness.

The Clearwater Region experienced “below-normal” precipitation for 2000-2001. Snowpack was 50% of average, while the water equivalent was 59% of average. Winter conditions for big game were favorable throughout the region. The precipitation totals for spring were 68% of average and added to the already dry conditions.

MANAGEMENT IMPLICATIONS

The population decline in hunt areas 10-1 and 10-2 will lead to more conservative and cautious management of exploitation. Current harvest levels (5-year average = 3.4 mountain goats/year) are below the maximum mountain goat management plan level of 5% (5 mountain goats). However, it is unlikely that any removal of additional mountain goats for transplants would be practical or prudent. Trapping will be suspended until future surveys reveal a positive growth trend and sufficient numbers to sustain removals. Permit levels in hunt areas 10-1 and 10-2 will remain conservative to avoid overexploitation.

In other areas, where populations have been severely reduced, hunts will not be offered until those populations recover to satisfactory levels and exhibit an acceptable level of population growth. Translocation into areas where mountain goats are absent or severely reduced in numbers will continue as transplant stock becomes available.

UNITS 14, 18, 19, 20, 22, 23 CONTROLLED HUNT AREA 18

Hunts were not offered in 1999 in Units 14, 19, and 20. A list of hunts closed prior to 1991 can be found in the Clearwater Region portion of the Department's 1986-1991 Mountain Goat Management Plan.

MANAGEMENT DIRECTION

Goals for managing mountain goats in Units 14, 18, 19, and 20 include increasing populations through conservative hunting seasons, trapping and transplanting into vacant habitat or to augment existing populations, maintaining harvest and recreational opportunity, emphasizing nonconsumptive values, inventorying all mountain goat populations at a maximum interval of 5 years, and collecting information on mountain goat diseases.

BACKGROUND

Historically, mountain goats were hunted on a general basis in Idaho north of the Salmon River. As a result some of the easily accessible herds were overhunted or eliminated. From 1966 to present, all mountain goat hunts have been offered as controlled hunts. Units were originally quite large, often including several discrete populations. In general, the more accessible populations still received the brunt of the harvest. In 1972, the hunts were divided into smaller, more easily manageable units to control and more evenly distribute hunting pressure.

POPULATION SURVEYS

Population surveys were not conducted during the reporting period.

A paintball mark-resight survey was conducted in Hunt Area 18 (Units 18 and 22) in 1999, in conjunction with the capture effort. During 3-7 June 1999, 33 mountain goats (28 adults and 5 kids) were marked with permanent, purple dye paintballs. Thirty of the mountain goats were marked during 4.0 flight hours devoted to that purpose (7.5 mountain goats/hour), while 3 were marked incidental to dart capture. During the resight survey (16-17 June 1999), 103 mountain goats were observed, including 84 adults (13 marked) and 19 kids (1 marked). The estimates (Table 8) were of somewhat low precision, and there was concern over potential bias caused by questionable ability to identify marks.

HARVEST CHARACTERISTICS

Many of the mountain goat hunts remained closed in 1999 because of low populations or absence of mountain goats (see Clearwater Region portion of the Department's 1986-1991 Mountain Goat Management Plan). Five permits have been offered each year in the mountain goat hunt in Unit 18 since 1983 (Table 7). Drawing odds for the Unit 18 hunt have averaged 1 in 10 over the past 10 years. In 2000, the 5 permittees harvested 4 mountain goats (Table 11).

TRAPPING AND TRANSPLANTING

Twenty-five mountain goats trapped at Snow Peak, Unit 9, and at Olympic National Park, Washington, have been transplanted into Unit 18 since 1962 (Table 6). With growth in the mountain goat population in the Seven Devils area, the Dry Diggins lookout was evaluated as a potential trap site for mountain goats as early as 1987. Subsequent efforts with clover traps in 1991 and 1993 resulted in the capture of only 1 mountain goat.

Mountain goats were captured in Unit 18 with darts fired from a helicopter in 1999 and 2001. Eighteen goats were captured and subsequently released into Big Mallard Creek in Unit 20. The capture efforts were patterned after the protocol at Olympic National Park where over 300 mountain goats have been captured and removed via darting with Carfentanil. Capture and transport to the staging area required 1.36 flight hours/mountain goat in 1999, and 0.84 flight hours/goat in 2001. Given the mark-resight estimates on population size and a reasonably conservative approach to

exploitation rates, up to 12 mountain goats (6 nannies) could be removed every other year for transplants.

HABITAT AND CLIMATIC CONDITIONS

The deep, rugged canyons of the Snake and Salmon Rivers dominate the topography of Units 14, 18, 19, and 20. Mountain goat populations in this area are found almost exclusively in habitat designated as Wilderness and managed by the USFS. Mountain goats in Unit 18 are found in the Seven Devils area, while those in Units 19 and 20 are found on the breaks of the Salmon River in the Gospel Hump and Frank Church River-of-No-Return wilderness areas. Habitats in both areas are generally drier and more open than mountain goat habitat found in Units 10 and 17.

The Clearwater Region experienced “below-normal” precipitation for 2000-2001. Snowpack was 50% of average, while the water equivalent was 59% of average. Winter conditions for big game were favorable throughout the region. The precipitation totals for spring were 68% of average and added to the already dry conditions.

MANAGEMENT IMPLICATIONS

Given the mountain goat management plan guidelines and the 1999 Hunt Area 18 mark-resight population estimate, with continued harvest, up to 12 mountain goats (6 nannies) could be removed for transplants every other year. The total exploitation level would be below 5%. We suggest conducting an additional mark-resight survey in 2002.

In other areas where populations have been severely reduced, no hunts will be offered until those populations recover to satisfactory levels. Translocation to reestablish or augment populations will continue as mountain goats become available.

Table 1. Season structure for 2000 controlled, either-sex, mountain goat hunts 10-1 and 10-2 in the Clearwater Region.

Hunt Areas	Season	
	Dates	Length (Days)
10-1, 10-2	8/30-11/12	75

Table 2. Summary of mountain goat surveys in Unit 10, 1991^a-present.

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	Ratio Kid:100 Adult
1991	10-1	Isabella Cr.	50	13	0	63	26.0
1996	10-1		48	13		61	27.1
2000 ^b	10-1		54±12			54±12	
1991	10-2	Collins to	73	15	0	88	20.5
1996	10-2	Quartz Cr.	61	14	0	75	23.0
2000 ^b	10-2		44±5			44±5	
1991		Flat Mtn. to	14	3	0	17	21.0
1996		Elizabeth Mtn.	12	1	0	13	8.3
1991		Pot Mtn.	2	0	0	2	0.0
1996			4	0	0	4	0.0
1991		Moose Mtn.	27	1	0	28	3.7
1996			24	3	0	27	12.5
1991		S. Fk. Kelly Cr	34	6	0	40	17.6
1996		To Williams Cr.	14	0	0	14	0.0
1991		TOTAL	200	38	0	238	19.0
1996			163	31	0	194	19.0

^a Boundaries in Unit 10 changed in 1991 to include old Unit 9A

^b Paintball, mark-resight survey (19 April–1 May 2000).

Table 3. Summary of mountain goat surveys in Unit 17, 1991^a-present.

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	Ratio Kid:100 Adult
1991	17	E. Fork. Moose Cr.	25	7	0	32	28.0
1994			25	5	0	30	20.0
1991		White Cap Cr.	23	6	0	29	26.1
1994			25	2	0	27	8.0
1991		Canyon Cr.	21	12	0	33	57.1
1994			14	6	0	20	42.9
1991		Copper Cr.	3	0	0	3	0.0
1994			0	0	0	0	--
1991		Paradise Cr.	8	0	0	8	0.0
1994			4	0	0	4	0.0
1991		Cub Cr.	10	5	0	15	50.0
1994			3	0	0	3	0.0
1991		Brushy Fork Cr.	10	5	0	15	50.0
1994			12	4	0	16	33.3
1991		Bear Cr.	4	3	0	7	75.0
1994			9	2	0	11	22.2
1991		Upper Selway (Above Magruder Crossing)	14	5	0	19	35.7
1994			16	2	0	18	12.5
1991		Little Clear. To Echo Cr.	4	1	0	5	25.0
1994			6	0	0	6	0.0
1991		Snake Cr.	0	0	0	0	--
1994			1	0	0	1	0.0
1991 ^b		Goat Cr.	--	--	--	--	--
1994			11	3	0	14	27.3
1991		Grouse Cr./ Running Cr.	0	0	0	0	--
1994			0	0	0	0	--
1991		Stewart Cr.	0	0	0	0	--
1994			1	0	0	1	0.0
1991		TOTAL	122	44	0	166	36.1
1994			127	24	0	151	18.9

^a Mountain goats were first surveyed in this unit by helicopter in 1991.

^b Goat Creek was not surveyed in 1991.

Table 4. Summary of mountain goat surveys in Unit 12, 1981-present.

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	Ratio Kid:100 Adult
1981	12	Old Man Cr.	18	3	0	21	16.7
1987			18	4	0	22	22.2
1996			21	3	0	24	14.3
1981		Boulder Cr.	9	3	0	12	33.3
1987			9	1	0	10	11.1
1996			0	0	0	0	0.0
1981		Noseeum Cr.	6	2	0	8	33.3
1987			11	3	0	14	27.2
1996			3	0	0	3	0.0
1981		Skookum Cr.	2	0	0	2	0.0
1987			6	0	0	6	0.0
1996			2	1	0	3	50.0
1981		Grave Butte	2	0	0	2	0.0
1987			0	0	0	0	0.0
1996			0	0	0	0	0.0
1981		Stanley Cr.	5	1	0	6	20.0
1987			5	0	0	5	0.0
1996			4	0	0	4	0.0
1981		Lone Knob	1	0	0	1	0.0
1987 ^a			-	-	-	-	-
1996			0	0	0	0	0.0
1981		Squaw Cr.	2	0	0	2	0.0
			8	6	0	14	75.0
			11	0	0	11	0.0
1981 ^a		Fish Cr.	-	-	-	-	-
1987			1	0	0	1	0.0
1996			0	0	0	0	0.0
1981		Boulder/Crooked Fork	4	1	0	5	25.0
1987			10	3	0	13	30.0
1996			2	1	0	3	50.0
1981		TOTAL	49	10	0	59	20.4
1987			68	17	0	85	25.0
1996			43	5	0	48	11.6

^a Drainage not included in survey.

Table 5. Summary of mountain harvest and drawing odds by hunt area, 1991-present.

Area	Year	No. Permits	Harvest		Hunter Success	Days/Hunter	Total First Choice Applicants	Drawing Odds
			M	F				
610-1	1991	2	0	2	100	3.0	25	1:12.5
	1992	2	2	0	100	3.0	25	1:12.5
	1993	2	2	0	100	3.0	18	1:9.0
	1994	2	0	2	100	4.5	28	1:14.0
610-1 was changed to 10-1 in 1995.								
10-1	1995	2	2	0	100	2.0	26	1:13.0
	1996	2	1	0	50	3.0	22	1:11.0
	1997	2	2	0	100	3.5	39	1:19.5
	1998	2	1	0	50	2.0	42	1:21.0
	1999	2	1	1	100	9.0	33	1:16.5
	2000	2	1	0	50	1.0	26	1:13.0
610-2	1991	2	1	1	100	3.5	22	1:11.0
	1992	2	0	1	50	3.5	20	1:10.0
	1993	2	0	2	100	3.0	22	1:11.0
	1994	2	1	0	50	2.0	21	1:10.5
610-2 changed to 10-2 in 1995.								
10-2	1995	2	2	0	100	10	18	1:9.0
	1996	2	1	1	100	3.5	29	1:14.5
	1997	2	0	2	100	2.5	29	1:14.5
	1998	2	2	0	100	1.5	27	1:13.5
	1999	2	1	1	100	11.0	24	1:12.0
	2000	2	1	1	100	5.0	27	1:13.0
612	1991	3	2	0	67	2.0	26	1:12.0
	1992	3	1	1	67	4.5	24	1:8.0
	1993	3	0	3	100	1.0	38	1:12.7
	1994	3	1	2	100	2.0	27	1:9.0
612 changed to 12 in 1995.								
12	1995	3	1	1	67	2.7	29	1:9.7
	1996	3	0	2	67	5.5	29	1:9.7
	1997	Closed						

Table 6. Summary of mountain goat transplants in the Clearwater Region, 1962-present.

Date	Unit and Capture Site	Unit and Release Site	Number of goats				Total
			Adult		Kid		
			M	F	M	F	
June 1962	9-Snow Peak	18-Seven Devils	2	4	2	0	8
July 1964	9-Snow Peak	18-Seven Devils	2	5	0	2	9
June 1966	9-Snow Peak	15-Dome Hill	3	1	0	0	4
June 1966	9A-Black Mtn.	15-Dome Hill	1	3	0	0	4
June 1967	9A-Black Mtn.	15-Dome Hill	1	2	0	0	3
June 1986	9A-Black Mtn	12-Boulder Cr.	2	5	0	0	7
June 1987	9-Snow Peak	19-Oregon Butte	0	8	0	0	8
July 1987	9A-Black Mtn.	19-Oregon Butte	2	2	0	0	4
July 1989	Olympic NP, WA	18-Seven Devils	8	0	0	0	8
June 1991	10-Black Mtn	27-Ship Island Cr	4	4	0	0	8
June 1994	10-Black Mtn	20-Big Squaw Cr.	4	4	0	0	8
June 1996	10-Black Mtn	20-Big Squaw Cr.	0	1	0	0	1
June 1998	10-Black Mtn	15-Johns Cr.	1	0	0	0	1
June 1998	10-Black Mtn	20-Big Squaw Cr.	1	2	0	0	3
June 1999	18-Seven Devils	20-Big Mallard Falls	4	3	0	0	7
April 2001	18-Seven Devils	20-Big Mallard Falls	5	6	0	0	11

Table 7. Season structure for the 2000 controlled, either-sex, mountain goat hunt 18 in the Clearwater Region.

Hunt Area	Season	
	Date	Length (Days)
18	8/30-11/12	75

Table 8. Summary of mountain goat surveys in Unit 18, 1981-present.

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	Ratio Kid:100 Adult
1981	18	Dry Gulch	20	0	0	20	0.0
1987			0	0	0	0	0.0
1993			49	5	0	54	10.0
1996			0	0	0	0	0.0
1981		Bernard Cr.	29	4	0	33	13.8
1987			15	2	0	16	14.3
1993			3	2	0	5	66.0
1996			19	1	0	20	5.3
1981		Bernard Cr. to Three Cr.	0	0	0	0	0.0
1987			28	7	0	1	0.0
1993			11	4	0	15	36.0
1996			12	1	0	13	8.3
1981		Sheep Cr.	3	0	0	3	0.0
1987			1	0	0	1	0.0
1993			1	0	0	1	0.0
1996			4	0	0	4	0.0
1981		Three Cr.	12	2	0	14	16.7
1987			3	0	0	3	0.0
1993			20	3	0	23	15.0
1996			16	4	0	20	25.0
1981		Granite Cr.	1	0	0	1	0.0
1987			19	3	0	22	15.8
1993			13	3	0	16	23.0
1996			9	1	0	10	11.1
1981		Three Cr. To Granite Cr.	0	0	0	0	0.0
1987			4	0	0	4	0.0
1993			20	3	0	23	15.0
1996			1	0	0	1	0.0
1981		TOTAL	65	6	0	71	9.2
1987			70	12	0	82	17.1
1993			117	20	0	137	17.1
1996			61	7	0	68	11.5
1999 ^a			177±49	61±44	0	237±67	34.5

^a Paintball, mark-resight estimates that include all of Hunt Area 18 (Units 18 and 22).

Table 9. Summary of mountain goat surveys in Unit 19, 1981-present.

Year	Hunt		Adults	Kids	Unknown	Total	<u>Ratio</u>
	Area	Inclusive Location					Kid:100 Adult
1982	19	Wind River	5	2	0	7	40.0
1986			1	0	0	1	0.0
1993			7	3	0	10	42.0
1982		Crooked River	7	1	0	8	14.3
1986			11	3	0	14	27.2
1993			4	0	0	4	0.0
1982		Sheep Cr.	0	0	0	0	--
1986			24	9	0	33	37.5
1993			8	0	0	8	0.0
1982		Elk Cr.	2	1	0	3	50.0
1986			9	4	0	13	44.4
1993			2	0	0	2	0.0
1993		Upper Johnson Cr.	3	1	0	4	33.3
1982		TOTAL	14	4	0	18	28.6
1986			45	16	0	61	35.6
1993			24	4	0	28	16.7

Table 10. Summary of mountain goat surveys in Unit 20, 1981-present.

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	<u>Ratio</u> Kid:100 Adult
1982	20	Blowout Cr.	2	0	0	2	0.0
1987			4	0	0	4	0.0
1993			1	0	0	1	0.0
1982		Rhett Cr.	10	4	0	14	40.0
1987			12	1	0	13	8.3
1993			1	0	0	1	0.0
1982		Sabe Cr.	10	3	0	13	30.0
1987			30	8	0	38	26.7
1993			15	2	0	17	13.3
1982		Rattlesnake Cr.	3	1	0	4	33.3
1987			2	0	0	2	0.0
1993			2	0	0	2	0.0
1982		Bargamin Cr.	2	0	0	2	0.0
1987			2	0	0	2	0.0
1993			0	0	0	0	0.0
1982		TOTAL	27	8	0	35	29.6
1987			50	9	0	59	18.0
1993			19	2	0	21	10.5

Table 11. Summary of mountain goat harvest and drawing odds by hunt area in Unit 18, 1991-present.

Area	Year	No. Permits	<u>Harvest</u>		Hunter Success	Days/ Hunter	Total First Choice Applicants	Drawing Odds
			M	F				
618	1991	5	3	1	80	2.3	44	18.8
	1992	5	2	1	60	3.3	34	16.8
	1993	5	3	2	100	4.3	47	19.4
	1994	5	3	1	80	5.8	36	17.2
618 changed to 18 in 1995								
18	1995	5	1	3	75	2.5	57	111.4
	1996	5	3	1	80	3.25	39	17.8
	1997	5	3	2	100	4.4	64	112.8
	1998	5	1	4	100	3.0	71	114.2
	1999	5	3	2	100	1.4	64	1:12.8
	2000	5	3	1	80	12.0	51	1:10.2

**PROGRESS REPORT
SURVEYS AND INVENTORY**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Mountain Goat Surveys</u>
PROJECT:	<u>W-170-R-25</u>		<u>and Inventories</u>
SUBPROJECT:	<u>3</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Utilization, and Associated</u>
JOB:	<u>5</u>		<u>Habitat Studies</u>
PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT - SOUTHWEST REGION, NAMPA

ABSTRACT

No mountain goat surveys were conducted or harvest occurred in the Southwest Region in 2000-2001.

**PROGRESS REPORT
SURVEYS AND INVENTORY**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Mountain Goat Surveys</u>
PROJECT:	<u>W-170-R-25</u>		<u>and Inventories</u>
SUBPROJECT:	<u>3, McCall</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Utilization, and Associated</u>
JOB:	<u>5</u>		<u>Habitat Studies</u>
PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT - SOUTHWEST REGION, MCCALL

ABSTRACT

No mountain goat harvest occurred in the Southwest Region during this reporting period. No mountain goat population surveys were conducted. Past survey results indicate that the Unit 22 mountain goat population has a low recruitment rate.

UNITS 19A, 20A, 22, 23, 24, 25, 26

MANAGEMENT DIRECTION

Management will be consistent with the statewide management direction delineated in the 1991-1995 Mountain Goat Management Plan (page 16).

BACKGROUND

Historically, Units 20A, 25, and 26 had controlled mountain goat hunt areas (Figure 1). Unit 20A had 3 controlled hunt areas with a total of 13 permits the last year hunting was authorized (1979). All 3 hunts were discontinued in 1980. Unit 25 also had 3 controlled hunt areas. Hunting was discontinued in one area in 1979 and in 1980 in the other areas. A total of 7 permits was issued the last year hunting was allowed. Unit 26 had 2 controlled hunt areas. By 1980 hunting was discontinued in both hunt areas. A total of 5 permits was issued the last year hunting was allowed in both areas.

POPULATION SURVEYS

No population surveys of mountain goats were conducted during the reporting period. Past survey results indicate that the Unit 22 mountain goat population has a low recruitment rate (Table 1).

HARVEST CHARACTERISTICS

Mountain goats are hunted in portions of Unit 22 and 23 of the Southwest Region and harvest is reported with the Unit 18 harvest in the Clearwater Region. No other mountain goat hunting occurs in the Southwest Region.

MANAGEMENT IMPLICATIONS

The McCall Subregion accounted for 8 mountain goat controlled hunt areas in 1977. All mountain goat hunting in the region was discontinued in 1980. Mountain goat hunting will remain closed within the Southwest Region until population survey data document that populations have recovered and meet the minimum requirements to establish a hunt as set forth in the 1991-1995 Mountain Goat Management Plan. An exception to this is the Unit 22 mountain goat population, which is contiguous with the Unit 18 population. The Unit 22 population has been increasing as a result of mountain goats pioneering out from the Unit 18 hunt area. Mountain goat Hunt Area 18 was expanded south in 1997 to include the Brush Creek drainage of Unit 22.

Mountain goat transplant sites were identified and prioritized during the 1988-1990 reporting period. Authorization from the appropriate land management agencies was obtained during the 1989-1990 reporting period. These sites were incorporated into the Department's 1991-1995 Mountain Goat Management Plan and revised in August 2000.

Table 1. Summary of Mountain Goat Observations in Unit 22 of the Southwest Region, 1996 (1995 totals in parenthesis).

Year	Area	Adults	Kids	Total	<u>Ratio</u> Kid:100 Adult
1996					
	Deer Creek	11 (27)	1 (0)	12 (27)	
	Granite Creek	26 (7)	2 (2)	28 (9)	
	Sawpit Creek	<u>7 (4)</u>	<u>2 (0)</u>	<u>9 (4)</u>	
	Total	44 (38)	5 (2)	49 (40)	11 (5)

**PROGRESS REPORT
SURVEYS AND INVENTORY**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Mountain Goat Surveys</u>
PROJECT:	<u>W-170-R-25</u>		<u>and Inventories</u>
SUBPROJECT:	<u>4</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Use, and Associated</u>
JOB:	<u>5</u>		<u>Habitat Studies</u>
PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT - MAGIC VALLEY REGION

ABSTRACT

Aerial surveys conducted in Units 43 and 48 during the reporting period indicated that mountain goat numbers remained low in Unit 43 and were stable to increasing in Unit 48. Both hunters in Hunt Area 48 were successful in 2000.

**UNITS 43, 48, 49
CONTROLLED HUNT AREA 48**

MANAGEMENT DIRECTION

Follow statewide management direction, encourage the U.S. Forest Service to reduce livestock/human/mountain goat conflicts in favor of mountain goats, and maintain current hunts and permit levels.

BACKGROUND

Unit 43 – After relatively liberal harvests during the 1970s, mountain goat hunting seasons were closed in Unit 43 in 1979 and 1980 because of concern over declining numbers and a lack of information on the status of populations. Surveys conducted in February 1981 indicated mountain goat numbers were high enough to allow limited hunting. From 1981-1990, 4 controlled hunt permits (2 hunt areas) were authorized and from 1991-1994, 3 permits (1 hunt area) were authorized. Helicopter surveys conducted in 1994 and 1996 indicated the population in Unit 43 had decreased and did not meet minimum standards to allow harvest. Unit 43 has been closed to mountain goat hunting since 1995.

Unit 49 -- From 1981-1986 that portion of Unit 49 west of the Little Wood River was included in a hunt area with a portion of Unit 48 and 2 permits were authorized. An aerial survey in December 1985 indicated the Unit 49 mountain goat population was not large enough to allow sport harvest and the season has been closed since 1987.

Unit 48 -- From 1981-1986, 4 permits were issued in 2 hunt areas (1 area included that portion of

Unit 49 west of the Little Wood River). In 1987, Unit 49 was closed to mountain goat hunting and excluded from the 648-2 hunt area. From 1987-1990, Unit 48 was divided into 2 hunts each with 2 permits; east of State Highway 75 (648-2) and west of State Highway 75 upstream from and including the Baker Creek drainage (648-1). Permit levels were reduced in 1991 based on aerial survey results. Since 1991, 2 permits have been authorized annually in 1 hunt area that includes all of the former 648-1 and 648-2 hunt areas (Table 1).

POPULATION SURVEYS

An aerial survey of all suitable habitat in Units 43 and 48 was conducted between 16-27 April 2001. Poor weather conditions hampered completion of the survey on consecutive days. Twenty-eight mountain goats were observed (100 adults:7 juveniles) in Unit 43. Total goats observed during 2001 was lower than the 1996 census but near the average for the last three surveys. These numbers are still well below levels that can sustain any hunting harvest (Table 2).

Sixty-nine mountain goats were observed (100 adults:39 juveniles) in Unit 48. Total goats observed in 1990 and 1994 were 59 and 64, respectfully. Current goals and population levels will continue to allow minimal harvest opportunity in this unit.

TRANSPLANTS

Potential release sites have been identified in Units 43, 48, and 49. No transplants occurred in the region during the reporting period (Table 3).

HARVEST CHARACTERISTICS

In 2000, both mountain goat permittees in Unit 48 were successful. One hunter harvested a 5½-year-old female mountain goat in 2 days of hunting, while the other hunter harvested a 6½-year-old male in 3 days of hunting. Drawing odds in the Unit 48 hunt averaged 15% from 1991-2000. A summary of mountain goat harvest data for the Magic Valley Region is shown in Tables 4 and 5.

MANAGEMENT IMPLICATIONS

Results of the 2001 aerial survey in Units 43 and 48 suggest that mountain goat numbers have remained stable in both units since the last survey. Both units appear to have relatively low production and limited potential for additional harvest. The Unit 43 population has very low numbers; however, sexually mature adults are scattered throughout the suitable habitat and the potential for increasing the population is good. Unit 48 remains the most productive mountain goat unit in the Magic Valley Region. Because of its proximity to the Ketchum/Sun Valley area and State Highway 75, Unit 48 goats are frequently observed by the general public and have important nonconsumptive value.

Hunting will remain closed in Unit 43 until aerial survey data indicates population increases in these and adjacent units. In Unit 48, the permit level will remain at 2 until data becomes available to suggest a change. Because of an increased number of mountain goats observed in 2000 in Unit 49, it

was included in a hunt area with Unit 50 hunt area for 2001-2002 seasons. Permit levels remained at 2 for this hunt area. Future surveys of this mountain goat population will include habitat in both Units 49 and 50 since this population uses portions of both units. The population has been identified for augmentation releases if and when a source of mountain goats becomes available. Currently the U.S. Forest Service is attempting to improve mountain goat habitat through improved livestock management and limiting motorized access, which should assist in population recovery.

Table 1. 2000 Structure for Controlled, Either-Sex Mountain Goat Hunt 48 in the Magic Valley Region.

Hunt Area	Season	
	Dates	Length (Days)
48	8/30-11/12	75

Table 2. Summary of Mountain Goat Surveys in Units 43, 48, and 49, 1981-2001.

Year	Unit	Adults	Kids	Unknown	Total	Kid:100 Adult
1981	48 ^a	18	3	0	21	17
1981	48 ^b	19	2	0	21	11
1981	48/49 ^c	21	1	5	30	4
1985	48 ^a	26	8	0	34	31
1990	48	43	16	0	59	37
1994	48	52	13	0	65	25
2001	48	55	14	0	69	25
1981	43	69	20	0	89	29
1990	43	67	21	0	88	31
1994	43	21	4	0	25	16
1996	43	25	7	0	32	29
2001	43	26	2	0	28	8
1992	49	8	2	0	10	25
2000	49	22	1	0	23	4

^a That portion of Unit 48 west of the North Fork Big Wood River and north of State Highway 75.

^b That portion of Unit 48 west of State Highway 75 and north of Baker Creek.

^c That portion of Unit 48 east of State Highway 75 and south of the Trail Creek Road, and that portion of Unit 49 west of the Little Wood River.

Table 3. Summary of Mountain Goat Transplants in the Magic Valley Region.

Date	Capture Site	Release Site	<u>Adult</u>		<u>Kid</u>		Total
			Male	Female	Male	Female	
2000-01	No activity						

Table 4. Summary of Mountain Goat Harvest and Drawing Odds in Hunt Area 643-1, 643-2, and 643, 1983-2000.

Hunt Area	Year	No. Permits	<u>Harvest</u>		Hunter Success	Days/Hunter	Total First Choice Applicants	Drawing Odds
			M	F				
643-1	1983	2	0	0	0	7.5	22	1:11
643-2	1983	2	2	0	100	1.0	29	1:14.5
643-1	1984	2	1	0	50	3.5	21	1:10
643-2	1984	2	0	2	100	2.5	25	1:12.5
643-1	1985	2	0	1	50	4.0	41	1:20.5
643-2	1985	2	0	2	100	3.0	31	1:15.5
643-1	1986	2	1	1	100	4.0	14	1:7
643-2	1986	2	0	2	100	2.0	10	1:5
643-1	1987	2	1	1	100	6.5	8	1:4
643-2	1987	2	0	2	100	4.0	7	1:3.5
643-1	1988	2	1	0	50	8.0	9	1:4.5
643-2	1988	2	2	0	100	*	7	1:3.5
643-1	1989	2	1	0	50	4.0	9	1:4.5
643-2	1989	2	2	0	100	3.0	10	1:5
643-1	1990	2	0	1	50	12.0	5	1:2.5
643-2	1990	2	1	1	100	6.5	9	1:4.5
643 ^a	1991	3	0	1	33	6.7	18	1:6
643 ^a	1992	3	0	1	33	3.7	7	1:2.3
643 ^a	1993	3	1	2	100	5.3	14	1:4.7
643 ^a	1994	3	1	2	100	5.5	11	1:3.7
43 ^a	1995				CLOSED			
43 ^a	1996				CLOSED			
43 ^a	1997				CLOSED			
43 ^a	1998				CLOSED			
43 ^a	1999				CLOSED			
43 ^a	2000				CLOSED			

* Data Incomplete or No Data

^a Same geographical area as 643-1 and 643-2

Table 5. Summary of Mountain Goat Harvest and Drawing Odds in Hunts 648, 648-1, 648-2 and 48, 1983-2000.

Hunt Area	Year	No. Permits	Total Harvest		Hunter Success	Days/Hunter	First Choice Applicants	Drawing Odds
			M	F				
648-1	1983	2	1	1	100	1.0	41	1:20.5
648-2	1983	2	1	0	50	3.0	39	1:19.5
648-1	1984	2	1	1	100	5.5	26	1:13
648-2	1984	2	2	0	100	3.5	24	1:12
648-1 ^c	1985	2	1	1	100	2.0	46	1:23
648-2 ^a	1985	2	0	2	50	1.0	46	1:23
648-1	1986	2	0	2	100	3.0	4	1:2
648-2 ^b	1986	2	1	1	100	17.5	7	1:3.5
648-1	1987	2	2	0	100	11.0	9	1:4.5
648-2	1987	2	2	0	100	3.0	13	1:6.5
648-1	1988	2	2	0	100	*	6	1:3
648-2	1988	2	2	0	100	*	10	1:5
648-1	1989	2	1	1	100	6.5	13	1:6.5
648-2	1989	2	2	0	100	2.0	8	1:4
648-1	1990	2	2	0	100	1.5	2	1:1
648-2	1990	2	1	1	100	3.5	9	1:4.5
648 ^c	1991	2	1	0	50	8.0	18	1:9
648 ^c	1992	2	1	0	50	2.0	8	1:4
648 ^c	1993	2	2	0	100	6.0	12	1:6
648 ^c	1994	2	2	0	100	3.0	10	1:5
48 ^c	1995	2	0	2	100	3.5	13	1:6.5
48 ^c	1996	2	2	0	100	1.0	8	1:4
48 ^c	1997	2	2	0	100	5.5	16	1:8
48 ^c	1998	2	2	0	100	2.0	13	1:6.5
48 ^c	1999	2	1	0	50	25.0	20	1:10
48 ^c	2000	2	1	1	100	2.5	13	1:6.5

* Data Incomplete or No Data

^a Hunt 648-2 changed to Hunt 649 in 1986.

^b That portion of Unit 48 east of State Highway 75. The portion of Unit 48 west of the North Fork of the Big Wood River and north of State Highway 75 was formerly included in Hunt 636A-2.

^c Same geographical area as 648-1 and 648-2 combined.

**PROGRESS REPORT
SURVEYS AND INVENTORY**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Mountain Goat Surveys</u>
PROJECT:	<u>W-170-R-25</u>		<u>and Inventories</u>
SUBPROJECT:	<u>6</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Utilization, and Associated</u>
JOB:	<u>5</u>		<u>Habitat Studies</u>
PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT - UPPER SNAKE REGION

ABSTRACT

Five distinct populations of mountain goats occur in the Upper Snake Region. These include the Pioneer Mountains (Unit 50), South Lemhi Range (Units 29, 51, and 58), Red Conglomerates (Unit 59), Italian Peaks (Unit 59A), and the Snake River Range (Unit 67).

Four controlled hunts were offered in the Upper Snake Region in 1999. Twenty-one permits were offered, and 19 mountain goats were harvested (90% success) based on mandatory harvest reports. Drawing odds ranged from 8.3:1 to 15.0:1.

Population surveys were flown in Hunt Areas 51 and 67 in the first week of August 2000. In Hunt Area 51, a total of 157 mountain goats with a kid:adult ratio of 26:100 was counted. This total represents the highest number of mountain goats ever counted in this Hunt Area. The previous high count was 130 (ground count) in 1987. The next most recent helicopter survey was conducted in 1992 and accounted for only 61 mountain goats. In Hunt Area 67, totals of 14 and 90 mountain goats were tallied north and south of Palisades Creek, respectively. Both of these totals continued the downward trends recently being observed in these areas.

No trapping and/or transplanting operations were conducted during this reporting period.

**UNITS 29, 51, 58, 59A
CONTROLLED HUNT AREAS 51, 59A**

Description: Hunt Area 51 - That portion of Unit 29 south of and excluding the Big Timber Creek drainage, that portion of Unit 51 east of the Howe-Goldburg Road, and that portion of Unit 58 west of State Highway 28.

Description: Hunt Area 59A - All of Unit 59A and that portion of Unit 58 east of State Highway 28 and south of but excluding the Willow Creek drainage.

BACKGROUND

Mountain goats are native to these ranges. Reports of observations of one to a few mountain goats date back to the early 1950s. Numbers remained low, however, until about the mid-1970s. Aerial surveys in 1982 indicated that populations in Hunt Areas 51 and 59A had increased enough to increase permits in Hunt Area 51 and initiate Hunt Area 59A. The populations appear to have remained stable or increased slightly over the last 10 years. Hunt Area 59 was initiated in 1987 after a 1986 survey found 46 mountain goats with a ratio of 44 kids per 100 adults. This hunt was closed after a 1994 population survey accounted for only 25 mountain goats.

From 1983 to 1986, Hunt Area 51 was split into 51-1 (north of Rocky Canyon drainage) and 51-2 (south of and including Rocky Canyon drainage). These hunts were combined in 1987 when observations showed mountain goats moved freely between the two hunt areas and hunter densities were not a problem.

Two controlled hunts (Table 1), with a total of 9 permits, were held in these units in 1999 and again in 2000.

POPULATION SURVEYS

A population survey was flown in Hunt Area 51 in the first week of August 2000. A total of 157 mountain goats with a kid:adult ratio of 26:100 was counted (Table 2). This total represents the historical high count for the area and was 105% higher than the next most recent count of 61 in 1992.

Population surveys were last conducted in Units 59 and 59A in late July 1994 (Table 2). A Bell G47 Soloy helicopter was used to conduct the surveys.

A total of 25 mountain goats was counted in Unit 59 in 1994. The observed kid:adult ratio was 79:100, and no twin sets were identified. The 25 mountain goats counted represents a decrease of 46% from the previous survey (1986). Counting conditions were considered good for the 1994 survey. Mountain goats were distributed around subalpine fir clones at about 9,000 feet. No mountain goats were seen along upper Irving Creek or in Montana on Garfield Mountain or the Lima Peaks.

The Unit 59A survey resulted in a total count of 128 mountain goats with 39 kids:100 adults (four sets of twins identified). This total represents an increase of 44% from the next most recent survey (1991) and is the most mountain goats ever counted in this unit.

HARVEST CHARACTERISTICS

A total of 9 permits was issued for these two hunts again in 2000, and 8 mountain goats were harvested. All four permittees were successful in harvesting a mountain goat in Hunt Area 51 in 2000 while four of the five hunters in Hunt Area 59A harvested a mountain goat (Table 3), based on

mandatory harvest reports. The harvest consisted of 6 males and 2 females. Drawing odds were 8.3:1 for Hunt Area 51 and 9.0:1 for Hunt Area 59A in 2000 (Table 3).

CLIMATIC CONDITIONS

Spring and summer weather conditions during 2000 were warmer and drier than normal. Winter precipitation was well below normal and temperatures were above average. The spring of 2001 came early, and warm and dry conditions have persisted.

HABITAT CONDITIONS

Habitat conditions remained relatively static during this reporting period.

TRAPPING AND TRANSPLANTING

No trapping and/or transplanting operations were conducted during this reporting period.

MANAGEMENT IMPLICATIONS

The 1991-1995 Mountain Goat Management Plan authorizes hunts in game management units having a minimum of 50 adult mountain goats, requires that hunted units be inventoried at least once every five years, and sets permit levels to not exceed 5% of the adults in any population. Based on most recent survey data, season framework modifications were implemented beginning in 1995. The permit level in Unit 51 was reduced from 6 to 4, the Unit 59 hunt was closed, and the hunt in Unit 59A had one additional permit added (5).

UNIT 50 CONTROLLED HUNT AREA 50

Description: Hunt Area 50 - That portion of Unit 50 south and east of the Trail Creek Road and south and west of U.S. Highway 93.

BACKGROUND

Hunt Areas 50-1 and 50-2 were closed in 1982 because of a low kid:adult ratio. Hunt Area 50, with five permits, was reopened in 1986 after 92 mountain goats with 30 kids:100 adults were counted on a 1985 survey. This hunt area was previously identified as 50-2 and was closed when 45 mountain goats with 22 kids:100 adults were counted during a helicopter survey during the winter of 1981-1982. Season structure for Hunt Area 50 is shown in Table 4.

POPULATION CHARACTERISTICS

A helicopter survey was last conducted in Unit 50 in late August 1999 (Table 5). The total number of mountain goats counted in the Hunt Area 50 portion (50) was nearly identical to the total

accounted for on the next most recent survey (49 in 1992), but was only 54% of the total counted on the 1985 survey (92). However, the kid:adult ratio had improved to 25:100.

HARVEST CHARACTERISTICS

Two permits were issued in Hunt Area 50 again in 2000, resulting in the harvest of 2 mountain goats (Table 6). Drawing odds (Table 6) decreased to 15.0:1 in 2000.

CLIMATIC CONDITIONS

Spring and summer weather conditions were warmer and drier than normal. Winter precipitation was well below normal and temperatures were above average. The spring of 2001 came early, and warm and dry conditions have persisted.

HABITAT CONDITIONS

Mountain goats in Hunt Area 50 occupy the higher elevation peaks and ridges of the Pioneer Range. Habitat in this area is discontinuous and appears less productive than other occupied mountain goat habitat in the Upper Snake Region. The two habitat components that are most limited are alpine meadow summer range and mountain mahogany stands for winter range. Tracks observed on aerial surveys indicate mountain goats, either solitary or in small groups, shift several miles to find suitable habitats following winter storms. Water may also be limiting in some parts of the summer range.

TRAPPING AND TRANSPLANTING

No trapping and/or transplanting operations have been conducted in Unit 50.

MANAGEMENT IMPLICATIONS

Permits in Hunt Area 50 were reduced from 5 to 2 in 1993 based upon results of the 1992 population survey. The 50 mountain goats accounted for on the two most recent (February 1992 and August 1999) population surveys place this hunt at the minimum population level for a unit to sustain a hunt, as per the 1991-1995 Mountain Goat Management Plan.

UNIT 67 CONTROLLED HUNT AREAS 67-1, 67-2

Description: Hunt Area 67-1 - That portion of Unit 67 south of Palisades Creek.

Description: Hunt Area 67-2 - That portion of Unit 67 north of Palisades Creek and south of State Highway 31 - CLOSED.

BACKGROUND

The Snake River Range lies outside the historical range of mountain goats. Five mountain goats were introduced in 1969 (Hayden 1989). The mountain goat population in Unit 67 grew rapidly in the 1970s and 1980s. Hunts were initiated in 1983. Each of Hunt Areas 67-1, 67-2, 67-3, and 67-4 had 4 permits in 1986, resulting in a net increase of 6 permits over the 1985 seasons. Two new hunts (67-5 and 67-6) were created in 1987. Due to decreasing population trends and plans to continue trapping mountain goats from the Mt. Baldy and Mt. Baird populations for statewide transplants, seasons were restructured in 1991. Total permits were reduced from 24 to 13. Hunt Areas 67-2, 67-4, and 67-6 were combined and renumbered to 67-1. Additionally, Hunt Area 67-1 became 67-2; 67-3 remained 67-3; and 67-5 became 67-4. Season structure for mountain goat Hunt Areas 67-1 and 67-2 for 1997 are shown in Table 7. Permits were increased from 7 to 20 in Hunt Area 67-1 based upon the results of the 1996 population survey. The permit level for Hunt Area 67-2 remained at 4 for 1998. The continuation of a downward population trend resulted in the closure of Hunt Area 67-2 beginning in 1999 and a decrease in permits in Hunt Area 67-1 from 20 to 10.

POPULATION SURVEYS

Productivity and survival have historically been high in this introduced population. In 1982 and 1983 the percent of adult females producing young was 71% and 83%, respectively, and twinning rates were 25% and 33%, respectively. Annual survival from 1982 to 1983 was calculated to be 88% among kids, 95% among yearlings, and 93% among adults/subadults (Hayden 1989).

Surveys have been conducted in Unit 67 on a fairly frequent basis. An aerial population survey was conducted on these two mountain goat populations with a Bell G47 Soloy helicopter in early August 2000.

A total of 90 mountain goats with a kid:adult ratio of 48:100 was counted in the Mt. Baird portion of Unit 67 (Hunt Area 67-1; Table 8). The next most recent count in this area was a helicopter count conducted in 1998 that accounted for 163 mountain goats. This population has shown a steady decline from 217 (the historical high count) to 90 since 1996. Reasons for this decline are largely unknown.

The 2000 population survey of the Mt. Baldy portion of Unit 67 resulted in a total count of only 14 mountain goats with a kid:adult ratio of 56:100 (Table 9). This total of 14 mountain goats represents the lowest total for this population and a continuation of a significant downward trend over the past 10 years. The total of 14 mountain goats is just 11% of the historical high count of 126 for this area that was observed in 1986.

HARVEST CHARACTERISTICS

In 2000, 9 mountain goats (5 males and 4 females) were harvested on the 10 permits (90% success rate) on the 67-1 hunt (Table 10). Drawing odds were 8.3:1 in Hunt Area 67-1 in 2000 (Table 10).

CLIMATIC CONDITIONS

Spring and summer weather conditions were warmer and drier than normal. Winter precipitation was well below normal and temperatures were above average. The spring of 2001 came early, and warm and dry conditions have persisted.

HABITAT CONDITIONS

Unit 67 mountain goat habitat is productive, with a good complex of alpine meadows, mountain mahogany, and conifers. In summer the mountain goats use lush, alpine meadows and cirque basins. Examination of harvested mountain goats from this area indicates they are in extremely good body condition going into winter.

Domestic sheep graze the Mt. Baird area and may be impacting mountain goat summer range. This area is heavily used by mountain goats prior to domestic sheep use, but they leave and move onto winter range when domestic sheep intrude. It is not known if this mountain goat movement is due to forage or spatial competition, or disturbance created by herders and dogs. The Targhee National Forest, who administers the area, has continued to evaluate the conflict.

TRAPPING AND TRANSPLANTING

Efforts to translocate mountain goats from the Mt. Baldy population have been ongoing since 1987. Mountain goats were trapped in clover traps using salt as bait from 1989-1991. A total of 15 mountain goats was removed from the Mt. Baldy population during these three trapping efforts (Table 11).

In July 1992 the New Zealand net-gun crew captured 11 mountain goats on Mt. Baldy. These animals were successfully translocated to the Salmon Region (Panther Creek in Unit 28). The 11 mountain goats translocated in 1992 consisted of 9 females (3 yearlings, 3 two-year-olds, 2 three-year-olds, and 1 four-year-old), and 2 males (1 yearling and 1 two-year-old).

In August 1994 a total of 11 mountain goats was net gunned from the Mt. Baird portion of Unit 67 to be transplanted to Square Top in Unit 21 (Salmon Region) by the New Zealand net gun crew. One 3.5-year-old male was killed during the capture operation. The 10 mountain goats transplanted to Unit 21 consisted of 6 females (4 yearlings and 2 two-year-olds) and 4 males (1 yearling, 2 two-year-olds, and 1 three-year-old). This operation represented the first attempt to remove mountain goats from the Mt. Baird portion of Unit 67.

The New Zealand net gun crew again captured mountain goats in the Mt. Baird portion of Unit 67 in August 1997. A total of 10 adult mountain goats (6 females, 4 males) was transplanted to the Corn Lakes area in Unit 21 (Salmon Region).

A complete summary of mountain goat transplants in Unit 67 is presented in Table 11.

MANAGEMENT IMPLICATIONS

The past heavy harvest strategy (pre-1992) was dictated by the rapidly increasing, productive nature of this introduced herd. Subsequent downward population trends, along with plans to continue trapping mountain goats for transplant operations, precipitated a reduction in permits and a restructuring of Unit 67 mountain goat hunts.

The largest number of mountain goats (217) counted in Hunt Area 67-1 (Mt. Baird area) was observed on the 1996 survey flight. Subsequent survey results indicated a decrease to 163 in 1998 and then 90 in 2000. The population objective after the 1996 survey was to reduce this population to a level thought to be more in balance with available habitat. A more aggressive harvest strategy (20 permits) was adopted beginning with the 1997 hunting season and an additional 10 mountain goats were trapped and provided for statewide transplant operations. However, the 67-1 mountain goat population has declined more precipitously than management actions would dictate. Reasons for this decline are largely unknown. This situation will continue to be monitored closely. Permits will be reduced accordingly.

The continued downward population trend in Hunt Area 67-2 is cause for concern and will be monitored closely. This population decline resulted in the 67-2 hunt being closed beginning with the 1999 season.

LITERATURE CITED

Hayden, J. A. 1989. Status and population dynamics of mountain goats in the Snake River Range, Idaho. M. S. Thesis, Univ. Montana, Missoula. 147 pp.

Table 1. 1999 and 2000 Season structure for controlled, either-sex mountain goat Hunt Areas 51 and 59A in the Upper Snake Region.

Hunt Area	Season	
	Dates	Length (Days)
51	8/30–11/12	75
59A	8/30–11/12	75

Table 2. Summary of Mountain Goat Surveys in Units 51, 59, and 59A, 1982-Present.

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	<u>Ratio</u> Kid:100 Adult
1982 ^{a,c}	51	Lemhi Range South of the Big Timber Creek drainage	75	22	0	97	29
1986 ^a			68	15	17	101	22
1987 ^b			100	30	0	130	30
1992 ^a			54	7	0	61	13
2000 ^a			125	32	0	157	26
1986 ^a	59	Red Conglomerates	32	14	0	46	44
1994 ^a			14	11	0	25	79
1982 ^a	59A	Italian Peaks	46	13	0	59	28
1986 ^a			10	3	0	13	30
1991 ^b			61	24	4	89	39
1994 ^a			92	36	0	128	39

^a Helicopter count.

^b Ground count.

^c Census results combined for Hunt Areas 51-1 and 51-2.

Table 3. Summary of Mountain Goat Harvest and drawing odds by Hunt Area (Hunt Areas 51, 59, and 59A), 1991-2000.

Hunt Area	Year	No. Permits	Harvest		Hunter Success	Days/Hunter	Total 1st Choice Applicants	Drawing Odds
			M	F				
51	1991	6	2	4	100	4.5	32	5.3:1
	1992	6	3	2	83	4.5	50	8.3:1
	1993	6	5	1	100	4.4	32	5.3:1
	1994	6	5	1	100	4.2	44	7.3:1
	1995	4	1	2	75	11.3	36	9.0:1
	1996 ^a	4	3	0	75	ND	25	6.3:1
	1997 ^a	4	0	2	50	ND	20	5.0:1
	1998 ^a	4	3	1	100	ND	40	10.0:1
	1999 ^a	4	2	1	75	ND	34	8.5:1
	2000 ^a	4	3	1	100	ND	33	8.3:1
59	1991	2	1	1	100	2.0	18	9.0:1
	1992	2	1	1	100	5.0	14	7.0:1
	1993	2	2	0	100	3.5	14	7.0:1
	1994	2	0	2	100	4.0	11	5.5:1
	1995	CLOSED			--	--	--	--
	1996	CLOSED			--	--	--	--
	1997	CLOSED			--	--	--	--
	1998	CLOSED			--	--	--	--
	1999	CLOSED			--	--	--	--
	2000	CLOSED			--	--	--	--
59A	1991	3	2	1	100	2.7	17	5.7:1
	1992	3	2	1	100	3.7	22	7.3:1
	1993	4	3	0	75	4.3	25	6.3:1
	1994	4	1	2	75	3.8	34	8.5:1
	1995	5	1	4	100	2.8	35	7.0:1
	1996 ^a	5	2	2	80	ND	44	8.8:1
	1997 ^a	5	4	1	100	ND	43	8.6:1
	1998 ^a	5	4	0	80	ND	36	7.2:1
	1999 ^a	5	3	1	80	ND	49	9.8:1
	2000 ^a	5	3	1	80	ND	45	9.0:1

^a Harvest estimates derived from telephone survey through 1995 and from mandatory harvest reports from 1996-2000.

Table 4. 1999 and 2000 Season structure for controlled, either-sex, mountain goat Hunt Area 50 in the Upper Snake Region.

Hunt Area	Season	
	Dates	Length (Days)
50	8/30–11/12	75

Table 5. Summary of Mountain Goat Surveys in Unit 50, 1982-Present.

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	Ratio Kid:100 Adult
1982 ^a	Closed	Area ^b	13	3	0	16	23
1985 ^a			9	2	0	11	22
1992 ^a			13	0	0	13	0
1999 ^a			26	4	0	30	15
1982 ^a	50	Area ^c	37	8	0	45	22
1985 ^a			66	20	6	92	30
1992 ^a			45	4	0	49	9
1999 ^a			40	10	0	50	25

^a Helicopter.

^b That portion of Unit 50 north and west of the Trail Creek Road and south and west of U.S. Highway 93.

^c That portion of Unit 50 south and east of the Trail Creek road and south and west of U.S. Highway 93.

Table 6. Summary of Mountain Goat Harvest and drawing odds by Hunt Area, (Hunt Area 50) 1991-2000.

Hunt Area	Year	No. Permits	Harvest		Hunter Success	Days/Hunter	Total 1st Choice Applicants	Drawing Odds
			M	F				
50	1991	5	3	2	100	9.0	30	6.0:1
	1992	5	2	3	100	3.0	26	5.2:1
	1993	2	1	1	100	7.0	15	7.5:1
	1994	2	1	1	100	8.5	15	7.5:1
	1995	2	1	0	50	5.0	14	7.0:1
	1996 ^a	2	2	0	100	ND	11	5.5:1
	1997 ^a	2	1	0	50	ND	11	5.5:1
	1998 ^a	2	1	1	100	ND	17	8.5:1
	1999 ^a	2	2	0	100	ND	17	8.5:1
	2000 ^a	2	1	1	100	ND	30	15.0:1

^a Harvest estimates derived from telephone survey through 1995 and from mandatory harvest reports and hunter contacts from 1996-2000.

Table 7. 1999 and 2000 Season structure for controlled, either-sex, mountain goat Hunt Area 67-1 in the Upper Snake Region.

Hunt Area	Season	
	Dates	Length (Days)
67-1	8/30–11/12	75

Table 8. Summary of Mountain Goat Surveys in Unit 67 South of Palisades Creek, 1982-Present (Mt. Baird area).

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	Ratio Kid:100 Adult
1982 ^a	67-1	South of Palisades Creek	33	13	0	46	39
1985 ^a			35	16	0	51	46
1986 ^b			0	0	104	104	--
1986 ^a			37	15	0	52	41
1988 ^b			71	21	0	92	30
1990 ^b			45	18	0	63	40
1993 ^b			104	33	16	153	34
1994 ^a			73	42	0	115	58
1996 ^a			151	66	0	217	44
1998 ^a			118	45	0	163	38
2000 ^a			61	29	0	90	48

^a Helicopter survey.

^b Ground count.

Table 9. Summary of Mountain Goat Surveys in Unit 67 North of Palisades Creek, 1982-Present (Mt. Baldy area).

Year	Hunt Area	Inclusive Location	Adults	Kids	Unknown	Total	Ratio Kid:100 Adult
1982 ^a	67-2	North of Palisades Creek	45	12	0	57	27
1985 ^a			31	8	0	39	26
1986 ^b			0	0	126	126	--
1986 ^a			38	19	49	106	50
1987 ^b			72	28	0	100	39
1988 ^b			91	31	0	122	34
1989 ^b			35	12	0	47	34
1990 ^b			73	22	0	95	30
1994 ^a			41	20	0	61	49
1996 ^a			47	17	0	64	36
1998 ^a			26	7	0	33	27
2000 ^a			9	5	0	14	56

^a Helicopter survey.

^b Ground count.

Table 10. Summary of Mountain Goat Harvest and drawing odds by Hunt Area (Hunt Areas 67-1 and 67-2), 1991-2000.

Hunt Area	Year	No. Permits	Harvest ^a		Hunter Success	Days/Hunter	Total 1st Choice Applicants	Drawing Odds
			M	F				
Mt. Baird								
67-1	1991	7	5	2	100	3.3	129	18.4:1
	1992	7	4	3	100	3.8	72	10.3:1
	1993	7	2	4	85	3.0	67	9.6:1
	1994	7	6	1	100	2.7	77	11.0:1
	1995	7	2	0	28	7.0	97	13.9:1
	1996	7	4	1	71	ND	77	11.0:1
	1997	20	8	8	80	ND	166	8.3:1
	1998	20	4	9	65	ND	129	6.5:1
	1999	10	4	5	90	ND	105	10.5:1
	2000	10	5	4	90	ND	83	8.3:1
Mt. Baldy ^b								
67-2	1991	2	2	0	100	1.0	17	8.5:1
	1992	2	1	1	100	3.0	9	4.5:1
	1993	2	2	0	100	1.0	17	8.5:1
	1994	2	1	1	100	6.5	11	5.5:1
	1995	4	1	0	25	5.7	32	8.0:1
	1996	4	3	1	100	ND	41	10.3:1
	1997	4	3	1	100	ND	26	6.5:1
	1998	4	3	0	75	ND	21	5.3:1
	1999	CLOSED			--	--	--	--
	2000	CLOSED			--	--	--	--
67-3	1991	2	0	1	50	1.0	15	7.5:1
	1992	2	2	0	100	3.5	12	6.0:1
	1993	2	1	0	50	7.5	24	12.0:1
	1994	2	0	2	100	2.0	9	4.5:1
67-4	1991	2	2	0	100	4.0	15	7.5:1
	1992	2	1	0	50	4.0	21	10.5:1
	1993	2	2	0	100	2.0	9	4.5:1
	1994	2	1	1	100	2.0	22	11.0:1

^a Harvest estimates derived from telephone survey through 1995 and from mandatory harvest reports and hunter contacts from 1996-2000

^b Hunt Areas 67-2, 67-3, and 67-4 sequential (1991-1994).

Table 11. Summary of Mountain Goat Transplants in Unit 67 in the Upper Snake Region.

Date	Capture Site	Release Site	Adult		Kid		Total
			M	F	M	F	
7/69	9-Snow Peak	67-Palisades Creek	1	2	0	0	3
7/69	9A-Black Mtn.	67-Palisades Creek	1	1	0	0	2
7/70	9A-Black Mtn.	67-Black Canyon	3	0	0	0	3
7/70	9A-Black Mtn.	67-Black Canyon	1	2	1	0	4
8/89	67-Baldy Mtn.	28-Williams Creek	1	1	0	0	2
7/90	67-Baldy Mtn.	28-Panther Creek	2	3	0	2	7
7/91	67-Baldy Mtn.	28-Panther Creek	1	4	0	1	6
7/92	67-Baldy Mtn.	28-Panther Creek	2	9	0	0	11
8/94	67-Baird Mtn.	21-Square Top	4	6	0	0	10
8/97	67-Baird Mtn.	21-Corn Lakes	4	6	0	0	10

**PROGRESS REPORT
SURVEYS AND INVENTORY**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Mountain Goat Surveys</u>
PROJECT:	<u>W-170-R-25</u>		<u>and Inventories</u>
SUBPROJECT:	<u>7</u>	STUDY NAME:	<u>Big Game Population Status,</u>
STUDY:	<u>I</u>		<u>Utilization, and Associated</u>
JOB:	<u>5</u>		<u>Habitat Studies</u>
PERIOD COVERED:	<u>July 1, 2000 to June 30, 2001</u>		

MOUNTAIN GOAT - SALMON REGION

ABSTRACT

During 2000, 24 permits for mountain goats were available in 9 hunt areas. Two permit holders chose to defer their permits until the 2001 season because of wildfires in the Salmon Region. Of 22 active hunters, 20 harvested animals (91% success), 14 (75%) of which were males. Chances of drawing a permit for mountain goat in the Salmon Region fell to 12% in 2000, the lowest level since 1985.

The most recent aerial surveys for mountain goats were conducted in Units 21 and 28 during January and February 2001. Few animals were observed in Unit 21, whereas numbers in some areas of Unit 28 indicated stable to slightly increasing herds. The Salmon Region has approval for 10 mountain goat release sites, 5 of which are in designated wilderness. Sixty-one mountain goats have been released since 1989 and the region could accommodate release of 120 additional mountain goats.

UNITS 21, 21A, 27, 28, 29, 30, 30A, 36, 36A, 36B, 37, 37A
CONTROLLED HUNT AREAS 27-1, 27-2, 27-3, 27-4, 30, 36A-1, 36A-2, 36A-3, 36A-4, 36B

MANAGEMENT DIRECTION

Follow statewide management direction. Increase population, increase nonconsumptive use of mountain goat herds, maintain harvest and recreational opportunity, and translocate mountain goats.

BACKGROUND

Most herds winter at low elevations on south-facing cliffs, where mountain-mahogany (*Cercocarpus ledifolius*) is a dominant forage species. These mountain goats move to higher elevations during summer where alpine, subalpine, or north-slope habitats are preferred. Mountain goats in Units 36 and 36A depend less on mountain-mahogany winter ranges. Most do migrate to south-facing cliffs, but some winter on high elevation ridgelines.

As with other herds in Idaho, population trends over the past 20-25 years have varied considerably

among individual herds. Some herds, particularly in accessible areas, have been drastically reduced or eliminated. Other herds have declined and then recovered to near historical high numbers.

The U. S. Forest Service (USFS) administers most mountain goat habitat, but the Bureau of Land Management also manages small amounts of critical winter range. Portions of Units 21, 27, 28, and 36 are designated wilderness.

Suitable mountain goat habitats are often widely separated. Thus, movement of mountain goats into low-density areas is slow and erratic. Translocating animals may accelerate processes of repopulating vacant habitats and stimulating increases in stagnant herds.

Unit 37 appears to have potential mountain goat habitat, but this area lies outside the native range of mountain goats in Idaho. Because mountain goats have prospered following introduction into several areas outside their native range in North America, there may be potential for establishing a new herd in Unit 37. However, no inventory has been made of habitats in Unit 37 and we currently have no reliable estimate of the area's potential to support mountain goats.

POPULATION SURVEYS

During January and February 2001, 69 mountain goats were observed during aerial surveys of Units 21 (Table 1) and 28 (Table 4). Observed age ratio was 21 kids per 100 adults. The number of mountain goats observed in Unit 21 was approximately 20% of the previous count in 1996. Comparable data in Unit 28 are scarce; however, counts of some mountain goat herds in and adjacent to Hunt Area 27-4 appear stable to increasing.

HARVEST CHARACTERISTICS

The 1991-1995 Mountain Goat Management Plan set criteria for establishing permit levels:

1. Set permit levels so annual harvest does not exceed 5% of adult segment of a herd, except 15% of adults can be harvested in highly productive herds if at least 15% of the adult females are producing twins.
2. Authorize hunts only for herds consisting of ≥ 50 individuals.

From 1975-1982, 21 mountain goat hunts were completely closed in response to declining populations. Permits in remaining hunts were reduced to a low of 10 in 1985 (Tables 7 and 8). From 1986 to 1993, the number of permits increased to 32 as several hunts were reinstated and permit levels were increased in existing hunts. In 1995 permits were reduced in hunts 36A-3 and 36A-4 and hunts 27-1 and 27-2 were closed. In 1997 hunt 27-2 was reopened with 2 permits. Hunt 27-4 was added in 1999 with 2 permits.

Harvest and hunter information was compiled from Big Game Mortality Reports (BGMRs). Successful hunters must present mountain goat horns to an IDFG representative within 10 days of harvest and complete a BGMR. Mountain goat season structure (Table 9) has been unchanged since

1991 and permit levels (Tables 7 and 8) were identical to those of 1999. Nine controlled hunts with 24 permits were authorized for 2000 in the Salmon Region. Hunters could harvest a mountain goat of either sex, except females accompanied by kids were protected. Two holders of mountain goat permits for 2000 opted to defer their permits until the 2001 hunting season because of wildfires in the Region. Success among 22 active hunters was 91% in 2000. Of 19 mountain goats for which the sex was recorded, 14 were males. During 75-day seasons (Table 9), region-wide hunter success has averaged 90% since 1995 and males have comprised 67% of the harvest.

Prior to 1986 the chance of drawing a Salmon Region mountain goat permit was very low, averaging 5%. Since 1986 hunters who apply for a mountain goat permit have been restricted to only that controlled hunt application. From 1986 to 1994 drawing success substantially increased, averaging 20%. When mountain goat permit numbers were reduced in 1995, applicant numbers did not drop proportionally. Since 1995 drawing success has averaged 14%, reaching a low of 12% in 2000. Drawing odds for individual hunts vary widely from year to year.

CLIMATIC CONDITIONS

Summer 2000 was dry with extensive wildfires in parts of the Salmon Region. Vegetation cured early in the growing season. However, above-average October rainfall prompted autumn green-up that partly replaced forage removed by fires. Winter temperatures were mild, seldom dropping below 0°F, and snow accumulation was minimal. Animals, therefore, entered winter in average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack was well below average (30-55% of normal) and snowmelt occurred 2-4 weeks earlier than normal. Water-year precipitation has been well below average, so drought conditions prevailed through the end of the reporting period.

HABITAT CONDITIONS

Mountain goat herds along the Bitterroot Mountains, Panther Creek, Lemhi Range, Middle Fork Salmon River, and Squaw Creek are largely migratory. Winter ranges are low elevation, south-facing cliffs where mountain-mahogany is the dominant forage species. These mountain goats generally move to higher elevation, sub-alpine habitats in summer. Some mountain goats along the Idaho border summer in Montana.

During the past 15 years, elk numbers have increased dramatically. Portions of mountain goat winter ranges in Units 21, 21A, 27, 29, and 37A now receive substantial use by elk during winter. The capacity of these ranges to support mountain goats may be reduced because of competition with elk.

There is little overlap between elk and mountain goats on critical winter and summer ranges in Units 36 and 36A. Habitat conditions are believed to be stable and able to accommodate some increase in mountain goat populations, primarily in Unit 36.

CAPTURE AND TRANSLOCATION

Ten potential release sites have been approved in the Salmon Region (Table 10) with more sites pending. Since 1989, 61 mountain goats have been released within the region (Table 11).

MANAGEMENT IMPLICATIONS

Most mountain goat herds in the Salmon Region are stable, whether or not herds are hunted. Permit levels have been adjusted to reflect current populations.

Translocation of mountain goats into historical range will continue to be a priority. Release sites along the Middle Fork Salmon River have high esthetic values because of the $\geq 8,000$ river tourists during summer. Release sites will remain closed to hunting until populations increase to huntable levels.

Units 36 and 36A are very popular areas for human recreation during both summer and winter. The visible mountain goat herds in these units, therefore, fulfill a valuable esthetic role in addition to providing harvest. A few recreational activities, such as snowmobiling and heliskiing, have potential to disturb wintering mountain goats in some areas. Regulation of these activities needs to be coordinated with the Sawtooth National Recreation Area.

Table 1. Mountain goat surveys in Unit 21, Salmon Region, 1996-present.

Year	Location	Adults	Kids	Unknown	Total	Kids:100 adults
1996	Lost Trail - Hughes Cr.	8	2		10	25
1996	Hughes Cr. - Horse Cr.	26	4		30	15
2001	Hughes Cr. - Horse Cr.	5	1		6	20

Table 2. Mountain goat surveys in Units 21A and 30, Salmon Region, 1988-present.

Year	Hunt		Adults	Kids	Unknown	Total	Kids:100
	Area	Location					Adults
1988	30	Sheep Cr.-Goat Mt.	116	22		138	19
1996	30	Sheep Cr.-Goat Mt.	81	4		85	5
1997	30	Sheep Cr.-Goat Mt.	73	16		89	22

Table 3. Mountain goat surveys in Unit 27, Salmon Region, 1988-present.

Year	Hunt		Adults	Kids	Unknown	Total	Kids:100 Adults
	Area	Location					
1999*		Rapid R. headwaters	21	3		24	14
1988	27-1	E. Fork Mayfield Cr.	17	4		21	24
1994	27-1	E. Fork Mayfield Cr.	10	1		11	10
1995	27-1	E. Fork Mayfield Cr.	16	4		20	25
1997	27-1	E. Fork Mayfield Cr.	17	2		19	12
1999*	27-1	E. Fork Mayfield Cr.	7	1		8	14
1988	27-2	Trail Cr.-China Cr.	54	11		65	20
1994	27-2	Trail Cr.-China Cr.	36	5		41	14
1995	27-2	Trail Cr.-China Cr.	50	6		56	12
1997	27-2	Trail Cr.-China Cr.	92	10		102	11
1999*	27-2	Trail Cr.-China Cr.	37	4		41	11
1993*	27-3	Meyers Cove-Falconberry	37	7		44	19
1999*	27-3	Meyers Cove-Falconberry	37	4		41	11
1993*	27-3	Yellowjacket-Waterfall	49	8		57	16
1999*	27-3	Yellowjacket-Waterfall	57	6		63	11
1993*		Waterfall-Goat Cr.	15	1		16	7
1999*		Waterfall-Goat Cr.	14	1		15	7
1993*		Big Cr.-Soldier Cr.	0	0		0	
1999*		Big Cr.-Soldier Cr.	5	1		6	20
1999*		Marble Cr.-Indian Cr.	18	2		20	11

* Spring green-up count.

Table 4. Mountain goat surveys in Unit 28, Salmon Region, 1988-present.

Year	Hunt		Adults	Kids	Unknown	Total	Kids:100 Adults
	Area	Location					
1996		Cobalt-Garden Cr.	10	0		10	0
2001		Cobalt-Garden Cr.	2	0		2	0
1999*		Upper Camas Cr.	5	0		5	0
1996		Williams Cr.	2	2		4	100
1996		Iron Cr.-Moyer Cr.	11	5		16	45
1999+		Iron Cr.-Moyer Cr.	21	2		23	10
2001		Iron Cr.-Moyer Cr.	17	3		20	18
2001		Napias Cr.	3	1		4	33
2001	27-4	Camas Cr.–Yellowjacket	30	7		37	23

* Spring green-up count.

+ Incidental to elk survey.

Table 5. Mountain goat surveys in Units 36, 36A, and 36B, Salmon Region, 1988-present.

Year	Hunt		Adults	Kids	Unknown	Total	Kids:100
	Area	Location					Adults
1988	36-1	Elk Cr.-Redfish L.	27	7		34	26
1994	36-1	Elk Cr.-Redfish L.	22	0		22	0
1988	36-2	Redfish L.-Alturas Cr.	39	7		46	18
1994	36-2	Redfish L.-Alturas Cr.	28	7		35	25
1988		Beaver Cr.-Galena	32	7		39	22
1994		Beaver Cr.-Galena	27	2		29	7
1988	36A-1	E Pass Cr.-W Pass Cr.	37	13		50	35
1994	36A-1	E Pass Cr.-W Pass Cr.	38	10		48	26
1988	36A-2	Above W Pass Cr.	33	9		42	27
1994	36A-2	Above W Pass Cr.	36	7		43	19
1988	36A-3	Warm Spgs.-Wickiup Cr.	61	18		79	30
1994	36A-3	Warm Spgs.-Wickiup Cr.	48	8		56	17
1988	36A-4	Germania Cr.-4th July Cr.	86	21		107	24
1994	36A-4	Germania Cr.-4th July Cr.	65	6		71	9
1985	36B	Mill Cr.-Ramey Cr.	52	23		75	44
1986	36B	Mill Cr.-Ramey Cr.	37	16		53	43
1988	36B	Mill Cr.-Ramey Cr.	73	20		93	27
1994	36B	Mill Cr.-Ramey Cr.	92	23	2	117	25

Table 6. Mountain goat surveys in Units 29 and 37A, Salmon Region, 1988-present.

Year	Location	Adults	Kids	Unknown	Total	Kids:100 adults
1988	Above Patterson Cr.	9	1		10	11
	Mahogany-Patterson	21	3		24	11
	Morse Cr.-Falls Cr.	12	2		14	17
	McKim Cr.-Tater Cr.	10	1		11	10
	Total	52	7		59	14

Table 7. Mountain goat harvest, Salmon Region, 1979-present.

Year	Permits	First Choice Applicants	Draw Success (%)	Harvest			Hunter Success (%)
				Male	Female	Total	
1979	93	1,833	5	18	10	28	30
1980	40	1,524	3	11	4	15	38
1981	23			10	6	16	70
1982	20	456	4	6	6	12	60
1983	20	350	6	7	7	14	70
1984	20	270	7	12	5	17	85
1985	10	178	6	6	0	6	60
1986	13	65	20	8	2	10	77
1987	13	67	19	7	5	12	92
1988	13	80	16	5	2	7	54
1989	29	95	31	17	6	23	79
1990	29	130	22	13	7	20	69
1991	29	174	17	18	8	26	90
1992	29	149	19	18	7	25	86
1993	32	165	19	18	7	25	78
1994	32	172	19	20	6	26	81
1995	21	158	13	13	6	19	90
1996	21	143	15	15	4	19	90
1997	22	144	15	10	8	18	82
1998	22	159	14	11	11	22	100
1999	24	140	17	17	5	22	92
2000	^a 24	201	12	14	5	20	91

^a Two of these permits were deferred until the 2001 season because of wildfires.

Table 8. Mountain goat harvest and draw odds by Hunt Area, Salmon Region, 1989-present.

Hunt Area	Year	Permits	Harvest		Hunter Success	Days/ Hunter ^a	First Choice Applicants	Draw Odds	
			M	F					
27-1	1989	3	2	0	67	2.0	9	1: 3.0	
	1990	3	2	0	67	2.7	9	1: 3.0	
	1991	3	1	2	100	3.3	14	1: 4.7	
	1992	3	2	1	100	2.7	13	1: 4.3	
	1993	3	1	2	100	3.3	15	1: 5.0	
	1994	3	2	1	100	3.5	8	1: 2.7	
	1995-2000 closed								
27-2	1989	3	3	0	100	3.3	10	1: 3.3	
	1990	3	1	0	33	3.0	10	1: 3.3	
	1991	3	2	0	67	8.0	18	1: 6.0	
	1992	3	3	0	100	5.5	9	1: 3.0	
	1993	3	3	0	100	6.0	23	1: 7.7	
	1994	3	2	1	100	9.0	15	1: 5.0	
	1995-1996 closed								
	1997	2	2	0	100	4.0	7	1: 3.5	
	1998	2	1	1	100	7.0	23	1:11.5	
	1999	2	1	1	100	1.5	10	1: 5.0	
2000	2	1	1	100	3.0	16	1: 8.0		
27-3	1993	2	0	2	100	8.0	11	1: 5.5	
	1994	2	2	0	100	6.0	8	1: 4.0	
	1995	2	2	0	100	3.0	12	1: 6.0	
	1996	2	2	0	100	1.0	22	1:11.0	
	1997	2	1	0	50	4.0	10	1: 5.0	
	1998	2	1	1	100	3.0	12	1: 6.0	
	1999	2	1	0	50	4.0	14	1: 7.0	
	2000	2	1	1	100	1.5	13	1: 6.5	
27-4	1999	2	2	0	100	4.8	13	1: 6.5	
	2000	^b 2					13	1: 6.5	
30	1989	3	2	1	100	5.0	19	1: 6.3	
	1990	3	2	1	100	3.3	9	1: 3.0	
	1991	3	3	0	100	8.0	27	1: 9.0	
	1992	3	3	0	100	4.0	11	1: 3.7	
	1993	3	3	0	100	6.0	21	1: 7.0	
	1994	3	2	1	100	3.0	17	1: 5.7	
	1995	3	1	2	100	11.0	20	1: 6.7	
	1996	3	1	2	100	-	14	1: 4.7	

Table 8. Mountain goat harvest and draw odds by Hunt Area, Salmon Region, 1989-present (continued).

Hunt Area	Year	Permits	Harvest		Hunter Success	Days/ Hunter ^a	First Choice Applicants	Draw Odds
			M	F				
	1997	3	1	2	100	6.3	32	1:10.7
	1998	3	2	1	100	10.0	23	1: 7.7
	1999	3	1	2	100	5.7	10	1: 3.3
	2000	3	3	0	100	3.5	27	1: 9.0
36-1	1982-2000 closed							
36-2	1989-2000 closed							
36A-1	1989	3	2	0	67	4.0	5	1: 1.7
	1990	3	1	2	100	5.7	24	1: 8.0
	1991	3	2	1	100	2.3	12	1: 4.0
	1992	3	2	1	100	3.7	34	1:11.3
	1993	3	2	0	67	3.0	8	1: 2.7
	1994	3	3	0	100	4.7	29	1: 9.7
	1995	3	0	2	67	4.7	31	1:10.3
	1996	3	2	1	100	-	16	1: 5.3
	1997	3	2	0	67	-	15	1: 5.0
	1998	3	1	2	100	2.0	16	1: 5.3
	1999	3	2	0	67	3.0	8	1: 2.7
	2000	3	2	0	67	5.0	21	1: 7.0
36A-2	1989	2	2	0	100	3.5	3	1: 1.5
	1990	2	1	1	100	4.5	18	1: 9.0
	1991	2	0	2	100	8.0	10	1: 5.0
	1992	2	2	0	100	4.0	11	1: 5.5
	1993	2	1	0	50	4.0	7	1: 3.5
	1994	2	0	0	0	4.0	8	1: 4.0
	1995	2	1	1	100	2.0	9	1: 4.5
	1996	2	2	0	100	4.5	21	1:10.5
	1997	2	1	1	100	4.5	7	1: 3.5
	1998	2	0	2	100	1.5	17	1: 8.5
	1999	2	2	0	100	4.5	8	1: 4.0
	2000	2	1	1	100	3.5	27	1: 13.5
36A-3	1989	4	1	2	75	3.0	12	1: 3.0
	1990	4	1	2	75	3.7	18	1: 4.5
	1991	4	2	1	75	2.3	22	1: 5.5
	1992	4	3	1	100	4.8	19	1: 4.8
	1993	4	3	1	100	6.0	21	1: 5.3
	1994	4	2	1	75	6.3	23	1: 5.8
	1995	2	0	1	50	5.0	13	1: 6.5

Table 8. Mountain goat harvest and draw odds by Hunt Area, Salmon Region, 1989-present (continued).

Hunt Area	Year	Permits	Harvest		Hunter Success	Days/ Hunter ^a	First Choice Applicants	Draw Odds
			M	F				
	1996	2	2	0	100	14.5	11	1: 5.5
	1997	2	1	1	100	2.5	12	1: 6.0
	1998	2	2	0	100	3.0	12	1: 6.0
	1999	2	2	0	100	3.0	11	1: 5.5
	2000	2	2	0	100	3.5	13	1: 6.5
36A-4	1989*	8	4	3	88	6.0	27	1: 3.4
	1990*	8	2	1	38	10.6	33	1: 4.1
	1991*	8	5	2	88	6.9	34	1: 4.2
	1992*	8	1	3	50	11.0	37	1: 4.6
	1993*	8	2	1	38	12.8	33	1: 4.1
	1994*	7	3	2	71	4.5	36	1: 4.5
	1995*	5	5	0	100	4.7	47	1: 9.4
	1996*	5	2	1	60	6.3	27	1: 5.4
	1997	4	0	3	75	3.0	31	1: 7.8
	1998	4	2	2	100	5.2	33	1: 8.2
	1999	4	3	1	100	5.3	31	1: 7.8
	2000	4	1	2	75	1.3	39	1: 9.8
	(* Archery Only)							
36B	1989	3	1	0	33	5.7	10	1: 3.3
	1990	3	3	0	100	2.3	9	1: 3.0
	1991	3	3	0	100	4.0	37	1:12.3
	1992	3	2	1	100	1.3	15	1: 5.0
	1993	4	3	1	100	2.8	26	1: 6.5
	1994	5	4	0	80	2.0	28	1: 7.0
	1995	4	4	0	100	1.3	26	1: 6.5
	1996	4	4	0	100	5.2	32	1: 8.0
	1997	4	2	2	100	3.0	30	1: 7.5
	1998	4	2	2	100	3.5	23	1: 5.8
	1999	4	3	1	100	6.0	35	1: 8.8
	2000	4	3	0	75	2.3	32	1: 8.0

^a Days/hunter based only on partial sample of successful hunters beginning in 1996.

^b Both permits in Area 27-4 were deferred until 2001 season.

Table 9. Season structure for controlled mountain goat hunts, Salmon Region, 2000.

Hunt Area	Season		Bag Limit
	Dates	Length (Days)	
27-2	8/30-11/12	75	1 either sex
27-3	8/30-11/12	75	1 either sex
27-4	8/30-11/12	75	1 either sex
30	8/30-11/12	75	1 either sex
36A-1	8/30-11/12	75	1 either sex
36A-2	8/30-11/12	75	1 either sex
36A-3	8/30-11/12	75	1 either sex
36A-4	8/30-11/12	75	1 either sex
36B	8/30-11/12	75	1 either sex

Table 10. Approved release sites for mountain goats in Salmon Region.

Unit	Location	Release Method	No. Goats to Release	No. Released To Date
21 ^a	Horse Cr.	Helicopter	30	20
21	Beartrap Springs	Vehicle	10	-
27 ^a	Goat Cr.	Helicopter	10-20	-
27 ^a	Tumble/Parrot Cr.	Helicopter	10	-
27 ^a	Ship Island Cr.	Helicopter	20-30	8
27 ^a	Jack/Wilson Cr.	Helicopter	10	7
28	Panther Cr.	Vehicle	10-20	23
28	Williams Cr.	Vehicle	10	2
29	Warm Springs Cr.	Helicopter	10-20	-
29	Haynes Cr.	Vehicle	10-20	-

^a Designated wilderness, helicopter use authorized by USFS.

Table 11. Mountain goat translocation history, Salmon Region, 1982-present.

Date	Capture Site		Release Site		Adults		Kids		Total
	Unit/State	Location	Unit	Location	M	F	M	F	
1982	WA	Olympic Park	37A	Patterson Cr.	8	12			20
1989	9	Snow Peak	27	Jack Cr.		1			1
1989	10	Black Mt.	27	Jack Cr.	2	4			6
1989	67	Swan Valley	28	Williams Cr.	1	1			2
1990	67	Swan Valley	28	Pine Cr.	1				1
1990	67	Swan Valley	28	Panther Cr.	1	3		2	6
1991	10	Black Mt.	27	Ship Island Cr.	4	4			8
1991	67	Swan Valley	28	Panther Cr.	1	4		1	6
1992	67	Swan Valley	28	Panther Cr.	2	9			11
1994	67	Mt. Baird	21	Square Top Mt.	4	6			10
1997	67	Big Elk Cr.	21	Corn Lake	4	6			10

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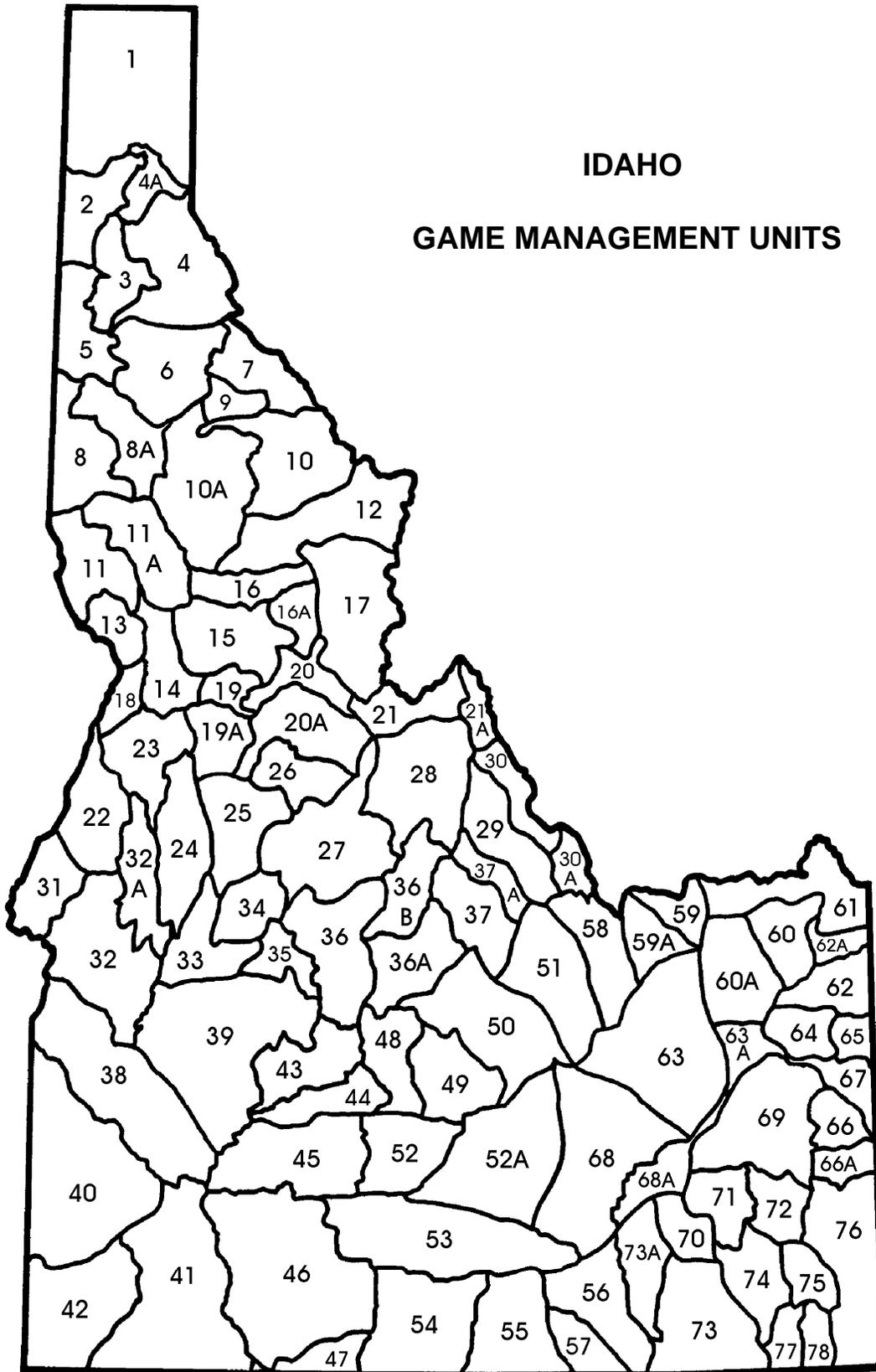
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Bureau of Wildlife

IDAHO

GAME MANAGEMENT UNITS



FEDERAL AID IN WILDLIFE RESTORATION

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

