

**IDAHO DEPARTMENT OF FISH AND GAME**

**Steven M. Huffaker, Director**

**Project W-170-R-28**

**Progress Report**



**UPLAND GAME**

Study II, Job 1

April 1, 2003 to March 31, 2004

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**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>1-7</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b>	<u>April 1, 2003 to March 31, 2004</u>		

**STATEWIDE**

**Summary**

During the report period, staff continued to follow the 1991-1995 Upland Game Species Management Plan. The plan will be revised, as needed, and will not be rewritten in the near future. This plan has three general objectives:

- Increase efforts at improving habitat for upland game species, particularly through the Department's Habitat Improvement Program (HIP)
- Increase hunting opportunity for underutilized species
- Simplify regulations to minimize confusion for the hunting public

Upland game population trends are monitored through harvest surveys, August roadside counts, August helicopter flush counts, rooster crow counts, hunter check stations, and wing barrel harvest data. Each region collects data from a combination of methods based on regional bird densities and sampling constraints. Statewide, telephone surveys assess overall hunter activity and harvest of upland game species. From 1996 to 2000, telephone surveys estimated statewide rather than regional trends (except turkey) due to budget constraints. However, a separate telephone survey was conducted in 2000-2003 for sage-grouse and sharp-tailed grouse to improve sample size for these two species being considered for listing under the Federal Endangered Species Act (FESA). Also, starting in 2001, telephone surveys were expanded to collect regional data for all upland game species.

Statewide, upland game bird population trends were up in 2003. Chukar, quail, gray partridge, pheasant, and forest grouse harvest increased in 2003. Sage-grouse and sharp-tailed grouse harvest information was not available for this report. Wild turkey harvest increased in 2003 and was the highest harvest recorded.

## **Pheasant**

### **Abstract**

Pheasant management has intensified since the decline of pheasant populations during the 1980s. As of March 31, 2003, over 3,627 HIP upland bird projects covering about 79,817 acres had been started in Idaho. Special Pheasant Management Areas have been designated in several regions. These areas were established to attempt to concentrate most pheasant management into smaller areas that will allow closer monitoring of the impacts of this program.

### **Season Framework**

See Appendix A for the 2003 pheasant season framework. The bag and possession limit remained at three and six statewide. The number of pheasants allowed per Wildlife Management Area (WMA) pheasant permit remained at six and the cost of the permit remained \$21.50 for 2003.

### **Population Surveys**

Surveys were expanded in 1990 to include more August roadside routes. Overall, the number of pheasants observed per mile increased in Idaho compared to 2002.

### **Harvest Characteristics**

In a statewide telephone survey, approximately 24,540 hunters harvested 77,469 pheasants in 2003 (Table 1). Birds harvested per day in 2003 (0.62) were slightly higher than harvest per day in 2002 of 0.51 (Table 2). The Southwest Region had the highest hunter activity where 10,196 hunters harvested 31,962 pheasants.

### **Climatic Conditions**

Snowfall during the winter of 2003 was below average in most of the state. Temperatures and precipitation during the nesting season were warm to hot and dry. The climatic conditions improved nest success and brood survival in most areas of the state except in eastern Idaho. Also, the conditions favor an early and steady alfalfa harvest that can be detrimental to pheasants in areas like the Magic Valley where alfalfa is a major agricultural product. Summer precipitation was below normal and drought conditions existed throughout most of the state. Late summer showers provided relief in some parts of the state.

### **Habitat Conditions**

Habitat conditions continue to be marginal in many areas, with intensive farming activities leaving little winter cover or food. Swathing of alfalfa continues to destroy many nests, especially in the Magic Valley Region. The U.S. Department of Agriculture (USDA) declared several Idaho counties as agricultural disaster areas due to losses caused by drought. Several counties received emergency approval to graze Conservation Reserve Program (CRP) lands in

southeastern Idaho. Other areas were impacted by wildfire throughout the summer. Pheasant habitat (primarily agricultural) did not suffer significant losses directly from wildfire, but dry vegetative cover was intentionally removed throughout the summer to reduce the threat of fire around housing developments and agricultural fields. The greatest loss of upland game bird habitat from wildfire occurred in sagebrush grasslands and forested habitats.

### **Depredations**

Pheasants continue to cause depredations in a few areas, primarily on sprouting cornfields in the Southwest Region. Low population levels make this problem minimal.

### **Trapping and Transplanting**

No activities during this study period.

### **Management Studies**

No activities during this study period.

### **Management Implications**

Pheasant populations continue to fluctuate below historical levels in Idaho. Stable populations exist in areas where CRP lands complement other available nesting and brood-rearing habitat in the Clearwater, Southwest, and Southeast regions. There is public concern regarding predator numbers and their impacts to upland game species. To alleviate some of these concerns, the Department employed private trappers to trap and remove predators during the nesting season on WMAs where upland game and waterfowl production is a primary management objective.

## **Quail**

### **Abstract**

Quail populations continued to be good in many areas. Statewide harvest in 2003 increased from 2002. HIP efforts have benefited quail in the Clearwater and Southwest regions. Mountain quail are rare and the hunting season has been closed since 1984.

### **Season Framework**

The season framework (103 days) was one day longer than 2002. The bag limit was unchanged at ten per day (Appendix A).

### **Population Surveys**

Quail are counted incidental to other species during the August brood routes. No other surveys are done. Vocalization surveys were conducted within 13 areas in the Magic Valley Region to locate remnant populations of mountain quail.

## **Harvest Characteristics**

The statewide quail harvest estimate from the telephone survey increased from 88,607 in 2002 to 140,409 in 2003 (Table 1). The total number of quail hunters was slightly down from 12,308 in 2002 to 11,670 in 2003. The number of birds taken per hunter increased from 7.2 in 2002 to 12.0 in 2003 (Table 3). The Southwest Region had the highest level of quail harvest with 8,467 hunters taking 105,749 birds.

Quail were checked at stations incidental to other activities.

## **Climatic Conditions**

Snowfall during the winter of 2003 was below average in most parts of Idaho that have quail. Temperatures and precipitation during the nesting season were hot and dry. Summer 2003 precipitation was average to below normal and drought conditions existed in most regions of the state.

## **Habitat Conditions**

In general, the amount of riparian and agricultural habitat suitable for quail appears stable. The production and harvest of quail was up in 2003. Mountain quail have suffered a long-term decline for reasons that are still unclear.

## **Trapping and Transplanting**

No activities during this study period.

## **Management Studies**

Mountain quail continue to decline in Idaho. In 1992, a graduate research study was initiated to investigate the reasons for the declines observed during the last 20 years. A petition to list mountain quail as endangered under the FESA was submitted in 2001.

Mountain quail population and habitat surveys were conducted in the Magic Valley Region. A graduate student project is being developed to continue the surveys.

## **Management Implications**

Habitat improvement for quail will continue to be part of the HIP program. A greater emphasis on riparian buffers and shrub plantings will help improve existing habitat. Financial incentives for these practices also are available through the Continuous Conservation Reserve Program.

## **Forest Grouse**

### **Abstract**

Forest grouse continue to be an important resource for upland game bird hunters in Idaho. Forest grouse harvest increased in 2003 (182,770) when compared to 2002 (147,694). Forest grouse management activities continue to be minimal.

### **Season Framework**

The 2003 season framework was unchanged (Appendix A) with a 122-day season from September 1 to December 31. This season framework has remained unchanged since 1990. Bag and possession limits were four and eight.

### **Population Surveys**

Forest grouse population surveys were not conducted in Idaho during 2003.

### **Harvest Characteristics**

In a telephone survey, the statewide harvest estimate for forest grouse increased from 147,692 in 2002 to 182,770 in 2003 (Table 1). The number of forest grouse taken per day was 0.95, which was the third highest average during the past ten years (Table 4). The number of birds per hunter was 5.45, also the third highest average during the past ten years. The Southwest Region had the largest number of hunters (7,136) and forest grouse harvested (40,548).

Wing data were collected incidental to check stations run for other species. Wings were also collected at wing barrels. The number of blue and ruffed grouse wings collected in the regions has increased considerably in recent years and need analysis.

### **Climatic Conditions**

Snowfall was below average during the winter of 2003. Temperatures and precipitation during the nesting season were warm and dry. Summer precipitation was below normal and drought conditions existed throughout most of the state.

### **Habitat Conditions**

The Department continues to provide input to landowners statewide on how to improve forest grouse habitat. In 2000, the HIP program was expanded to include projects for all upland game bird species. Food plots and riparian enhancements are two practices that benefit forest grouse when practices are located in forested areas.

### **Trapping and Transplanting**

No activities during this study period.

## **Management Studies**

No activities during this study period.

## **Management Implications**

With current staffing and operating resources, little additional management work on forest grouse is planned. Weather, particularly spring nesting weather, will continue to dictate population trends, since habitat is relatively stable for these species.

## **Sage-grouse**

### **Abstract**

Sage-grouse populations were similar to 2000, but continued to be below pre-1985 levels. Extensive lek routes are run by the Department to monitor populations in specific areas and their response to local weather and habitat conditions. Wildfire has caused a significant loss of sage-grouse habitat. Invasion by, and spread of, cheatgrass and medusahead in sagebrush steppe has increased the wildfire frequency. Frequent wildfires are preventing the reestablishment of sagebrush in burned areas, especially in southwest and south-central Idaho. Season regulations were liberalized and standardized from 1990-1995 but changed drastically in 1996. Hunter participation has decreased by about 50% over the last decade and by about 70% in the last 20 years. The Department initiated a statewide management effort in 1996 to provide statewide leadership in conserving Idaho's sage-grouse populations.

### **Season Framework**

The season framework was altered in 1996 to provide three different types of seasons: liberal, conservative, and closed. Research is underway to evaluate whether these frameworks impacted sage-grouse population trends. The season framework changed in 2002 (Appendix A). Birch Creek Valley and the Big Desert areas that were previously closed (1995-2001) to sage-grouse hunting were reopened. Research suggested that the closed season did not have any measurable effect on sage-grouse populations as measured by the number of sage-grouse counted on lek routes. The hunting season was closed in 2002 in the Curlew Grasslands area due to low populations.

### **Population Surveys**

Lek routes have been expanded and standardized during the last few years. This was done to provide data that is more robust to year-to-year variation in attendance at a single lek and bird distribution. The need for more and better data is being driven by declines in this bird during the last decade and data needs for the new sage-grouse management effort.

## **Harvest Characteristics**

Starting in 2000, sage-grouse hunters were required to purchase a sage-grouse hunting validation. This requirement provided a means of collecting better harvest estimates from a sample of sage-grouse hunters through a telephone survey. However, 2003 survey results were not available at the time of this report (Table 5).

Numerous check stations are run in the state to gather information on reproductive success in different areas. In general, the sample size has decreased at these check stations in recent years due to shortened seasons and reduced hunter participation.

## **Climatic Conditions**

Snowfall during the winter of 2003 was below average in most of the state with sage-grouse. Temperatures and precipitation during the nesting season were warm and dry. Summer precipitation was below normal and drought conditions existed throughout the state during the summer of 2003.

## **Habitat Conditions**

Habitat management continues to be a major issue for the Department throughout the state. Several other western states are also concerned about sage-grouse declines that have occurred throughout the West over the last ten to 15 years. Large wildfires in the Upper Snake Region burned over 40,000 acres of sage-grouse habitat in 2003.

## **Trapping and Transplanting**

Inactive except for trapping related to research projects.

## **Management Studies**

A single statewide dataset for historic sage-grouse lek information was created. This data is available to all state and federal agencies involved in sage-grouse surveys and habitat work. Management projects continued statewide to locate critical sage-grouse habitats. Research projects continue in the Upper Snake and Magic Valley regions and Owyhee County to investigate the causes of mortality of juvenile sage-grouse and impacts of habitat loss.

## **Management Implications**

Sage-grouse are a good indicator of sagebrush habitat health. Monitoring and research on this species will continue to expand during the next reporting period. In August 1997, the Idaho Fish and Game Commission adopted a long-term management plan. Eight local working groups in different parts of the state are meeting to help determine the needs of local sage-grouse populations.

## **Sharp-tailed Grouse**

### **Abstract**

The largest remaining Columbian sharp-tailed grouse populations occur in eastern Idaho. Sharptails have received substantial benefits from CRP grassland habitat since the late 1980s. Harvest data for 2003 was not available at time of this report. Transplant efforts continued during the study period. Since 1992, 741 sharp-tailed grouse have been translocated from areas in southeastern Idaho, including 404 to the Shoshone Basin area of the Magic Valley Region. In 1998, two active leks were documented near these release sites. In 2003, 46 sharptails were trapped and release in the House Creek area of southwest Twin Fall county. Since 1992, a total of 156 birds have been sent to Oregon, 56 birds to Washington, and 196 birds to Nevada. Trap and transplant efforts will continue in 2004.

### **Season Framework**

The 2003 season framework was a 31-day season (October 1-31) statewide (Appendix A). The bag and possession limits remained at two and four, respectively.

### **Population Surveys**

Lek counts were conducted in the Upper Snake, Southeast, Magic Valley and Southwest regions. Lek counts were conducted in the Magic Valley Region and Washington County as Bureau of Land Management (BLM) Challenge Cost-Share Projects. Number of sharp-tailed grouse attending leks was down statewide compared to 2001.

### **Harvest Characteristics**

Beginning in 2000, sharp-tailed grouse hunters were required to purchase a sharp-tailed grouse hunting validation. This requirement provided a means of collecting better harvest estimates from a sample of sharp-tailed grouse hunters through a telephone survey. However, 2003 survey results were not available at the time of this report (Table 6).

Sharp-tailed grouse wings are collected at wing barrels and hunters checked incidental to other management activities. Wing barrels provide a large proportion of the wings collected. Wing data indicated that production was down in the Southeast and Upper Snake regions. In both cases, chick production was below the ten-year average.

### **Climatic Conditions**

Snowfall during the winter of 2003 was below average in most regions of Idaho. Temperatures and precipitation during the nesting season were moderate to hot and dry. Overall, summer precipitation was below normal.

## **Habitat Conditions**

The federal government's CRP program continues to provide good habitat for sharp-tailed grouse in Idaho. The majority of the 780,000 acres of CRP in Idaho are within sharp-tailed grouse range.

## **Trapping and Transplanting**

Since 1992, the Department has been trapping Columbian sharp-tailed grouse in southeastern Idaho for transplant to suitable habitats. In 1992, 33 birds were trapped and translocated to northeastern Oregon. Releases have taken place annually since that initial attempt.

In Idaho, 404 sharptails were trapped and translocated to Shoshone Basin and the House Creek areas between 1992 and 2003. Shoshone Basin and House Creek are located in southern Twin Falls County and is historical sharp-tailed grouse range. The first active lek from these releases was documented in early 1995 and another lek was found in 1997. Trapping on the leks has documented that about half of the males on the leks in 1998 were unbanded, indicating that there has been substantial reproduction by transplanted hens. Transplants into other suitable but unoccupied habitat in Idaho will be attempted as funds and transplant stock allow.

## **Management Studies**

Monitoring of the Shoshone Basin transplant birds was not conducted during the report period.

## **Management Implications**

Idaho has a unique resource in its Columbian sharp-tailed grouse populations. The Department will continue its efforts to transplant sharptails into areas identified as potential sharp-tailed grouse habitat to expand their distribution in Idaho.

## **Chukar Partridge**

### **Abstract**

Chukar partridge harvest in Idaho increased in 2003. Survey work is limited, with helicopter index flights conducted in the Clearwater and Southwest regions. HIP projects have improved several thousand acres of chukar habitat, especially on BLM lands, in recent years.

### **Season Framework**

Beginning in 2000, a single season framework was applied statewide with a closing date of January 15. The season remained unchanged in 2003 (Appendix A). This season runs concurrent with the gray partridge season. Previously, there was an 88-day chukar season in eastern Idaho and a 119-day season in western Idaho. The bag and possession limit for 2003 remained at eight and 16, respectively.

## **Population Surveys**

Chukar surveys were conducted by helicopter in the Southwest Region (Brownlee Reservoir) during late August 2003. The number of chukar observed per square mile was the fourth highest recorded since 1984. Helicopter surveys were not conducted in the Clearwater Region in 2003.

## **Harvest Characteristics**

In 2003, the statewide chukar harvest estimate of 130,759 was up from 109,040 in 2002 (Table 1). Approximately 16,572 hunters averaged 1.71 birds/day and 7.89 birds per season (Table 7). The Southwest Region had the highest overall harvest with 8,742 hunters taking 87,457 birds. Although some chukar hunters are contacted at Department game check stations, very little chukar data is collected.

## **Climatic Conditions**

Snowfall was below average in Idaho's chukar range during the winter of 2003. Temperatures and precipitation during the nesting season were dry. Summer precipitation was below average in the Clearwater and Southwest regions where the majority of chukar range occurs in Idaho.

## **Habitat Conditions**

Habitat characteristics were good during the report period, with good nesting conditions during the summer of 2003.

## **Trapping and Transplanting**

No activities during this study period.

## **Management Studies**

No activities during this study period.

## **Management Implications**

Overall, chukar harvest estimates have been increasing since 1997. Annual chukar partridge populations, like most upland game, are greatly influenced by weather conditions during the nesting and brood-rearing seasons. Current season lengths and bag and possession limits apparently do not need to be reduced for chukar partridge during periods of population lows. Upland game density-dependent hunting pressure is well documented in pheasant and quail populations (George et al. 1980; Vance and Ellis 1972; Kabat and Thompson 1963; Gallizoilli and Swank 1958; Bennitt 1951), and it is likely no different for chukar partridge.

## **Gray Partridge**

### **Abstract**

Field observations and harvest suggested that populations increased significantly in 2003. HIP efforts and CRP will continue to improve gray partridge habitat statewide.

### **Season Framework**

Beginning in 2000, a single season framework ending on January 15 was applied statewide and it remained unchanged in 2003 (Appendix A). This season ran concurrent with the chukar season. The previous season was an 88-day season in eastern Idaho and a 119-day season in western Idaho. The bag and possession limit in 2003 was eight and 16, respectively.

### **Population Surveys**

Gray partridge observations are recorded during the August roadside survey routes. Trend data indicated an increase in the Clearwater region, no change in Magic Valley and a decrease in the Southwest region. However, brood routes do not sample non-agricultural habitat used by gray partridge in Idaho and may not reflect statewide gray partridge population trends.

### **Harvest Characteristics**

The statewide harvest estimate for gray partridge approximately doubled from 26,644 in 2002 to 52,519 in 2003 (Table 1). Approximately 10,497 hunters averaged 1.08 birds per day or 5.00 birds per season (Table 8).

Gray partridge are checked incidental to other management activities at check stations in the Magic Valley Region. In the Magic Valley, number of gray partridge checked per 100 hunters was the highest recorded during the past 19 years.

### **Climatic Conditions**

Snowfall during the winter of 2003 was below average. Temperatures and precipitation during the nesting season were moderate and dry. Summer precipitation was below normal and drought conditions existed throughout most of the state.

### **Habitat Conditions**

HIP activities continue to improve gray partridge habitat in many parts of the state, especially in areas with large acreage of CRP.

### **Trapping and Transplanting**

No activities during this study period.

## **Management Studies**

No activities during this study period.

## **Management Implications**

Gray partridge will continue to be a species with relatively little active management. HIP activities will continue to enhance habitat, primarily in agricultural areas.

## **Wild Turkey**

### **Abstract**

Wild turkey populations have expanded dramatically in Idaho during the past decade. Most of the suitable habitat has been stocked and the overall population growth has stabilized. Spring controlled hunts in the Panhandle were replaced by general hunts. Fall general seasons were opened in the Southwest Region. The annual bag limit was reduced from three to two turkeys. Harvest in 2003 increased from the previous year and was the highest on record. Turkeys were trapped during the winter to address nuisance and depredation concerns.

### **Season Framework**

Spring general hunts were offered in the Panhandle, Clearwater, and Southwest regions during 2003 (Appendix A). Spring controlled hunts were offered in the Southwest, Magic Valley, Southeast, and Upper Snake regions. A fall general season was offered in the Panhandle, Clearwater, Southwest, and Southeast regions. Fall controlled hunts in the Clearwater and Southwest regions were replaced by fall general hunts. The bag limit was two bearded turkeys/spring (one per day) and one turkey (either sex) during the fall. A total of two turkeys per year could be harvested.

### **Population Surveys**

No formal surveys were conducted, although all regions conduct informal surveys of wintering grounds to get some estimate of population numbers and distribution.

### **Harvest Characteristics**

Overall, turkey harvest increased from 5,068 in 2002 to 6,491 in 2003 (Table 1). The telephone survey indicated 4,221 and 2,111 turkeys were harvested during general spring and general fall hunts, respectively. Spring controlled hunts harvested 159 turkeys. The total number of tags issued decreased from 24,417 in 2002 to 21,639 in 2003. Statewide harvest is concentrated in the Panhandle, Clearwater, and Southwest regions (Table 9).

No wild turkey check stations are conducted in Idaho.

## **Climatic Conditions**

Snowfall last winter was average or below average in most of the state. Temperatures and precipitation during the nesting season were moderate and dry. Summer precipitation was normal in northern Idaho and drought conditions existed in southern Idaho.

## **Trapping and Transplanting**

A total of 227 birds were trapped and translocated within Idaho during the winter of 2003-2004 (Table 10). Also, 108 turkeys were trapped and released in the Snake Mountains of Nevada.

## **Management Studies**

No activities during this study period.

## **Management Implications**

Wild turkeys continue to be transplanted in large numbers into Idaho. Interest in hunting this species continues to grow. National Wild Turkey Federation (NWTF) chapters are now established in each region except for the Salmon and Upper Snake regions. Cooperative habitat projects have been developed with the U.S. Forest Service (USFS), NWTF, and cooperating private landowners.

## **Mourning Dove**

### **Abstract**

Mourning dove continues to be a popular early-season species for hunting. Populations remain relatively low because of habitat changes.

### **Season Framework**

The 2003 season framework remained unchanged from 2002 (Appendix A).

### **Population Surveys**

Call-count surveys are conducted annually and data are provided to the U.S. Fish and Wildlife Service (USFWS) who monitor dove numbers nationwide. The number of doves heard per mile decreased in the Clearwater and Southeast regions, increased in the Magic Valley region and was mostly unchanged in the remaining regions (Table 11).

### **Harvest Characteristics**

No data available.

## **Management Implications**

Dove will continue to decline because of habitat conditions.

## **Rabbits and Hares**

### **Abstract**

Rabbit and hare population trends are not monitored except by harvest estimates.

### **Season Framework**

The season on pygmy rabbits was closed in 2002 due to concerns about low pygmy rabbit populations. Seasons for cottontail rabbits and snowshoe hares did not change from 2002 (Appendix A).

### **Harvest Characteristics**

In a telephone survey, approximately 4,043 hunters harvested 26,157 rabbits statewide during 2003. The telephone survey also indicated 619 hunters harvested 1,488 snowshoe hares statewide.

## **Management Implications**

Cottontail and snowshoe hare will continue to be a species with no active management in Idaho. Research on pygmy rabbits is being conducted at the Idaho National Engineering and Environmental Laboratory (INEEL) in eastern Idaho.

## **Crows**

### **Abstract**

Crows will continue to be a species with no active management.

### **Season Framework**

No change from 2002 (Appendix A).

### **Harvest Characteristics**

Insufficient data is collected from the telephone survey to allow an estimate of crow harvest and the survey was discontinued in 1994.

## **Management Implications**

Crows will continue to be a species with no active management in Idaho.

Table 1. Estimated upland game bird harvest in Idaho as determined by random telephone survey of license buyers, 1987-present.

Year	Pheasant	Forest Grouse	Gray Partridge	Chukar	Quail	Sage-Grouse	Sharp-tailed Grouse	Turkey
1987	155,600	100,800	28,200	92,100	39,200	42,000	4,300	185
1988	111,900	107,500	25,000	68,100	55,100	39,600	3,500	238
1989	102,700	122,600	10,000	55,800	55,000	40,000	3,500	228
1990	148,700	98,500	31,200	72,200	70,400	55,800	9,800	291
1991	117,700	103,400	32,400	72,700	73,300	39,500	6,000	495
1992	132,400	112,100	27,800	54,600	91,100	29,900	9,300	487
1993 <sup>a</sup>	129,100	190,600	39,000	72,800	117,200	37,400	14,400	977
1994	115,400	283,100	34,800	88,800	118,500	38,500	8,200	1,339
1995	114,600	252,600	42,500	125,200	175,300	27,500	7,900	1,526
1996 <sup>a</sup>	166,500	292,800	109,300	208,600	350,500	21,000	14,700	1,720
1997	63,300	43,853	32,100	37,300	87,200	16,000	10,300	2,703
1998	94,000	136,100	43,400	74,900	112,400	17,500	-	2,690
1999	110,100	80,600	103,100	96,800	114,900	4,700	12,400	5,458
2000	113,100	85,900	94,800	134,400	168,800	7,200	5,800	4,893
2001 <sup>a</sup>	87,100	149,400	41,800	89,300	119,600	7,000	4,100	4,483
2002	58,575	147,694	26,644	109,040	88,607	7,576	3,521	5,068
2003	77,469	182,770	52,519	130,759	140,409	-	-	6,491
Ten-year average	100,014	165,482	58,096	109,510	147,622	16,331	8,365	3,637

<sup>a</sup> New telephone survey methodology.

Table 2. Season framework, estimated pheasant hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) <sup>a</sup>	Daily bag <sup>a</sup>	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	44	4	78,500	374,100	455,100	4.77	0.82
1984	44	4	67,600	264,000	346,400	3.91	0.76
1985	44	4	57,000	237,800	336,100	4.17	0.71
1986	58	4	49,600	180,100	249,700	3.63	0.72
1987	58	4	41,300	155,600	220,700	3.77	0.71
1988	58	4	31,300	111,900	166,800	3.57	0.67
1989	58	4	28,500	102,700	160,500	3.61	0.64
1990	58	3	33,100	148,700	199,100	4.50	0.75
1991	58	3	30,900	117,700	183,900	3.81	0.64
1992	58	3	31,200	132,400	183,200	4.24	0.72
1993 <sup>b</sup>	58	3	31,900	129,100	222,100	4.05	0.58
1994	58	3	25,600	115,400	161,200	4.53	0.72
1995	58	3	28,100	114,600	189,600	4.07	0.60
1996 <sup>b</sup>	58	3	32,900	166,500	234,900	5.06	0.71
1997	58	3	32,900	63,300	108,700	1.92	0.58
1998	76	3	28,400	94,000	136,200	3.31	0.69
1999	77	3	23,700	110,100	150,700	4.65	0.73
2000	72	3	22,000	113,100	140,000	5.14	0.81
2001 <sup>b</sup>	73	3	27,300	87,100	142,300	3.29	0.61
2002	74	3	24,634	58,575	115,403	2.38	0.51
2003	75	3	24,540	77,469	125,513	3.16	0.62
Ten-year average	-	-	27,007	100,014	150,452	3.70	0.66

<sup>a</sup> Season length and bag in southwestern Idaho where the majority of pheasant hunting occurs.

<sup>b</sup> New telephone survey methodology.

Table 3. Season framework, estimated quail hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) <sup>a</sup>	Daily bag <sup>a</sup>	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	106	10	8,000	59,500	46,800	7.44	1.27
1984	108	10	6,400	47,000	42,800	7.34	1.10
1985	102	10	7,000	56,500	43,400	8.07	1.30
1986	103	10	5,900	39,200	26,300	6.64	1.49
1987	104	10	5,200	39,200	29,900	7.54	1.31
1988	106	10	6,300	55,100	34,700	8.75	1.59
1989	107	10	5,800	55,000	31,900	9.48	1.72
1990	108	10	7,400	70,500	44,600	9.53	1.58
1991	102	10	7,300	73,300	46,600	10.04	1.57
1992	103	10	8,000	91,100	45,300	11.39	2.01
1993 <sup>b</sup>	104	10	15,400	117,200	63,900	7.61	1.83
1994	105	10	13,200	118,500	74,000	9.01	1.60
1995	106	10	15,500	175,300	101,800	11.39	1.72
1996 <sup>b,c</sup>	116	10	22,300	350,500	118,400	15.72	2.96
1997	103	10	12,000	87,200	49,600	7.27	1.76
1998	104	10	13,200	112,400	58,000	8.52	1.93
1999	105	10	10,100	114,900	57,500	11.38	2.00
2000	107	10	10,700	168,800	66,400	15.79	2.54
2001 <sup>b</sup>	108	10	12,000	119,600	59,100	9.98	2.02
2002	102	10	12,308	88,607	51,071	7.20	1.73
2003	103	10	11,670	140,409	59,528	12.03	2.36
Ten-year average	-	-	13,298	147,622	69,540	11.10	2.12

<sup>a</sup> Season length and bag in Canyon County.

<sup>b</sup> New telephone survey methodology.

<sup>c</sup> Special two-week extension January 18-31, 1997.

Table 4. Season framework, estimated forest grouse hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days)	Daily bag	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	72	4	22,700	110,000	135,800	4.85	0.81
1984	72	4	19,100	85,600	119,100	4.48	0.72
1985	72	4	18,200	73,400	103,900	4.03	0.71
1986	100	4	20,400	104,400	123,400	5.12	0.85
1987	93	4	18,400	100,800	98,800	5.48	1.02
1988	102	4	19,800	107,500	127,100	5.43	0.85
1989	101	4	22,100	122,600	167,600	5.55	0.73
1990	122	4	20,900	98,500	130,900	4.71	0.75
1991	122	4	21,600	103,400	132,500	4.79	0.78
1992	122	4	23,600	112,100	148,200	4.75	0.76
1993 <sup>a</sup>	122	4	55,800	190,600	357,100	3.42	0.53
1994	122	4	60,700	283,100	458,600	4.69	0.62
1995	122	4	61,800	252,600	464,500	4.07	0.54
1996 <sup>a</sup>	122	4	60,000	292,800	420,600	4.88	0.70
1997	122	4	15,300	43,900	60,200	2.87	0.73
1998	122	4	39,400	136,100	160,600	3.45	0.85
1999	122	4	14,500	80,600	81,600	5.56	0.99
2000	122	4	14,200	86,000	73,500	6.07	1.17
2001 <sup>a</sup>	122	4	31,900	149,400	181,700	4.69	0.82
2002	122	4	33,505	147,694	199,463	4.41	0.74
2003	122	4	33,554	182,770	192,951	5.45	0.95
Ten-year average	-	-	36,486	165,496	229,371	4.54	0.72

<sup>a</sup> New telephone survey methodology.

Table 5. Season framework, estimated greater sage-grouse hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) <sup>a</sup>	Daily bag <sup>a</sup>	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	14	1 <sup>b</sup>	7,100	13,700	18,400	1.93	0.75
1984	14	1 <sup>b</sup>	5,300	11,700	15,400	2.21	0.76
1985	14	3 <sup>b</sup>	10,000	26,900	30,000	2.69	0.90
1986	23	3	11,200	37,900	35,700	3.38	1.06
1987	23	3	11,900	42,000	37,500	3.53	1.12
1988	23	3	12,300	39,600	44,000	3.22	0.90
1989	23	3	11,100	40,000	40,000	3.60	1.00
1990	30	3	13,800	55,800	49,400	4.04	1.13
1991	30	3	14,500	39,500	48,100	2.72	0.82
1992	30	3	13,200	29,900	42,700	2.27	0.70
1993 <sup>c</sup>	30	3	26,700	37,400	92,700	1.40	0.40
1994	30	3	17,900	38,500	67,500	2.16	0.57
1995	30	3	17,400	27,500	66,700	1.60	0.41
1996 <sup>c</sup>	7	1	12,000	21,000	45,100	1.75	0.47
1997	7	1	5,700	16,000	18,400	2.81	0.87
1998	7	1	9,200	17,500	36,000	1.90	0.49
1999	7	1	3,500	4,700	7,900	1.34	0.60
2000	7	1	5,900	7,200	12,900	1.22	0.56
2001 <sup>c</sup>	7	1	5,300	7,000	12,100	1.32	0.58
2002	7	1	5,772	7,576	12,992	1.31	0.58
2003	7	1	-	-	-	-	-
Ten-year average	-	-	9,186	16,331	31,066	1.78	0.53

<sup>a</sup> Season length and bag in Butte County until 1995. In 1996, seasons changed dramatically and season days are for Fremont County.

<sup>b</sup> Aggregate bag with sharp-tailed grouse.

<sup>c</sup> New telephone survey methodology.

Table 6. Season framework, estimated sharp-tailed grouse hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) <sup>a</sup>	Daily bag <sup>a</sup>	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	14	1 <sup>b</sup>	600	900	18,400	1.50	0.05
1984	14	1 <sup>b</sup>	800	900	2,500	1.13	0.36
1985	14	3 <sup>b</sup>	800	2,000	3,900	2.50	0.51
1986	14	2	700	1,700	3,300	2.43	0.52
1987	14	2	1,100	4,300	3,100	3.91	1.39
1988	16	2	800	3,500	3,400	4.38	1.03
1989	16	2	1,200	3,500	4,400	2.92	0.80
1990	16	2	1,900	9,800	8,700	5.16	1.13
1991	16	2	1,900	6,000	6,700	3.16	0.90
1992	16	2	2,400	9,300	7,600	3.88	1.22
1993 <sup>c</sup>	16	2	5,100	7,200	19,600	1.43	0.37
1994	16	2	7,800	8,200	32,400	1.08	0.25
1995	16	2	7,900	7,900	40,300	1.04	0.20
1996 <sup>c</sup>	16	2	7,000	14,700	31,900	2.10	0.46
1997	16	2	4,300	10,300	12,000	2.40	0.86
1998	16	2	-	-	-	-	-
1999	16	2	2,600	12,400	11,600	4.77	1.07
2000	31	2	2,800	5,800	7,700	2.06	0.75
2001 <sup>c</sup>	31	2	2,200	4,100	6,000	1.83	0.67
2002	31	2	1,869	3,521	5,117	1.88	0.69
2003	31	2	-	-	-	-	-
Ten-year average	-	-	4,559	8,365	18,377	1.84	0.46

<sup>a</sup> Season length and bag in Fremont County.

<sup>b</sup> Aggregate bag with sage-grouse.

<sup>c</sup> New telephone survey methodology.

Table 7. Season framework, estimated chukar partridge hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) <sup>a</sup>	Daily bag <sup>a</sup>	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	106	8	11,600	44,700	45,900	3.85	0.97
1984	108	3	4,400	10,500	16,200	2.39	0.65
1985	102	3	7,200	30,800	28,000	4.28	1.10
1986	103	8	9,800	59,500	37,600	6.07	1.58
1987	104	8	12,100	92,100	60,400	7.61	1.53
1988	106	8	10,600	68,000	47,200	6.42	1.44
1989	107	8	8,800	55,800	42,300	6.34	1.32
1990	108	8	10,400	72,200	42,700	6.94	1.69
1991	102	8	10,900	72,700	48,100	6.67	1.51
1992	103	8	10,500	54,600	42,700	5.21	1.28
1993 <sup>b</sup>	104	8	16,500	72,800	81,900	4.41	0.89
1994	105	8	14,000	88,800	65,700	6.38	1.35
1995	106	8	16,900	125,200	95,500	7.47	1.31
1996 <sup>b</sup>	102	8	18,500	208,600	140,500	11.28	1.49
1997	103	8	14,400	37,300	33,600	2.59	1.11
1998	119	8	14,000	74,900	51,600	5.35	1.45
1999	120	8	12,000	96,500	58,300	8.04	1.66
2000	122	8	9,800	134,400	85,600	13.72	1.57
2001 <sup>b</sup>	123	8	13,800	89,300	61,600	6.46	1.45
2002	117	8	15,413	109,040	71,486	7.07	1.53
2003	118	8	16,572	130,759	76,359	7.89	1.71
Ten-year average	-	-	14,539	109,480	74,025	7.53	1.48

<sup>a</sup> Season length and bag in Canyon County.

<sup>b</sup> New telephone survey methodology.

Table 8. Season framework, estimated gray partridge hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) <sup>a</sup>	Daily bag <sup>a</sup>	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	106	8	11,300	59,500	72,100	5.27	0.83
1984	108	3	5,300	23,500	35,700	4.43	0.66
1985	102	3	4,800	16,800	26,200	3.50	0.64
1986	103	8	4,800	17,200	22,700	3.58	0.76
1987	104	8	5,700	28,200	28,700	4.95	0.98
1988	106	8	4,400	25,000	26,000	5.68	0.96
1989	107	8	2,900	10,000	15,000	3.45	0.67
1990	108	8	6,100	31,200	31,400	5.11	0.99
1991	102	8	6,400	32,400	34,800	5.06	0.93
1992	103	8	5,600	27,800	25,100	4.96	1.11
1993 <sup>b</sup>	104	8	13,600	39,000	65,100	2.87	0.60
1994	105	8	11,200	34,800	59,100	3.14	0.59
1995	106	8	12,400	42,500	67,000	3.44	0.63
1996 <sup>b</sup>	102	8	17,400	109,300	118,000	6.28	0.93
1997	103	8	8,700	32,100	26,300	3.69	1.22
1998	119	8	9,500	43,400	39,600	4.57	1.10
1999	120	8	13,200	103,100	81,700	7.81	1.26
2000	122	8	12,400	94,800	81,000	7.62	1.17
2001 <sup>b</sup>	123	8	10,900	41,800	58,100	3.83	0.72
2002	117	8	7,830	26,644	39,742	3.40	0.67
2003	118	8	10,497	52,519	48,723	5.00	1.08
Ten-year average	-	-	11,403	58,096	61,927	5.09	0.94

<sup>a</sup> Season length and bag in Canyon County.

<sup>b</sup> New telephone survey methodology.

Table 9. Season framework and estimated turkey harvest in Idaho, 1983-present.

Year	General Season Framework			General Season Harvest			Controlled Hunts			Total Harvest	Total Tags Sold <sup>b</sup>
	Spring	Fall	Bag <sup>a</sup>	Spring	Fall	Total	Hunts	Permits	Harvest		
1983	4/23-5/1	-	1	19	-	19	-	-	-	19	270
1984	4/25-5/10	-	1	17	-	17	4	70	26	43	312
1985	4/24-5/9	-	1	37	-	37	10	100	36	73	439
1986	4/14-5/11	-	1	88	-	88	24	150	52	140	571
1987	4/13-5/10	-	1	117	-	117	30	180	68	185	814
1988	4/11-5/8	-	1	153	-	153	28	232	85	238	1,395
1989	4/10-5/7	-	1	137	-	137	26	271	91	228	1,339
1990	4/9-5/6	-	1	185	-	185	17	226	106	291	1,436
1991	4/8-5/5	-	1	393	-	393	13	215	102	495	1,754
1992	4/13-5/10	-	1	532	-	532	14	310	130	662	2,020
1993	4/12-5/9	-	1	750	-	750	14	405	153	903	2,303
1994	4/11-5/8	-	1	1,130	-	1,130	25	350 <sup>c</sup>	209	1,339	3,066
1995	4/10-5/7	-	1	1,314	-	1,314	29	466	212	1,526	3,929
1996	4/8-5/12	-	1	1,476	-	1,476	25	574	244	1,720	4,940
1997	4/14-5/11	-	1	2,451	-	2,451	10	528	252	2,703	5,114
1998	4/15-5/14	-	2	2,324	-	2,324	12	658	337	2,661	6,436
1999	4/15-5/25	-	3	4,916	-	4,916	12	1,205	542	5,458	16,781
2000	4/15-5/25	10/1-31	3	4,054	201	4,255	12	1,183	638	4,893	18,173
2001	4/15-5/25	9/15-30	3	2,987	844	3,831	9	1,094	652	4,483	21,233
2002	4/15-5/25	9/15-10/31	3	3,263	1,015	4,278	13	1,567	790	5,068	24,417
2003	4/15-5/25	9/15-10/31	2	4,221	2,111	6,332	11	382	159	6,491	21,639

<sup>a</sup> Bearded turkey only in spring hunts, either sex in fall hunts. Instituted a second spring tag in 1999 valid 5/10-25.

<sup>b</sup> Sportsman Package tags not included in total tags sold until 1998.

<sup>c</sup> One controlled hunt had unlimited permits; number of permits drawn unavailable.

Table 10. Turkey transplant history for Idaho, 1961-present.

Year	Sub-Species <sup>a</sup>	Release Site	Source	# of Birds Released
1961	M	Unit 18	Colorado	17
1962	M	Unit 18	Colorado	11
1963	M	Unit 14	Colorado	11
1965	M	Unit 11	Unit 18	10
1966	M	Units 11, 39	Unit 14	14
1967	M	Unit 22	-	19
1970	M	Unit 32	-	14
1971	M	Unit 8	Unit 6	15
1971	M	Boundary County	-	60 <sup>b</sup>
1972	M	Unit 8	Unit 6	2
1972	M	Boundary County	-	24 <sup>b</sup>
1973	M	Units 8, 11	Unit 6	6
1979	M	Unit 31	-	5
1980	M	Unit 18	South Dakota	10
1982	M	Units 11, 14	South Dakota	31
1982	R	Unit 11A	KS, OK, TX	51
1982	R	Units 22, 38, 53, SE Region	-	115
1982	M	Units 22, 25, 32	-	38
1983	R	Unit 11A	Oklahoma, Texas	18
1983	M, R	Units 28, 39, 55	-	84
1984	R	Units 40, 55, SE Region	-	65
1984	R	Unit 63A	Texas	32
1985	R	Unit 13	Texas	34
1985	E	Unit 10A	Pennsylvania	16
1985	R	Units 28, 40	-	7
1986	M	Unit 8	Unit 22	34
1986	R	Unit 11	North Dakota	14
1986	M	Unit 39	-	17
1986	R	Unit 40	-	14
1987	M	Unit 39	-	20
1988	M	Units 8, 11A, 13	Units 11 & 22	83
1988	M	Units 39, 54	-	45
1988	R	Unit 63A	Unit 32A	12
1989	M	Unit 11A	Unit 10A	18
1989	R	Unit 38	-	14
1990	M	Unit 14	Unit 8	16
1990	E	Unit 10A	North Dakota	17
1990	M	Units 22, 31, 39, SE Region	-	156
1991	M	Units 11, 11A, 14	Units 1, 8, 9, 11	113
1991	E, R	Units 8A, 10A	North Dakota	80
1991	M	Units 28, 36B	-	40
1992	M	Units 11	Unit 1	28
1992	M	Units 11, 14	North Dakota	48
1993	M	Units 10A, 11, 14	Units 1, 3, 8	93
1993	M	Units 11, 13	North Dakota	49
1993	M	Units 21A, 31, 32A, 36B, 39, SE Reg.	-	260

Table 10. Continued.

Year	Sub-Species <sup>a</sup>	Release Site	Source	# of Birds Released
1993	R	Units 32, 38	-	58
1994	M	Units 8, 11A, 14	Units 1, 8, 11A	90
1994	R	Units 38, 54	-	59
1994	M	Unit 32, SE Region	-	142
1995	M	Units 8, 11A, 14	Units 8, 11A	36
1995	M	Unit 33	-	57
1995	R	Unit 54	-	14
1996	M	Units 8, 11	British Columbia	63
1996	M	Units 11, 15	Units 8, 10A, 11A	54
1996	R	Units 38, 54	-	28
1997	M	Units 8A, 11, 13, 15, 18	Idaho	261
1997	R	Unit 32	-	35
1997	M	Units 31, 33	-	105
1998	M	Units 14, 18, 20, 32A, 33	Units 8, 10A, 11, 15	121
1998	M	Units 31, 32, 39	-	53
1998	R	Units 32, 54	-	92
1999	M	Units 15, 23	Unit 10A	64
1999	R	Units 32, 54	-	62
1999	M	Units 28, 37, 39, 50	-	140
1999	U	SE Region	-	15
2000	M	Units 11, 13, 14, 15, 18, 63A	Idaho	332
2000	U	SE Region	-	50
2001	M	Units 15, 63A	Idaho	436
2001	R	Unit 54	California	41
2001	U	Unit 71	-	136
2002	M	Units 10A, 11, 14, 15, 63A, 67, 69	Idaho	227
2003	H	Units 11, 63A, 67, 69	Idaho	196
2004	M	Units 5, 8A, 11, 54, 68A,	Idaho	227
Total				5,074

<sup>a</sup> E = Eastern; H = Hybrid; M = Merriam's; R = Rio Grande; U = Unknown.

<sup>b</sup> Approximate number of game farm birds released in Boundary County by private citizens.

Table 11. Mourning dove call-count survey results for Idaho, 1993-present.

Year	Region 1	Region 2	Region 3	Region 4	Region 5	Region 7
1993						
Routes (miles) counted	-	2	(580)	28 (575)	3	(20)
Doves per mile	-	0.2	0.3	1.8	0.7	0.05
1994						
Routes (miles) counted	3 (60)	2	(560)	28 (575)	3	(20)
Doves per mile	0.22	0.3	4.6	3.3	0.9	0.05
1995						
Routes (miles) counted	3 (60)	2	(480)	28 (575)	3	(20)
Doves per mile	0.1	0.1	2.2	1.8	0.6	0.1
1996						
Routes (miles) counted	3 (60)	1	(260)	28 (575)	3	(0)
Doves per mile	0.3	0.02	2.3	2.2	0.4	-
1997						
Routes (miles) counted	3 (60)	1	(660)	28 (575)	3	(20)
Doves per mile	0.3	0.15	2.2	2.2	0.7	0.0
1998						
Routes (miles) counted	3 (60)	1	(640)	28 (575)	3	(0)
Doves per mile	0.23	0.3	1.6	2.4	0.5	-
1999						
Routes (miles) counted	3 (60)	1	(540)	28 (575)	3	(20)
Doves per mile	0.4	0.15	3.9	3.7	0.5	0.0
2000						
Routes (miles) counted	3 (60)	1	(540)	28 (575)	3	(20) <sup>a</sup>
Doves per mile	0.33	0.15	3.3	1.3	0.4	0.0
2001						
Routes (miles) counted	3 (60)	1	(620)	28 (575)	3	(20)
Doves per mile	0.17	0.1	3.2	2.2	0.2	0.15
2002						
Routes (miles) counted	2 (40)	2	(600)	28 (575)	3	(20)
Doves per mile	0.33	0.13	2.4	2.5	1.1	0.3
2003						
Routes (miles) counted	2 (40)	2	(540)	28 (575)	3	(20)
Doves per mile	0.43	0.05	2.6	3.4	0.6	0.35

<sup>a</sup> Route relocated.

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>1</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b>	<u>April 1, 2003 to March 31, 2004</u>		

**PANHANDLE REGION**

**Pheasant**

**Abstract**

For many years, the Department released game-farm birds in the spring prior to nesting and released cocks prior to the season opener to bolster declining wild populations and hunter success rates. Fewer and fewer landowners were willing to allow hunter trespass if pheasants were released on their property. Consequently, the Department's Coeur d'Alene River WMA near Harrison ended up being the only place available to release birds. In 1981, the region recommended that all pheasant releases be discontinued and the program was eliminated effective the fall of 1982.

**Harvest Characteristics**

Most pheasant hunting in the Panhandle Region occurs in the Palouse country around Worley, Plummer, and Tensed. Remnant wild populations still occur and provide fair hunting for those people who have permission to hunt on private land. A telephone survey for 2003 upland game hunters was conducted for the third time since budgetary constraints resulted in the discontinuation of the annual survey in 1996. The survey estimated that 749 hunters harvested 2,028 pheasants in 2003 (Table 1).

**Management Implications**

The quality and quantity of pheasant habitat in the Panhandle Region has declined to a low point due to modern, clean farming techniques and monoculture crops. Large complexes of seed-bluegrass fields are burned annually, severely limiting habitat. The Department no longer supplements the wild population nor releases birds directly for harvest. There is growing public sentiment against the large-scale field burning in the Palouse. If burning becomes severely restricted in the future, pheasant cover will improve, and additional grain farming could substantially improve pheasant populations.

## **Quail**

### **Abstract**

Quail in the Panhandle Region of North Idaho are present at low population levels associated with agricultural lands, hay production and pastures areas, and urban inter-face areas where they often receive supplemental winter feeding. Population levels are low as a result of the areas annual snow fall and cool, wet springs that reduce chick survival but can fluctuate in years with minimal snow accumulation.

### **Harvest Characteristics**

Quail hunting effort in the Panhandle Region is very low. Harvest information obtained from the statewide telephone survey of Panhandle Region hunters is listed in Table 2.

### **Management Implications**

As a result of a series of mild winters and higher quail populations, the Panhandle Region was included with other parts of the state that offered a quail hunting season for the 2002-2003 period. Low hunter participation and limited access to quail in the urban inter-face is not anticipated to negatively impact the Panhandle quail population or produce significant levels of harvest.

## **Forest Grouse**

### **Abstract**

Few hunters take the time to hunt primarily for grouse. All three species of forest grouse are usually taken incidental to other activities, and usually in conjunction with driving down the road.

### **Harvest Characteristics**

A telephone survey for 2003 upland game hunters was conducted for the third time since budgetary constraints resulted in the discontinuation of the annual survey in 1996. The survey estimated that 5,918 hunters harvested 30,746 forest grouse in 2003 (Table 3).

### **Climatic Conditions**

Wet, cold, spring weather in northern Idaho is the rule rather than the exception. Adverse spring weather can limit the production and survival of forest grouse young for several years at a time. A general slowing of logging during the past two decades has likely been detrimental to grouse populations in the Panhandle, particularly for ruffed and blue grouse.

## **Management Implications**

Grouse populations in the Panhandle are driven by large-scale influences on early seral stages. Logging and wildfire are both less prevalent now than they were 40 years ago. On a proximate scale, grouse abundance is heavily influenced by spring weather, much as it is in other portions of their range. Hunting is a negligible influence on grouse populations, and season changes do not need to be adjusted to influence grouse populations.

## **Gray Partridge**

### **Abstract**

Gray partridges in North Idaho are associated with agricultural lands near Worley, Plummer, Harrison, and Post Falls. Widespread burning of crop residues in August and September eliminates most potential food and cover patches that would help gray partridge to survive the winter months. Intensive farming also contributes to fewer gray partridge by eliminating permanent cover patches, annual weeds that serve as food sources, wind breaks, fence rows, and riparian zones.

### **Harvest Characteristics**

Partridge hunting effort in the Panhandle Region is very low. A few hunters are checked on the Rathdrum Prairie and the rolling hill country near Worley and Plummer. Historic harvest information obtained from the statewide telephone survey is believed to reflect, almost entirely, Panhandle Region hunters hunting in other regions. Table 4 reports telephone survey results for gray partridge hunter numbers and harvest at the regional level for 2003.

### **Management Implications**

Gray partridge are taken largely incidental to pheasant hunting. Seasons should be set to match those in adjacent portions of the state where gray partridge are taken more commonly.

## **Wild Turkey**

### **Harvest Characteristics**

The 2003 Panhandle turkey seasons saw a major change in harvest strategy. The spring controlled hunt was eliminated. The 2003 season in the Panhandle consisted of a general hunt beginning April 15, with the harvest of a second bird allowed after May 1. All spring harvest ended on May 25 and was restricted to bearded birds. A fall general season allowing the harvest of any turkey ran from September 15 through October 31. The “extra” tag that allowed the harvest of a second bird in the spring was also valid for the fall hunt.

Turkey hunter numbers have grown very rapidly in the Panhandle. From just 187 hunters in 1991, hunter numbers peaked at 4,187 in 1999. There were 3,616 turkey hunters in the Panhandle during the 2003 spring and fall hunts combined (Table 5).

Success rates have averaged 15.4 hunter days per bird from the first general hunt in 1994, through 1999. Data from the 2003 general spring season (15.1 hunter days/bird) is consistent with the 1994–1999 average (Table 5).

### **Trapping and Transplanting**

Trapping and removal of turkeys typically occurs in the winter months to alleviate damage to fields, buildings, and equipment where turkeys congregate in large numbers. The winter of 2003-2004 was very mild with little snow accumulation and few complaints about excessive numbers of turkeys. A total of 78 turkeys were trapped in the Panhandle Region during this period. Twenty-two turkeys were trapped in Boundary County for release in Nevada. Thirty-eight turkeys were trapped in Unit 1 and released in Unit 5 and 18 birds were trapped in Unit 3 and relocated within the unit.

### **Management Implications**

Recent requests from hunters to eliminate the spring controlled hunt (primarily because of the cost) and the fact that there was no longer a large demand for the spring controlled hunt permits (leftover tags were available for the first time in 2002), drove the change to eliminate the controlled hunt.

## **Mourning Dove**

### **Population Surveys**

Mourning doves are common in the Panhandle Region and, in some areas, are locally numerous. Most mourning doves are found during the summer around agricultural lands near Worley, Plummer, Harrison, Post Falls, and Bonners Ferry.

In May 2003, two call-count surveys were completed in the Panhandle Region (Table 6). One route was in Kootenai County, and one was in Shoshone County. A third route that is conducted in Boundary County is no longer reported in this document. The number of mourning doves heard per mile has increased slightly during the past 14 years. Route replacement during 1993 precludes direct comparison of subsequent data route with that prior to 1993.

### **Harvest Characteristics**

In North Idaho, most mourning doves leave before the season opens. The season opener usually coincides with the first cool evening temperatures of late August. Also, for most of the grain and grass seed, farmers burn their fields after harvest annually. Starting in mid-August and ending in late September, most cover and food patches are consumed by fire.

Idaho has had a very liberal mourning dove season and bag limit in the past. However, due to the declining trend in the mourning dove breeding population throughout the west, the hunting season was shortened by one month in 1987 and the bag and possession limits reduced from 15 and 30 to ten and 20, respectively.

Mourning dove hunting effort in the Panhandle Region is very low. A few hunters are checked on opening day on Harrison Flats and near Athol on the edge of the Rathdrum Prairie. Beginning in 1996, telephone survey information has been collected at the statewide level only.

### **Management Implications**

Widespread burning of crop residues practiced by area farmers coupled with the first cool evening temperatures of late August usually combine to move mourning doves south out of the region before the hunting season opens.

## **Snowshoe Hare**

### **Background**

Snowshoe hares are prevalent throughout the coniferous forest in the Panhandle Region of North Idaho. Hare densities are considered to be low compared to other, more traditional hare habitats at higher latitudes. Hare densities within the Panhandle Region vary widely dependent upon habitat types and timber harvest.

Snowshoe hare hunting effort in the Panhandle Region is very low. Harvest information obtained from the statewide telephone survey of Panhandle Region hunters is listed in Table 7.

### **Management Implications**

Low hunter participation and limited harvest is not anticipated to negatively impact the Panhandle snowshoe hare population.

Table 1. Estimated pheasant harvest in the Panhandle Region, 1983-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1983	2,205	3,616	5,806	1.6	0.8
1984	907	2,565	3,966	2.8	0.7
1985	633	1,053	2,814	1.7	0.4
1986	522	1,725	1,865	3.3	0.9
1987	630	1,454	2,151	2.3	0.7
1988	570	1,184	2,358	2.1	0.5
1989	447	785	1,305	1.8	0.6
1990	409	1,590	1,606	3.9	1.0
1991	513	1,430	2,281	2.8	0.6
1992	755	1,658	2,854	2.2	0.6
1993	1,175	3,371	5,597	2.9	0.6
1994	899	3,165	4,270	3.5	0.7
1995	853	2,376	5,097	2.8	0.5
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	354	421	2,379	1.2	0.2
2002	1,122	4,240	7,116	3.8	0.6
2003	749	2,028	2,399	2.7	0.9
Three-year average	742	2,230	3,965	3.0	0.6

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 2. Estimated quail harvest in the Panhandle Region, 2003.

Year	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
2003	123	707	370	5.8	1.9

Table 3. Estimated forest grouse harvest in the Panhandle Region, 1983-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1983	7,982	44,208	58,622	5.5	0.8
1984	7,432	41,867	54,597	5.6	0.8
1985	6,637	30,357	46,714	4.6	0.6
1986	7,194	35,138	55,203	4.9	0.6
1987	4,963	26,546	33,394	5.3	0.8
1988	5,710	34,504	46,580	6.0	0.8
1989	6,491	41,719	68,443	6.4	0.6
1990	6,088	45,665	60,079	7.5	0.8
1991	6,339	29,564	51,235	4.7	0.6
1992	5,440	29,088	46,949	5.3	0.6
1993	13,823	59,496	129,103	4.3	0.5
1994	20,509	118,877	196,623	5.8	0.6
1995	22,866	110,007	217,049	4.8	0.5
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	4,473	19,727	35,964	4.4	0.5
2002	5,799	29,688	48,516	5.1	0.6
2003	5,918	30,746	45,273	5.2	0.7
Three-year average	5,397	26,720	43,251	5.0	0.6

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 4. Estimated gray partridge harvest in the Panhandle Region, 1983-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1983	1,057	3,873	2,703	3.7	1.4
1984	305	629	1,097	2.1	0.6
1985	174	361	782	2.1	0.5
1986	83	546	266	6.6	2.0
1987	148	599	447	4.0	1.3
1988	109	221	341	2.0	0.6
1989	127	134	182	1.1	0.7
1990	149	416	503	2.8	0.8
1991	97	385	347	4.0	1.1
1992	185	1,006	894	5.4	1.1
1993	495	1,546	2,628	3.1	0.6
1994	450	1,704	2,341	3.8	0.7
1995	366	2,376	5,706	6.5	0.4
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	99	20	196	0.2	0.1
2002	132	83	498	0.6	0.2
2003	198	506	566	2.6	0.9
Three-year average	143	203	420	1.4	0.5

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 5. Estimated turkey harvest in the Panhandle Region, 1984-present.

Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1984						
Controlled	2	50	44	22	6.9	152
General	0	-	-	-	-	-
1985						
Controlled	2	50	39	21	8.0	167
General	0	-	-	-	-	-
1986						
Controlled	6	75	49	33	7.0	231
General	0	-	-	-	-	-
1987						
Controlled	6	75	57	37	6.1	227
General	0	-	-	-	-	-
1988						
Controlled	6	135	75	58	7.0	407
General	0	-	-	-	-	-
1989						
Controlled	6	180	118	74	-	-
General	0	-	-	-	-	-
1990						
Controlled	6	180	147	97	-	-
General	0	-	-	-	-	-
1991						
Controlled	9	195	187	99	5.2	518
General	0	-	-	-	-	-
1992						
Controlled	12	300	285	123	7.1	875
General	0	-	-	-	-	-
1993						
Controlled	12	395	219	155	7.5	1,165
General	0	-	-	-	-	-
1994						
Controlled	23	457	409	206	5.9	1,223
General	1	-	256	77	10.0	769
1995						
Controlled	23	436	417	203	5.5	1,117
General	1	-	557	86	23.9	2,057
1996						
Controlled	17	435	444	221	6.3	1,402
General	1	-	1,043	192	19.1	3,671
1997						
Controlled	2	450	398	216	4.9	1,059
General	1	-	2,223	643	13.4	8,632
1998						
Controlled	2	450	389	225	5.7	1,287
General	1	-	1,534	464	10.7	4,972

Table 5. Continued.

Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1999 <sup>a</sup>						
Controlled Spring	2	525	479	284	6.0	1,680
General Spring	1	-	3,503	815	15.4	12,537
Controlled Fall	1	400	205	106	4.0	424
2000						
Controlled Spring	2	525	464	232	6.2	1,431
General Spring	1	-	3,140	799	14.0	11,206
Controlled Fall	1	500	131	81	2.2	175
2001						
Controlled Spring	1	525	475	232	9.1	2,113
General Spring	1	-	1,490	363	15.2	5,503
General Fall	1	-	456 <sup>b</sup>	268	4.5	1,208
2002						
Controlled Spring	1	525	567	426	7.2	3,100
General Spring	1	-	1,173	379	11.4	4,350
Late Spring/Fall <sup>b</sup>	1	-	524	110	17.8	1,968
2003						
Controlled	0	-	-	-	-	-
General Spring	1	-	1,990	522	15.1	7,909
Late Spring	1	-	573	360	6.6	2,369
General Fall	1	-	1,053	495	8.5	4,204

<sup>a</sup> Multiple bird bag limits and fall seasons began in 1999.

<sup>b</sup> The general late spring/fall tag allowed harvest after May 1 in the spring season or in the fall.

Table 6. Mourning dove call-count survey results in the Panhandle Region, 1994-present.

Year	Routes (miles) counted	Doves heard	Doves seen	Doves heard/mile	Doves seen/mile
1994	3 (60)	13	8	0.22	0.13
1995	3 (60)	6	4	0.10	0.07
1996	3 (60)	18	19	0.30	0.32
1997	3 (60)	18	19	0.30	0.32
1998	3 (60)	14	4	0.23	0.07
1999	3 (60)	24	9	0.40	0.15
2000	3 (60)	20	9	0.33	0.15
2001	3 (60)	10	9	0.17	0.15
2002	2 (40)	13	7	0.33	0.18
2003	2 (40)	17	8	0.43	0.20
Ten-year average	-	15	10	0.28	0.17

Table 7. Estimated snowshoe hare harvest in the Panhandle Region, 2003.

Year	Hunters	Hares harvested	Days hunted	Hares per hunter	Hares per hunter day
2003	56	59	142	1.0	0.4

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>2</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b>	<u>April 1, 2003 to March 31, 2004</u>		

**CLEARWATER REGION**

**Pheasant**

**Population Surveys**

In 1990, 11 brood routes were established in the Clearwater Region, with the primary emphasis directed at better monitoring pheasant population trends in the Region. One hundred fourteen pheasants were observed on these routes in 2003 (Table 1). The results are an increase from last year and higher than the previous five-year mean of 77. Other species recorded on the routes included quail, gray partridge, doves, cottontail rabbits, and a variety of raptors.

**Harvest Characteristics**

A telephone survey for 2003 upland game hunters was conducted for the third time since budgetary constraints resulted in the discontinuation of the annual survey in 1996. The survey estimated that 2,700 hunters harvested 13,437 pheasants in 2003 (Table 2). Brood survey results indicate increased production that, along with a season extension of two weeks that began in 1996, should have improved harvest opportunities.

**Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

**Management Implications**

Populations in north Idaho have been at reduced levels since 1983. An abundance of fields of small grains and adjacent idle uplands provides adequate nesting cover for pheasants in the Clearwater Region. The population's limiting factor is inadequate winter cover and/or inadequate winter food adjacent to winter cover. Development of scattered, permanent wintering

areas that can provide adequate food and cover in those portions of the Region where they are lacking would allow pheasant populations to increase.

The Department began working with the U.S. Soil Conservation Service and the U.S. Agricultural Stabilization and Conservation Service regarding the CRP program in 1986 and has continued this cooperation since that time. This program has great potential to increase upland game populations in the future. The Clearwater Region will continue to place high priority on its involvement with this program.

In 1987, the Department also initiated a statewide HIP program for upland game directed primarily towards pheasants, quail, gray partridge, and chukar partridge. This program, in conjunction with CRP, has great potential to positively affect upland game populations, particularly pheasants.

### **Bobwhite Quail**

Reporting on this species is not applicable for the Clearwater Region.

### **California Quail**

#### **Population Surveys**

No reliable population surveys are currently conducted for California quail in the Clearwater Region.

#### **Harvest Characteristics**

Telephone survey data estimated that 1,941 hunters harvested 29,152 quail in the Clearwater Region in 2003 (Table 3). This is a 55% increase from 2002. This is only the third time estimates have been generated since 1995 due to budgetary constraints.

#### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

#### **Management Implications**

Availability of quail habitat probably will not change dramatically in the next few years. California quail continue to be a lightly hunted species in the Region, and management will continue to be directed at maximizing hunting opportunity through liberal, standardized seasons and bag limits.

## **Mountain Quail**

### **Abstract**

Populations of mountain quail are limited to a few scattered sites ranging from Lewiston to Riggins, primarily adjacent to the Salmon River. A final project report from a mountain quail research project has been completed and is available for review.

### **Population Surveys**

The season on mountain quail was closed in 1984 because of concern for declining populations. Mountain quail population fluctuations are difficult to monitor, but it is generally believed that they have declined during the past 20 years due to unknown causes. These declines are probably the result of subtle habitat changes unfavorable to mountain quail.

A graduate student research project on mountain quail was initiated in 1991. The focus of the project shifted from spring/summer habitat use and seasonal movements to fall/winter emphasis in 1994. The project has now been completed. Another mountain quail project in the Craig Mountain area was begun in the spring of 2004.

## **Forest Grouse**

### **Population Surveys**

Random brood counts and drumming route counts were discontinued in 1988. Presently, none of these surveys are conducted to monitor population trends or predict fall harvest.

### **Harvest Characteristics**

Collections of random field check harvest data were discontinued in 1988. Regional telephone harvest survey information on forest grouse has been variable (Table 4). Harvest information was not collected at the regional level from 1996 to 2000 due to budgetary constraints. Telephone survey data estimated that 7,342 hunters harvested 40,972 forest grouse in 2002. Estimates for 2003 (5,510 hunters and 34,661 grouse harvested) were considerably less than the previous year.

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

## **Management Implications**

The limited amount of data currently collected on forest grouse and the lack of standard techniques for collecting it precludes its effective use for management purposes. There are few avid forest grouse hunters in the Clearwater Region. Most grouse are currently harvested incidentally to hunting for other species, and many are taken from or immediately adjacent to forest roads during the opening weeks of big game seasons. Therefore, many areas of the Region are seldom hunted.

## **Sharp-tailed Grouse**

### **Population Characteristics**

Substantial populations of Columbian sharp-tailed grouse were found in this area during the early 1920s but were believed to have been eliminated by the mid-1930s. Factors contributing to the decline and eventual loss of the species from the area were over-hunting, overgrazing by livestock, and intensified agricultural practices resulting in habitat destruction.

### **Harvest Characteristics**

There has been no hunting season for sharp-tailed grouse in the Clearwater Region for several decades.

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

### **Trapping and Transplanting**

A total of 82 sharp-tailed grouse were transplanted in the Clearwater Region during 1987 and 1988 from birds captured in the Southeast and Upper Snake regions. Due to the small number of birds and the difficulty in monitoring, limited information on the success of these transplant efforts is available.

### **Management Implications**

It is extremely difficult to reestablish populations of sharp-tailed grouse by transplanting relatively small numbers of birds in the spring. Future efforts may require increased sample sizes and more extensive monitoring.

## **Chukar Partridge**

### **Population Surveys**

No distribution surveys are conducted in the Clearwater Region. In general, the majority of the chukars within the Region are located along the breaks of the Snake, Salmon, and Clearwater Rivers.

A chukar ecology project in Unit 11 was conducted from spring 1995 to 1997. Radio-marked chukars along the breaks of the Salmon and Snake rivers were monitored to define habitat use, movements, distribution patterns, nesting chronology and success, and overall mortality causes and rates. A final report was completed in 1998.

### **Production**

Random brood routes and counts are no longer conducted.

Since 1985, the breaks of the Snake River have been surveyed annually from Tenmile Creek upstream to Corral Creek by helicopter (Table 5). Since 1991, the Salmon River breaks from White Bird to Maloney Creek have also been surveyed annually. Although it is difficult to make a final determination, it appears that helicopter surveys may be a reliable index to determine trends in fall chukar populations. Although other factors are apparently involved when predicting fall harvest, general trends appear predictable based on the surveys. No survey was flown in 2003 due to the lack of helicopter availability.

### **Harvest Characteristics**

A summary of the Clearwater Region chukar harvest from the telephone survey is provided in Table 6. Fluctuating harvest rates over the past several years apparently reflect stochastic variables, possibly weather impact on productivity. Harvest information was not collected at the regional level from 1996 to 2000 due to budgetary constraints. Telephone survey data estimated that 2,012 hunters harvested 14,192 chukars in 2002. Hunter numbers (1,806) and harvest (11,663) in 2003 were lower than the previous year by 10% and 18%, respectively.

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

### **Management Implications**

Annual chukar partridge populations, like most upland game, are greatly influenced by weather conditions during the nesting and brood-rearing seasons. Current season lengths and bag and possession limits apparently do not need to be reduced for chukar partridge during periods of

population lows. Upland game density-dependent hunting pressure is well documented in pheasant and quail populations (George et al. 1980; Vance and Ellis 1972; Kabat and Thompson 1963; Gallizoilli and Swank 1958; Bennitt 1951), and it is likely no different for chukar partridge.

## **Gray Partridge**

### **Population Surveys**

No standardized population surveys are currently conducted for gray partridge in the Clearwater Region. However, gray partridge counted incidentally in 2003 on the 11 Clearwater Region pheasant brood routes indicate that the population increased 297% from the 2002 survey.

### **Harvest Characteristics**

Harvest information on gray partridge has varied (Table 7). This year it was estimated that 1,309 hunters harvested 13,646 gray partridge. Harvest information was not collected at the regional level from 1996 to 2000 due to budgetary constraints.

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

### **Management Implications**

Favorable weather during early summer will allow populations to remain at current levels. Adjustments in season length or bag and possession limits are apparently unnecessary to accomplish population increases during or following population lows caused by adverse nesting and/or winter weather conditions.

## **Wild Turkey**

### **Population Surveys**

The Department does not have a reliable survey method for estimating turkey numbers. However, population status and trend can be inferred to a limited degree from harvest trend, turkey distribution, and general impressions of bird numbers from year to year. This information suggests that turkey numbers are stable and the distribution of turkeys is widespread throughout the Region.

A turkey research project was conducted in Unit 11 in the early 1990s. Among the more interesting findings were the long-distance seasonal movements of turkeys between Cottonwood

and Waha, exceptionally high productivity among young birds, and relatively low hunting-related mortality. Nesting and roosting habitat do not appear to be limiting in this area.

### **Harvest Characteristics**

Turkey harvest estimates have been calculated on a management unit basis since 1983 (Table 8). Regional turkey harvest had increased until 1999 and was a function of expanding turkey distribution and numbers and increasing hunter effort. Turkey harvest in the Clearwater Region fell from a high of 2,822 in 1999 to 2,068 for the 2003 spring season. A general and controlled fall turkey-hunting season was available in 2003. Telephone surveys estimated a fall harvest at 460 birds.

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

### **Winter Feeding**

Landowners in some areas traditionally feed flocks of wintering birds. Feeding is often associated with livestock feedlots. Because of average to below average winter weather severity in most recent years, it has not been necessary to initiate any Department-sponsored feeding operations. However, feed was sometimes supplied upon request to private individuals who had large numbers of turkeys on their property or if turkeys were negatively impacting livestock operations or in areas with significant snowfall and corresponding lack of natural winter feed.

### **Trapping and Transplanting**

Trapping efforts are now focused on sites where turkeys have become a nuisance on private property by contaminating livestock feed or by damaging agricultural crops as they begin to emerge. Ten turkey transplants within the Clearwater Region (210 birds) were completed in 2004 (Table 9). Four sites within the Region were supplemented with birds. Temporary personnel time was, in part, funded by a donation from the National Wild Turkey Federation. Additional sites in the Region will be evaluated for future releases of turkeys.

### **Management Implications**

Wild turkeys continue to expand their range within the Clearwater Region. More remote areas, once thought to be marginal habitat, now have at least a few turkeys present for at least a portion of the year. To respond to a growing level of complaints from private landowners that keep livestock in feedlots in winter, liberal seasons have been maintained or expanded, and birds have been trapped and then transplanted to other areas in the Region, to other IDFG regions, or to

other states. The present hunting season structure does not appear to adversely impact the expansion of populations.

## **Mourning Dove**

### **Population Surveys**

There are only two mourning dove call-count routes conducted in the Clearwater Region. By themselves, they do not provide an accurate index to dove production or population trend (Table 10). When those results are incorporated with the results from all other routes in the state, an accurate index to statewide dove production may be achieved.

### **Harvest Characteristics**

The annual harvest of mourning doves in the Clearwater Region is dependent upon the progress of the fall migration. In most years, a majority of the migrating doves have passed southward out of the Clearwater Region prior to opening day, influencing hunter opportunity. Regional harvest information on mourning doves has varied (Table 10). Telephone survey data have not been collected at the regional level since 1995 due to budgetary constraints.

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

### **Management Implications**

Although an effort was made to trap doves at the Billy Creek cabin in Unit 11 in the summer of 2003, no birds were trapped or banded in the Clearwater Region. A more concerted effort is planned for the 2004 summer to comply with the statewide directive for 2004 and 2005. Dove management in the Clearwater Region consists of permitting an annual hunting season as liberal as the federal season framework allows and conducting the annual call-counts on routes located within the Region. In 1987, the federal season framework reduced the maximum allowable season length to 30 days and maximum daily bag and possession limits to ten and 20, respectively. Idaho's hunting season regulations since then have reflected those changes.

## **Cottontail Rabbit**

### **Abstract**

There is no reliable measure of cottontail production or population trend in the Region, and it is not known what effect weather has on production. Lack of adequate brush for winter cover

adjacent to adequate food is probably limiting for cottontails on much of the unforested upland areas in the Clearwater Region.

### **Harvest Characteristics**

Cottontail harvest appears to be well under minimum sustainable levels. Harvest information was not collected at the regional level from 1996 to 2000 due to budgetary constraints. Reported harvest in 2003 was 605 Region-wide with an estimated 287 hunters participating. This was a significant increase from 2002 in harvest (95%) and hunters (87%).

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

### **Management Implications**

Management direction for cottontail rabbits in the Clearwater Region has been and will continue to be to provide maximum hunter opportunity through liberal seasons and bag limits. Cottontails are lightly hunted, and liberal seasons and regulations apparently do not adversely impact cottontail numbers.

## **Snowshoe Hare**

### **Population Surveys**

There is no measure of populations, production, or trends in the Region. Hare populations may be cyclic in nature and dependent upon forage availability, disease, and other density-dependent factors. Populations appear scattered and localized, with spruce-fir forest in young age classes as dominant cover in preferred habitat.

### **Harvest Characteristics**

Harvest levels are likely below sustainable levels. Reported harvest in 2003 was 126 harvested hares Region-wide with only an estimated 67 hunters participating; however, harvest levels have probably continued to be relatively insignificant.

### **Climatic Conditions**

The Clearwater Region experienced below normal snow-pack during the winter of 2003-2004. The Clearwater River Basin was 89% of average (October-March), while the Salmon River Basin averaged 78% for the same time period. Snowfall was earlier than usual in the Region, but

most accumulation at the lower elevations did not persist. Spring conditions were relatively warm and dry, benefiting upland game species.

### **Management Implications**

Management direction of snowshoe hares in the Clearwater Region has been and will continue to be to provide maximum hunter opportunity through liberal seasons and bag limits. Management direction to promote hare hunting would probably have little effect on hare populations.

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Table 1. Pheasant population characteristics and production in the Clearwater Region, 1990-present.

Year	Routes (miles) counted	Birds per mile	Percent unsuccessful females	Juv:100 adult females	N <sup>a</sup>	Average brood size
1990	11 (220)	0.7	-	153	-	-
1991	11 (220)	0.3	13	550	56	6.0
1992	11 (220)	0.8	41	517	164	5.9
1993	11 (220)	0.2	33	667	35	5.8
1994	11 (220)	0.8	13	508	165	6.1
1995	11 (220)	<0.1	100	0	1	0.0
1996	11 (220)	0.1	33	100	27	5.5
1997	11 (220)	0.3	0	771	61	7.7
1998	11 (220)	0.4	33	456	93	6.1
1999	11 (220)	0.2	40	385	41	5.4
2000	11 (220)	0.4	37	321	95	5.1
2001 <sup>b</sup>	12 (240)	0.5	43	478	119	6.1
2002	12 (240)	0.2	23	388	46	5.0
2003	12 (240)	0.5	9	347	114	3.6
Ten-year average	-	0.3	33	375	76	5.1

<sup>a</sup> Sample size.

<sup>b</sup> New route added for Clearwater Pheasant Initiative in 2001.

Table 2. Estimated pheasant harvest in the Clearwater Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	3,775	15,295	25,304	4.1	0.6
1986	4,022	13,689	20,089	3.4	0.7
1987	3,360	11,069	18,415	3.3	0.6
1988	2,041	5,312	11,314	2.6	0.5
1989	2,105	7,368	10,739	3.5	0.7
1990	2,299	14,928	17,440	6.5	0.9
1991	2,170	7,773	12,775	3.6	0.6
1992	2,400	9,644	17,009	4.0	0.6
1993	4,638	15,245	27,892	3.3	0.5
1994	4,533	16,313	25,547	3.6	0.6
1995	3,330	10,235	18,135	3.1	0.6
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	3,021	13,092	16,146	4.3	0.8
2002	3,713	7,159	12,768	1.9	0.6
2003	2,700	13,437	17,957	5.0	0.7
Three-year average	3,145	11,229	15,624	3.6	0.7

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 3. Estimated quail harvest in the Clearwater Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	1,148	11,588	6,803	10.1	1.7
1986	808	7,190	4,845	8.9	1.5
1987	1,051	7,834	4,467	7.5	1.8
1988	1,032	7,744	5,165	7.5	1.5
1989	700	3,532	3,088	5.0	1.1
1990	1,341	15,509	10,907	11.6	1.4
1991	903	5,525	5,315	6.1	1.0
1992	1,398	10,092	6,163	7.2	1.6
1993	3,000	21,213	18,121	7.1	1.2
1994	3,203	21,520	18,130	6.7	1.2
1995	2,051	14,358	11,332	7.0	1.3
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	1,904	14,790	8,551	7.8	1.7
2002	1,983	12,994	8,396	6.6	1.5
2003	1,941	29,152	12,808	15.0	2.3
Three-year average	1,943	18,979	9,918	9.8	1.9

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 4. Estimated forest grouse harvest in the Clearwater Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	3,495	13,680	20,824	3.9	0.7
1986	4,296	21,701	28,141	5.1	0.8
1987	4,169	23,866	27,558	5.7	0.9
1988	3,493	18,590	25,834	5.3	0.7
1989	4,473	25,848	38,140	5.8	0.7
1990	4,385	23,086	27,901	5.3	0.8
1991	4,364	24,127	30,026	5.5	0.8
1992	4,117	16,638	26,851	4.0	0.6
1993	11,782	55,692	89,243	4.7	0.6
1994	14,796	70,255	117,135	4.7	0.6
1995	12,692	54,993	94,736	4.3	0.6
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	5,927	26,970	34,684	4.6	0.8
2002	7,342	40,972	54,342	5.6	0.8
2003	5,510	34,661	34,342	6.3	1.0
Three-year average	6,260	34,201	41,123	5.5	0.8

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 5. Summary of helicopter surveys of chukar partridge conducted in Game Management Unit 11 in the Clearwater Region, 1985-present.

Area	Year	Number of birds	Number of groups	Groups/sq. mile	Birds/sq. mile	Birds/group
Salmon River breaks	1991	1,330	136	11.9	116.5	9.8
	1992	1,230	155	13.0	103.5	7.9
	1993	537	90	7.6	45.1	6.0
	1994	680	91	7.6	57.1	7.5
	1995	157	47	3.4	13.2	3.3
	1996	561	51	4.3	47.1	11.0
	1997	544	56	4.7	45.7	9.7
	1998	1,084	108	9.1	91.1	10.0
	1999	1,055	88	7.4	89.0	11.5
	2000	756	60	5.0	64.0	12.6
	2001	1,192	94	7.9	100.0	12.7
	2002	583	80	6.7	49.0	7.3
	2003	-	-	-	-	-
Snake River breaks	1985	895	55	6.1	98.5	16.3
	1986	1,566	91	8.3	142.1	17.2
	1987	1,627	95	8.6	147.6	17.1
	1988	446	48	6.4	59.5	9.3
	1989	1,095	74	5.3	78.8	14.8
	1990	1,245	100	7.9	97.8	12.5
	1991	745	84	5.9	53.0	9.0
	1992	867	100	6.2	53.5	9.0
	1993	307	35	2.2	19.0	8.8
	1994	638	49	3.0	39.4	13.0
	1995	137	23	1.4	8.5	6.0
	1996	829	39	2.4	51.2	21.3
	1997	1,124	82	5.1	69.4	13.7
	1998	1,159	91	5.6	71.5	12.7
	1999	956	83	5.1	59.0	12.0
2000	481	40	2.5	30.0	12.0	
2001	875	81	5.0	55.0	10.8	
2002	286	34	2.1	17.6	8.4	
2003	-	-	-	-	-	

Table 6. Estimated chukar partridge harvest in the Clearwater Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	1,605	5,424	4,948	3.4	1.1
1986	1,500	7,244	6,049	4.8	1.2
1987	1,844	16,265	8,743	8.8	1.9
1988	1,609	11,139	8,743	6.9	1.3
1989	1,125	8,383	4,392	7.5	1.9
1990	1,532	11,045	7,671	7.2	1.4
1991	1,751	9,244	6,841	5.3	1.4
1992	1,794	9,720	5,208	5.4	1.9
1993	2,628	14,441	11,936	5.5	1.2
1994	2,791	17,531	13,635	6.3	1.3
1995	2,518	14,256	12,266	5.7	1.2
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	1,775	9,871	6,324	5.6	1.6
2002	2,012	14,192	10,143	7.1	1.4
2003	1,806	11,663	8,292	6.5	1.4
Three-year average	1,864	11,909	8,253	6.4	1.4

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 7. Estimated gray partridge harvest in the Clearwater Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	1,024	2,626	4,714	2.6	0.6
1986	968	3,169	3,749	3.3	0.8
1987	1,012	5,996	5,266	5.9	1.1
1988	847	3,255	4,165	3.8	0.8
1989	442	666	1,928	1.5	0.3
1990	1,139	5,911	6,479	5.2	0.9
1991	1,012	6,215	5,661	6.1	1.1
1992	784	3,091	2,954	3.9	1.0
1993	2,505	8,658	13,668	3.5	0.6
1994	2,585	8,803	14,796	3.4	0.6
1995	1,767	6,905	9,281	3.9	0.7
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	1,714	5,586	7,622	3.3	0.7
2002	1,421	7,860	7,562	5.5	1.0
2003	1,309	13,646	8,859	10.4	1.5
Three-year average	1,481	9,031	8,014	6.1	1.1

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 8. Estimated turkey harvest by Unit in the Clearwater Region, 1985-present.

Year	Unit <sup>a</sup>													Total	Total hunter days
	8	8A	10	10A	11	11A	12	13	14	15	16	17	18		
1985	-	-	-	2	3	2	-	6	2	-	-	-	10	25	355
1986	-	-	-	3	8	3	-	3	3	-	-	-	5	25	300
1987	-	-	-	7	17	4	-	5	4	-	-	-	0	37	647
1988	-	-	-	13	39	22	-	4	2	-	-	-	2	82	1,073
1989	15	-	-	31	22	10	-	4	4	-	-	-	6	92	2,014
1990	15	10	-	31	38	10	-	13	-	-	-	-	1	118	1,980
1991	35	13	-	59	87	38	-	3	-	-	-	-	2	237	3,650
1992	21	18	-	42	37	34	-	5	-	0	0	-	24	181	3,651
1993	59	88	-	127	137	39	-	0	-	20	29	-	10	509	9,491
1994	90	192	-	372	83	141	-	0	13	0	26	-	0	917	14,573
1995	57	114	-	286	100	57	-	0	86	57	57	-	14	828	15,000
1996	47	116	-	280	94	91	22	0	35	69	25	-	0	779	11,000
1997	40	123	-	385	189	182	13	41	27	51	92	-	0	1,143	12,813
1998	65	194	-	444	134	157	42	23	55	0	55	-	18	1,187	13,160
1999	251	435	-	1,059	257	278	101	58	28	154	187	-	14	2,822	24,975
2000 <sup>b</sup>	123	461	-	822	141	264	22	30	76	76	163	-	30	2,288	26,205
2001 <sup>c</sup>	190	343	38	615	111	205	53	25	66	109	149	6	69	1,979	20,512
2002 <sup>b</sup>	177	230	110	497	153	205	34	21	55	119	132	6	49	2,243	20,004
2003 <sup>c</sup>	217	328	120	798	165	280	47	63	140	84	196	0	84	2,522	23,598
Ten-yr. avg.	126	254	89	556	143	186	42	26	58	72	108	-	28	1,671	18,184

<sup>a</sup> Units having no data were not open to hunting during those years.

<sup>b</sup> Fall turkey harvest added to total; unit of harvest and hunter days was not asked in survey.

<sup>c</sup> Fall general wild turkey harvest included.

Table 9. Turkey transplant history for the Clearwater Region, 1961-present.

Year	Sub-species <sup>a</sup>	Release site Drainage-Unit	Source-Unit	M	F	Total	New or supplemental release
1961	M	Deer Cr-18	Colorado	4	13	17	N
1962	M	Shingle Cr-18	Colorado	3	8	11	N
1963	M	Skookumchuck Cr-14	Colorado	4	7	11	N
1965	M	Webb Cr-11	Shingle Cr-18	2	8	10	N
1966	M	Webb Cr-11	John Day Cr-14	2	0	2	S
1971	M	Potlatch R-8	St. Maries-6	4	11	15	N
1972	M	Potlatch R-8	St. Maries-6	2	0	2	S
1973	M	Potlatch R-8	St. Maries-6	2	0	2	S
	M	Webb Cr-11	St. Maries-6	4	0	4	S
1980	M	Deer Cr-18	South Dakota	3	7	10	S
1982	M	Capt John Cr-11	South Dakota	5	14	19	N
	M	Slate Cr-14	South Dakota	3	9	12	S
	R	Lawyers Cr-11A	Kansas, Texas	7	17	24	N
	R	Cottonwood Cr-11A	Texas	4	8	12	N
	R	Big Canyon Cr-11A	Oklahoma	4	11	15	N
1983	R	Big Canyon Cr-11A	Oklahoma, Texas	3	15	18	S
1985	R	Wolf Cr-13	Texas	4	30	34	N
	E	Canyon Cr-10A	Pennsylvania	6	10	16	N
1986	M	Bedrock Cr-8	Hornet Cr-22	4	14	18	N
	M	Pine Cr-8	Hornet Cr-22	4	12	16	N
	R	Deer Cr-11	North Dakota	4	10	14	N
1988	M	Cottonwood Cr-13	Cottonwood Butte-11	4	21	25	N
	M	Bear Cr-8	Hornet Cr-22, Capt John Cr-11	6	23	29	N
	M	Six-Mile Cr-11A	Hornet Cr-22, Capt John Cr-11	11	18	29	N
1989	M	Lawyers Cr-11A	Woodland-10A	3	15	18	S
1990	M	John Day Cr-14	Big Bear Cr-8	6	10	16	N
	E	Jim Ford Cr-10A	North Dakota	9	8	17	N
1991	M	John Day Cr-14	Big Bear Cr-8	3	14	17	S
	M	Little Canyon-11A	Brush Cr-9	10	24	34	N
	M	Big Canyon Cr-11	Dawson Ridge-1	10	25	35	S
	E, R	Upper Fords Cr-10A	North Dakota	5	35	40	S
	E	Dicks Cr-8A	North Dakota	4	36	40	N
	M	Slate Cr-14	Cottonwood Butte-11	6	21	27	S
1992	M	Lawyers Cr-11	Kootenai R-1	7	21	28	N
	M	Skookumchuck Cr-14	North Dakota	10	21	31	S
	M	Cottonwood Butte-11	North Dakota	7	10	17	S
1993	M	White Bird Cr-14	Grouse Cr-1	6	24	30	S
	M	Hamilton Cr-13	North Dakota	4	20	24	S
	M	Rock Cr-11	North Dakota	3	22	25	N
	M	Orofino Cr-10A	Big Bear Cr-8	6	20	26	S
	M	Rock Cr-11	Big Bear Cr-8	3	0	3	N
	M	Wapshilla Cr-11	Blue Cr-3	4	8	12	S
	M	Whiskey Cr-10A	Grouse Cr-1	6	6	12	S
	M	Whiskey Cr-10A	Blue Cr-3	2	8	10	S

Table 9. Continued.

Year	Sub-species <sup>a</sup>	Release site Drainage-Unit	Source-Unit	M	F	Total	New or supplemental release
1994	M	Pickle Canyon-11A	Big Bear Cr-8	5	12	17	N
	M	Pickle Canyon-11A	Little Canyon-11A	5	0	5	N
	M	Allison Cr-14	Big Bear Cr-8	6	4	10	N
	M	Allison Cr-14	Big Bear Cr-8	0	11	11	N
	M	Allison Cr-14	Maas G-1	0	8	8	N
	M	Allison Cr-14	Houcks Spur-1	4	0	4	N
	M	Flannigan Cr-8	Maas G-1	1	2	3	N
	M	Flannigan Cr-8	Houcks Spur-1	4	24	28	N
	M	Flannigan Cr-8	Little Canyon-11A	4	0	4	N
1995	M	5-Mile Cr-11A	Big Bear Cr-8	6	0	6	S
	M	Flat Cr-8	Big Bear Cr-8	6	0	6	N
	M	Allison Cr-14	Crow Bench-11A	1	18	19	S
1996	M	Allison Cr-14	Cottonwood Cr-11A	5	0	5	S
	M	Deep Cr-8	Port Hill, B.C.	12	18	30	N
	M	Boulder Cr-8	Port Hill, B.C.	3	5	8	S
	M	Eagle Cr-11	Port Hill, B.C.	6	19	25	N
	M	Grave Cr-11	Orofino-10A	1	5	6	N
	M	Deer Cr-11	Big Bear Cr-8	10	28	38	N
	M	Blanco Cr-15	Jacks Cr-11A	4	6	10	N
1997	M	Squaw Cr-18	Armiger-10A	8	27	35	N
	M	Castle Cr-15	Armiger-10A	8	21	29	N
	M	Rice Cr-13	Panhandle Region	10	24	34	N
	M	Nora Cr-8A	Panhandle Region	10	33	43	N
	M	Billy Cr-11	Crow Bench-10A	10	27	37	N
	M	Cottonwood Cr-11	Big Bear Cr-8	8	27	35	N
	M	Dough Cr-11	Armiger-10A	6	19	25	N
	M	Blanco Cr-15	Mt Idaho-15	10	13	23	S
1998	M	MF Payette-33	Packard-8	6	24	30	N
	M	Papoose Cr-18	Lathrop-10A	6	29	35	N
	M	Allison Ranch-20	Mt Idaho-15	5	20	25	N
	M	Allison Cr-14	Duman-11	5	9	14	S
	M	Little Weiser-32W	Duman-11	6	11	17	S
	M	California	Duman, et al-11	6	26	32	NA
1999	M	Schwartz Cr-15	Bott Ranch-10A	3	21	24	N
	M	Rapid River-23	Busta-10A	12	28	40	N
	M	California	Bott Ranch-10A	3	24	27	NA
2000	M	Rapid River-18	Bott Ranch-10A	4	14	18	S
	M	Rice Cr-13	Groom, et al-11A	6	28	34	S
	M	Divide Cr-13	Bott, et al-10A	1	24	25	S
	M	Getta Cr-13	Gray, et al-10A	8	40	48	S
	M	Big Canyon Cr-13	Bott, et al-10A	6	14	20	S
	M	Wolf Cr-13	Duclercque-10A	6	11	17	S
	M	Hi-Range Cr-13	Gray, et al-10A	3	20	23	S
	M	Slate Cr-14	Gray-10A	2	23	25	S
	M	Red River-15	Duclercque-10A	1	22	23	S
	M	Billy Cr-11	Bott Ranch-10A	1	7	8	S

Table 9. Continued.

Year	Sub-species <sup>a</sup>	Release site Drainage-Unit	Source-Unit	M	F	Total	New or supplemental release
2001	M	Snake River-63A	Thompson-8	5	20	25	N
	M	Red River-15	Busta-10A	14	6	20	S
2002	M	Bob Smith Canyon Robber's Roost-71	Bott-10A	2	21	23	N
	M	Bob Smith Canyon Robber's Roost-71	Wilcox-10A	10	0	10	N
	M	Bob Smith Canyon Robber's Roost-71	Gray-10A	5	17	22	N
	M	Binninger-10A	Gray-10A	0	1	1	S
	M	Craig Mtn-11	Gray-10A	0	3	3	S
	M	Slate & Squaw Cr-14	Crabtree-15			29	S
	M	Main Snake below confluence-63A	Grandi-8	2	4	6	N
	M	Main Snake below confluence-63A	Jackson-10A	4	11	15	N
	M	Main Snake below confluence-63A	Crabtree-15	1	24	25	N
	M	Castle Cr-15	Lucas-15	0	14	14	S
	M	Eagle Cr-11	Lucas-15	0	13	13	S
2003	H	Eagle Cr-11	Harris-8A	0	10	10	S
	H	Eagle Cr-11	Weidner-11A	3	20	23	S
2004	H	SE Idaho	Frei-11	10	21	31	S
	H	Billy Cr-11	Frei-11	12	1	13	S
	H	Nevada	Frei-11	15	7	22	N
	H	F.S. Road 1963-8A	Frei-11	0	16	16	N
	H	Eagle Cr-11	Weidner-10A	10	26	36	S
	H	Benton Meadows-11	Weidner-10A	3	32	35	S
	H	Billy Cr-11	Weidner-10A	7	8	15	S
	H	Nevada	Weidner-10A	3	10	13	N
	H	SE Idaho	Nicolls-10A	2	9	11	S
	H	Nevada	Nicolls-10A	6	12	18	N

<sup>a</sup> E = Eastern; M = Merriam's; R = Rio Grande; H = Hybrid.

Table 10. Mourning dove call-count survey results and estimated harvest in the Clearwater Region, 1985-present.

Year	Call-count routes		Telephone survey <sup>a</sup>				
	Routes counted	Doves heard/mile	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	2	0.30	493	3,754	1,087	7.6	3.5
1986	2	0.00	320	3,666	1,340	11.5	2.7
1987	2	0.03	327	4,468	973	13.7	4.6
1988 <sup>b</sup>	1	0.10	205	842	398	4.1	2.1
1989	2	0.20	220	758	341	3.4	2.2
1990 <sup>c</sup>	1	0.30	110	863	108	7.8	8.0
1991	2	0.10	324	3,971	1,098	12.3	3.6
1992	2	0.10	156	1,151	152	7.4	7.6
1993	2	0.20	773	3,587	3,123	4.6	1.1
1994	2	0.30	1,161	8,765	3,989	7.5	2.2
1995	2	0.10	792	4,062	3,229	5.1	1.3
1996 <sup>c</sup>	1	0.02	-	-	-	-	-
1997 <sup>c</sup>	1	0.15	-	-	-	-	-
1998 <sup>c</sup>	1	0.30	-	-	-	-	-
1999 <sup>c</sup>	1	0.15	-	-	-	-	-
2000 <sup>c</sup>	1	0.15	-	-	-	-	-
2001 <sup>b</sup>	1	0.10	-	-	-	-	-
2002	2	0.13	-	-	-	-	-
2003	2	0.05	-	-	-	-	-

<sup>a</sup> Telephone survey data at the regional level were not collected after 1995; harvest is reported directly to the USFWS by hunters.

<sup>b</sup> Route 0730 not surveyed.

<sup>c</sup> Route 1150 not surveyed.

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>3</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b>	<u>April 1, 2003 to March 31, 2004</u>		

**SOUTHWEST REGION**

**Pheasant**

**Population Surveys**

No winter sex ratio counts were conducted.

The average young per brood in 2003 based on survey routes was 5.7. This was more than the 4.4 young/brood counted the previous year, and higher than the previous five-year average of 5.5. The 0.4 birds observed per mile was slightly more than were observed in 2002 (0.3), but less than the previous five-year average of 0.5 (Table 1).

**Harvest Characteristics**

A telephone survey for upland game hunters was conducted in 2003. The survey estimated 10,196 hunters harvested 31,962 birds in the Southwest Region during fall 2003 for an average of 0.6 birds/day. Participation decreased 2% and harvest increased 18% from 2002 (Table 2).

One check station was operated in Star in the Southwest Region to monitor pheasant hunting success on opening weekend in 2003. However, Freezeout Hill was the only check station operated in 2002. The total number of hunters checked was 55 in 2003 compared to 59 in 2002. The number of birds checked increased slightly from 18 birds in 2002 to 21 birds in 2003. Number of birds harvested per hunter day stayed the same at 0.4 and the number of hours hunted per bird harvested decreased to 7.4 (Table 2).

**Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

**Habitat Conditions**

Long-term population trends are down, primarily due to major changes in farming practices and development of agricultural lands. Farmers in Canyon and Owyhee counties are no longer

raising high-moisture corn which was normally harvested in late fall. Fall plowing of all fields has become the normal operating procedure, thereby limiting winter food and cover for pheasants. Conversion of farmland to residential subdivisions is increasing throughout the Region. Further reductions in long-term populations are expected.

### **Depredations**

Some pheasant depredations occur every spring on wheat, barley, and corn. Sweet corn is the primary corn damaged by pheasants. Cracker shells and salutes (M80s) are provided to landowners to alleviate the problem.

### **Stocking**

Adult roosters were purchased from a contractor and released on Department lands in the Southwest Region. A total of 9,420 pheasants were released on Fort Boise WMA, C. J. Strike WMA, Payette River WMA, and Montour WMA during the 2003 season. These birds added significantly to hunter opportunity on these four heavily hunted public management areas.

### **Management Implications**

Pheasant populations are largely dependent upon winter habitats, nesting habitats, and spring weather conditions during nesting and brood-rearing time. Weather conditions will have a larger influence on the pheasant population, while the habitat quality remains low. Habitat quality and quantity needs to be improved to moderate the effect of weather conditions. Uncontrollable weather factors will be the major influence on recruitment of birds into the fall populations until habitat conditions improve.

The Southwest Region has seen significant decreases in wintering habitat due to changes in farming practices and development of agricultural lands into home sites. The probability that populations will decrease is high, since any added mortality factors will cause further declines in pheasant numbers.

### **Summary**

Pheasant populations continue to decline with the loss of habitat. Associated with the decline in pheasant population and habitat, the number of hunters and harvest is down from historical numbers.

## **Bobwhite and California Quail**

### **Population Surveys**

Brood route miles counted in 2003 (540) were less than 2002 (600). The 2.5 birds observed per mile were less than observed in 2002 (4.3) but higher than the previous ten-year average of 1.9 (Table 3).

## **Harvest Characteristics**

Telephone survey data estimated that 8,467 hunters harvested 105,749 birds in 2003. In comparison, 7,613 hunters harvested about 61,026 quail in 2002 (Table 3).

A few birds are checked incidental to other activities. No check stations are run specifically for quail.

## **Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

## **Management Implications**

California quail populations are fairly stable over the long term but experience short-term population fluctuations, depending upon the severity of winter weather and the amount of cold, wet weather during the nesting season. Populations are currently in good condition.

## **Summary**

Quail populations are at a stable level in the Southwest Region. Harvest was higher in 2003 than in the two previous years.

# **Forest Grouse**

## **Population Surveys**

No drumming counts or other spring population indices were conducted in the Region during the last reporting period.

## **Harvest Characteristics**

Telephone survey data estimated that 7,136 hunters harvested 40,548 forest grouse in the Southwest Region in 2003. In 2002, 8,945 hunters harvested 34,672 birds (Table 4).

A few birds are checked incidental to other activities. No check stations are run specifically for forest grouse. We collected wings from 130 harvested ruffed grouse and 356 harvested blue grouse at 19 wing barrels distributed throughout the Region in Units 32, 32A, 33, and 39.

## **Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

## **Management Implications**

Forest grouse populations are dependent on good nesting and brood-rearing conditions. There is concern that insect damage to evergreen species may have a negative impact on blue grouse

populations. We have emphasized good forest grouse habitat management procedures to the BLM and the USFS when reviewing timber sales and livestock management plans.

## **Sage-grouse**

### **Population Surveys**

No sage-grouse brood routes were conducted in the Southwest Region in 2003. Thirty-nine leks were monitored from the ground in the Region during March-May 2003. An estimated 828 sage-grouse were observed on 39 leks. An additional 70 historically documented leks were surveyed from helicopter; 12 were confirmed active.

### **Harvest Characteristics**

Telephone survey data was not available for 2003.

Check stations were operated opening weekend along Highway 51 at Bruneau and along the Mud Flat Road during the 2003 season. The total number of birds checked was 254 compared to 293 sage-grouse checked in 2002 and 179 checked in 2001. The number of hours required to harvest a bird and the number of birds per hunter remained the same in 2003 as 2002 (Table 5).

Sage-grouse wings were collected at check stations and 15 wing barrels distributed throughout the sage-grouse hunt area for age analysis (Table 6).

### **Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

### **Management Implications**

Sage-grouse populations are largely dependent upon spring weather conditions during nesting and brood rearing. Recruitment of birds into the fall will be governed by uncontrollable weather factors until habitat quality and quantity is improved to moderate the effect of weather conditions.

Regional personnel continue to work closely with the BLM to reduce impacts of present and proposed land management practices on sage-grouse habitat. Currently, regional staff are conducting two studies on sage-grouse seasonal distribution and movements on the Owyhee Front and central Owyhee County. Results of the study will be used by BLM to prioritize wildfire suppression efforts based on key seasonal habitat used by sage-grouse.

### **Summary**

Survey information suggests sage-grouse populations have been stable in recent years in most of the Region.

## **Sharp-tailed Grouse**

### **Population Surveys**

Regional personnel ran no sharp-tailed grouse dancing grounds or brood routes in 2003.

Trends in sharp-tailed grouse populations are unknown in the Southwest Region. Monitoring of remnant flocks and their corresponding leks was most recently conducted in 2000 by BLM personnel and indicate a small but stable number of birds attending leks in recent years.

### **Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

### **Habitat Conditions**

Due to habitat loss, sharp-tailed grouse populations in the Southwest Region have been reduced to remnant flocks in Washington, Adams, and Payette counties. The Department and the BLM completed research on sharp-tailed grouse distribution, habitat use, and population size in Washington County in 1985. The Department has not participated in research on sharp-tailed grouse habitat in the Southwest Region since 1985.

### **Management Implications**

The Southwest Region has encouraged land management agencies to protect sharp-tailed grouse habitat when planning land management activities. In addition, the Region has entered into a cooperative agreement with the BLM and The Nature Conservancy (TNC) to manage sharp-tailed grouse populations and habitat in Washington County. An area of critical habitat for sharp-tailed grouse comprised of approximately 7,000 acres of BLM and TNC lands will be managed for sharp-tailed grouse by the cooperators. The Department will provide increased enforcement patrols and take over monitoring of sharp-tailed grouse dancing grounds on the Hixon Sharp-tailed Grouse Preserve, and additional leks in other portions of the Region will be surveyed for possible inclusion into the monitoring program.

Populations are far below long-term levels due to habitat losses. Sharp-tailed grouse have increased because of CRP improvements to habitat and good climatic conditions. It is not likely that populations will reach harvestable levels during this planning period.

### **Summary**

Sharp-tailed grouse populations are probably remaining stable, but are isolated and very limited. Significant increases in occupied habitat need to be accomplished.

## **Chukar Partridge**

### **Population Surveys**

Helicopter aerial surveys have been conducted in late August or early September along a portion of Brownlee and Lucky Peak Reservoirs since 1984 to monitor chukar population trends (Tables 7 and 8). In 2003, only Brownlee was surveyed. The number of birds observed was more than observed in 2002, but chukar group size was smaller. Chukar counts for 2003 are above the ten-year average.

### **Harvest Characteristics**

Telephone survey data estimated that 8,742 hunters pursued chukar in the Southwest Region and harvested an estimated 87,457 birds. Participation decreased 2% and harvest increased 12% from 2002 (Table 9). From 1991 to 1995, the chukar harvest averaged 50,000 by 8,000 hunters.

A few birds are checked incidental to other activities. No check stations are run specifically for chukar.

### **Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

### **Management Implications**

Chukar populations are largely dependent upon spring weather conditions during nesting and brood rearing. Recruitment of birds into the fall will be governed by uncontrollable weather factors until habitat quantity and quality is improved to moderate the effect of weather conditions.

### **Summary**

The chukar population was up in 2003. Survey counts along Brownlee Reservoir were the second highest in the last decade, but remained well below the historic high of 2,652 chukars counted in 1987.

## **Gray Partridge**

### **Population Surveys**

Brood route miles counted in 2003 (540) were less than 2002 (600). The 0.05 birds observed per mile was less than were observed in 2002 (0.1) and less than the previous ten-year average of 0.1 (Table 10).

## **Harvest Characteristics**

Telephone survey data estimated that 4,072 hunters pursued gray partridge in the Southwest Region and harvested an estimated 21,486 birds. Participation and harvest increased 45% and 97%, respectively, from 2002 (Table 10).

A few birds are checked incidental to other activities. No check stations are run specifically for gray partridge.

## **Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

## **Management Implications**

Gray partridge populations are largely dependent upon spring weather conditions during nesting and brood rearing. Recruitment of birds into the fall will be governed by uncontrollable weather factors until habitat quantity and quality is improved to moderate the effect of weather conditions.

## **Summary**

The gray partridge population is well below its historic highs, but the basic core population is still present. The habitat needs to be improved and the amount of high-quality habitat needs to be increased.

## **Wild Turkey**

### **Population Surveys**

No trend surveys are in place to monitor turkey populations in the Southwest Region.

### **Harvest Characteristics**

One controlled spring hunt was held for turkeys in the Southwest Region in 2003. The 2002, controlled fall hunt was changed to an either-sex general season hunt in 2003. A general spring gobbler-only hunt was also held in 2003. Harvest estimates for 2003 indicate a 15% increase in number of hunters compared to 2002. This resulted in 1,847 turkeys harvested in 2003 compared to 1,223 turkeys harvested in 2002 (Table 11).

No check stations were run during the turkey season.

### **Climatic Conditions**

Average precipitation and snow cover characterized the winter of 2003-2004. There were no indications that snow cover had a detrimental impact on wintering turkeys.

## **Trapping and Transplanting**

No turkeys were trapped in the Southwest Region and transplanted within Idaho during 2003, but thirty-three turkeys were trapped and transplanted to Nevada (Table 12).

## **Management Implications**

Regional personnel have supported enhancement of turkey habitat by plantings of food plots specifically for wild turkey on USFS lands and by completing habitat improvement projects on Department-owned lands. Additionally, regional personnel have provided input into land use plans on the importance of turkey habitat.

Turkey depredation complaints were received from several subdivisions near Boise. The increasing turkey populations are damaging gardens, power lines, and specialty crops, and fouling wintering concentration areas. A combination of trapping and transplanting plus attracting to new feeding areas has helped alleviate some of the problems in past years.

Turkey numbers have increased and, in some areas of the Region, they are dependent upon supplemental feed to survive the winter. During winter 2003-2004, Department personnel, in cooperation with members of the Idaho and local chapters of the NWTF, distributed approximately ten tons of donated grain to sustain these turkeys. Public demand for turkey feed has become intense, even in moderate to mild winters.

## **Summary**

Wild turkey hunter numbers were up 15% in 2003 compared to 2002. The increased number of hunters harvested 51% more turkeys in the Southwest Region in 2003.

## **Mourning Dove**

### **Harvest Characteristics**

There are no regional harvest estimates for 2003. From 1991 to 1995, the dove harvest averaged 46,000 birds by 4,500 hunters (Table 13).

### **Climatic Conditions**

Spring weather conditions were mild and favorable for nesting in 2003.

### **Population Surveys**

Regional personnel participate in the USFWS annual mourning dove call-count routes in May each year. In 2003, regional personnel counted mourning doves while conducting pheasant brood routes. Approximately 2.6 mourning doves per mile were counted in 2003 (Table 13).

## **Rabbits and Hares**

### **Population Surveys**

No surveys or other efforts are made to estimate rabbit and hare populations in the Southwest Region.

### **Harvest Characteristics**

Estimates from the telephone harvest survey indicate 1,137 hunters harvested 4,094 cottontail rabbits in 2003 compared to 4,921 cottontails harvested by 285 hunters in 2002. In addition, 25 hunters harvested 17 snowshoe hares in 2003.

### **Climatic Conditions**

Spring weather conditions appeared favorable for production of rabbits and hares in 2003.

### **Management Implications**

Hunting has little, if any, effect on populations. Seasons have been set with liberal bag limits and season lengths. No active data collection programs exist for rabbit or hare production or population estimates. The harvest of rabbits and hares is very small and has no impact on the populations.

Table 1. Pheasant population characteristics and production in the Southwest Region, 1980-present.

Year	Miles counted	Birds per mile	Percent unsuccessful females	Juv:100 adult females	N <sup>a</sup>	Average brood size
1980	404	3.6	3	481	1,483	0.5
1981	402	4.4	7	427	1,799	5.4
1982	430	2.1	134	304	905	4.4
1983	298	3.1	15	383	941	4.6
1984	310	1.8	17	437	555	4.5
1985	278	2.8	16	653	784	7.7
1986	176	3.2	10	475	570	5.3
1987	178	2.7	13	415	446	4.8
1988	161	2.0	12	414	315	4.5
1989	176	2.0	2	497	414	4.9
1990	192	2.5	8	516	485	5.2
1991	600	0.7	34	505	397	4.0
1992	660	0.9	29	527	610	5.3
1993	580	0.3	39	611	200	6.1
1994	580	1.6	24	481	959	6.9
1995	480	0.5	40	398	246	4.5
1996	260	0.8	17	624	215	6.2
1997	660	0.4	25	360	290	4.8
1998	640	0.6	25	358	371	4.8
1999	540	0.6	17	396	315	4.8
2000	540	0.5	22	575	246	7.4
2001	620	0.6	29	423	342	5.9
2002	600	0.3	59	436	180	4.4
2003	540	0.4	79	546	153	5.7
Ten-year average	546	0.6	34	460	332	5.5

<sup>a</sup> Sample size.

Table 2. Estimated pheasant harvest in the Southwest Region, 1980-present.

Year	Check station			Telephone survey <sup>a</sup>			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1980	2,457	2,239	0.9	3.7	-	-	-
1981	2,516	2,054	0.8	4.1	-	-	-
1982	1,860	1,147	0.6	5.5	-	-	-
1983	2,054	1,963	1.0	3.5	31,946	155,604	0.9
1984	1,723	1,342	0.8	4.6	28,979	132,487	0.8
1985	1,324	1,051	0.8	4.0	27,231	142,867	0.8
1986	1,718	1,412	0.8	4.1	25,218	119,326	0.8
1987	1,696	1,143	0.7	5.6	23,047	103,728	0.8
1988	1,245	569	0.5	7.0	17,016	64,302	0.7
1989	845	515	0.6	5.1	15,983	64,059	0.7
1990	962	739	0.8	4.2	16,309	74,302	0.7
1991	880	546	0.6	5.3	16,073	61,248	0.6
1992	693	488	0.7	4.5	15,800	68,600	0.7
1993	250	114	0.4	7.0	15,700	68,200	0.6
1994	198	128	0.6	4.7	12,600	57,100	0.7
1995	293	576	0.6	3.1	16,000	70,300	0.6
1996	156	471	0.7	4.5	-	-	-
1997	258	109	0.4	8.1	-	-	-
1998	143	86	0.6	5.3	-	-	-
1999	197	92	0.5	6.0	-	-	-
2000	357	135	0.4	7.1	-	-	-
2001	168	91	0.5	6.2	11,685	38,994	0.6
2002 <sup>b</sup>	59	18	0.4	7.6	10,425	27,010	0.6
2003 <sup>c</sup>	55	21	0.4	7.4	10,196	31,962	0.6
Ten-yr. average	188	173	0.9	6.0	12,181	45,073	0.6

<sup>a</sup> Telephone survey data were not collected at the regional level from 1980-1982 and 1996-2000.

<sup>b</sup> Freezeout Hill check station only.

<sup>c</sup> Star check station only.

Table 3. Quail population characteristics and estimated harvest in the Southwest Region, 1985-present.

Year	Brood routes <sup>a</sup>		Telephone survey <sup>b</sup>		
	Miles counted	Birds <sup>c</sup> per mile	Hunters	Birds harvested	Birds per hunter day
1985	-	-	4,854	37,776	1.2
1986	-	-	4,123	26,234	1.5
1987	-	-	3,677	27,476	1.2
1988	-	-	4,536	43,549	1.6
1989	-	-	4,523	47,418	1.8
1990	-	-	4,857	46,097	1.9
1991	600	1.5	5,478	58,352	1.7
1992	620	0.6	5,400	71,100	2.1
1993	580	0.3	10,400	86,100	1.3
1994	560	1.2	8,500	86,500	1.7
1995	480	0.9	11,500	143,800	1.8
1996	260	2.2	-	-	-
1997	660	1.0	-	-	-
1998	640	2.1	-	-	-
1999	540	2.1	-	-	-
2000	540	2.0	-	-	-
2001	620	2.8	7,718	84,977	2.2
2002	600	4.3	7,613	61,026	2.1
2003	540	2.5	8,467	105,749	2.4
Previous ten-year average	548	1.9	9,146	92,480	1.8

<sup>a</sup> Brood routes were not conducted from 1985-1990.

<sup>b</sup> Telephone survey data were not collected at the regional level from 1996-2000.

<sup>c</sup> Almost entirely California quail.

Table 4. Estimated forest grouse harvest in the Southwest Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Birds per hunter	Birds per hunter day
1985	3,524	12,441	3.5	0.8
1986	3,641	17,049	4.7	1.2
1987	4,145	18,406	4.4	1.1
1988	4,207	18,843	4.5	0.9
1989	4,846	25,699	5.3	1.0
1990	2,637	10,605	4.0	1.1
1991	2,365	10,636	4.5	1.0
1992	5,100	17,800	3.5	0.9
1993	10,400	30,100	2.9	2.9
1994	9,000	31,700	3.5	0.6
1995	13,500	43,800	3.2	0.6
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	7,008	34,251	3.3	1.0
2002	8,945	34,672	5.5	0.8
2003	7,136	40,548	10.4	1.1
Three-year average	7,696	36,490	4.7	1.0

<sup>a</sup> Telephone survey data were not collected at the regional level from 1996-2000.

Table 5. Estimated greater sage-grouse harvest in the Southwest Region, 1980-present.

Year	Check station <sup>a</sup>			Telephone survey <sup>b</sup>			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1980	505	441	0.9	6.7	-	-	-
1981	464	606	1.3	3.5	-	-	-
1982	359	236	0.6	9.2	-	-	-
1983	108	37	0.3	14.9	2,912	2,713	0.4
1984	47	31	0.7	5.2	504	901	0.6
1985	161	110	0.7	6.5	1,319	2,718	0.6
1986	245	330	1.3	4.3	608	1,253	0.6
1987	219	315	1.1	4.9	837	1,567	1.1
1988	329	284	0.9	5.7	1,830	4,532	0.7
1989	228	222	1.0	5.4	1,035	2,049	1.1
1990	476	883	1.9	3.3	1,217	4,320	1.5
1991	476	498	1.1	5.3	1,584	4,292	0.6
1992	599	412	0.7	7.7	1,500	4,200	0.7
1993	74	58	0.8	6.3	3,200	11,100	1.9
1994	99	109	1.1	3.8	3,400	6,400	0.6
1995	71	62	0.9	4.2	4,300	6,700	0.5
1996	44	29	0.7	6.0	-	-	-
1997	34	36	0.9	3.7	-	-	-
1998	23	23	1.0	3.8	-	-	-
1999	21	18	1.0	4.4	-	-	-
2000	365	312	0.9	6.5	997	1,848	0.6
2001	150	179	1.2	5.5	858	1,240	0.7
2002	285	293	1.0	5.0	1,135	1,499	0.7
2003	246	254	1.0	5.0	-	-	-
Ten-yr. average	134	132	1.0	4.8	2,138	3,537	0.6

<sup>a</sup> Walters Ferry and Bruneau check stations open on weekends in 1990. Bruneau check station open on opening day only from 1993-1999. Only the Bruneau and Mud Flat check stations were operated from 2001-2003.

<sup>b</sup> Telephone survey data were not collected at the regional level from 1980-1982 and 1996-1999. Telephone survey data for 2003 was not available at the time of this report.

Table 6. Greater sage-grouse production based on wing collections in the Southwest Region, 1980-present.

Year	Juv:100 females	Juv:100 adults	% unsuccessful females
1980	106	62	65
1981	111	61	26
1982	83	57	59
1983	332	225	33
1984	145	111	40
1985	150	101	48
1986	195	133	29
1987	198	124	29
1988	165	109	35
1989	277	163	26
1990	211	153	20
1991	108	66	78
1992	83	56	84
1993	197	129	53
1994	277	207	69
1995	145	98	46
1996	185	107	51
1997	123	78	54
1998	130	101	75
1999	300	192	56
2000	127	85	67
2001	145	110	38
2002	295	201	86
2003	199	130	81
Ten-year average	193	131	62

Table 7. Chukar partridge aerial survey results along Brownlee Reservoir in the Southwest Region, 1984-present.

Year	Chukars observed	Chukar groups	Groups per square mile <sup>a</sup>	Chukars per square mile	Chukars per group
1984	597	45	3.8	49.8	13.3
1985	872	62	5.2	72.7	14.1
1986	1,686	94	7.8	140.5	17.9
1987	2,652	115	9.6	221.0	23.1
1988	-	-	-	-	-
1989	649	57	4.8	54.1	11.4
1990	1,313	77	6.4	109.4	17.1
1991	1,621	103	8.6	135.1	15.7
1992	930	89	7.4	77.5	10.5
1993	211	24	2.0	17.6	8.8
1994	1,056	65	5.4	88.0	16.2
1995	952	88	7.3	79.3	10.8
1996	949	90	7.5	79.1	10.5
1997	881	79	6.6	73.4	11.2
1998	1,131	125	10.4	109.3	10.5
1999	1,330	101	8.4	110.8	13.2
2000	1,488	104	8.7	124.0	14.3
2001	1,724	127	10.6	143.7	13.6
2002	1,488	92	7.7	124.0	16.1
2003	1,656	139	11.6	138.0	11.9
Ten-year average	1,266	101	8.4	105.5	12.5

<sup>a</sup> The survey area is 12 square miles.

Table 8. Chukar partridge aerial survey results on Lucky Peak Reservoir in the Southwest Region, 1984-present.

Year <sup>a</sup>	Chukars observed	Chukar groups	Groups per square mile <sup>b</sup>	Chukars per square mile	Chukars per group
1984	84	10	1.1	7.6	8.4
1985	132	10	1.2	11.0	13.2
1986	144	15	1.0	9.6	9.6
1987	409	33	3.3	40.9	12.4
1988	-	-	-	-	-
1989	-	-	-	-	-
1990	-	-	-	-	-
1991	115	18	1.1	7.2	6.4
1992	-	-	-	-	-
1993	84	10	1.2	7.1	7.4
1994	190	13	1.5	19.0	14.6
1995	212	18	1.8	21.2	11.8
1996	-	-	-	-	-
1997	314	29	2.9	31.4	10.8
1998	193	26	2.6	19.3	7.4
1999	-	-	-	-	-
2000	241	21	2.1	24.1	11.5
2001	-	-	-	-	-
2002	218	18	1.8	21.8	12.1
2003	-	-	-	-	-
Ten-year average	228	21	2.1	22.8	10.9

<sup>a</sup> Years with no data were not surveyed.

<sup>b</sup> The survey area is ten square miles.

Table 9. Estimated chukar partridge harvest in the Southwest Region, 1985-present.

Year	Check station <sup>a</sup>			Telephone survey <sup>b</sup>			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1985	354	177	0.5	9.2	3,987	14,895	0.7
1986	402	238	1.2	6.3	6,505	46,299	1.9
1987	327	164	0.5	4.5	7,995	70,379	1.6
1988	316	168	0.5	11.5	6,957	49,687	1.7
1989	170	121	0.7	6.9	5,937	42,003	1.4
1990	257	420	1.6	2.4	5,793	49,954	1.9
1991	164	111	0.7	6.6	7,150	52,750	1.6
1992	136	72	<0.1	10.0	6,300	28,900	1.1
1993	5	2	0.4	7.5	8,500	48,100	5.1
1994	14	17	1.2	4.6	7,500	59,400	1.6
1995	7	9	1.3	2.9	10,700	96,700	1.5
1996	24	15	0.6	2.0	-	-	-
1997	9	15	1.7	2.4	-	-	-
1998	4	0	-	-	-	-	-
1999	5	0	-	-	-	-	-
2000	374	271	0.7	7.0	-	-	-
2001	36	69	1.9	1.9	7,988	61,201	1.6
2002	70	114	1.6	2.8	8,907	78,171	1.8
2003	58	181	3.1	1.6	8,742	87,457	2.0
Ten-yr. average	60	69	1.1	3.2	8,767	76,586	1.7

<sup>a</sup> Opening weekend harvest data only from Cecil Andrus WMA. Opening weekend harvest data only in 1990.

<sup>b</sup> Telephone survey data were not collected at the regional level from 1996-2000.

Table 10. Gray partridge population characteristics and estimated harvest in the Southwest Region, 1985-present.

Year	Production <sup>a</sup>			Telephone Survey <sup>b</sup>		
	Miles counted	Birds per mile	Birds counted	Hunters	Birds harvested	Birds per hunter day
1985	-	-	-	1,508	5,566	0.8
1986	-	-	-	1,610	6,645	0.7
1987	-	-	-	2,165	10,906	0.7
1988	-	-	-	1,809	11,951	1.1
1989	-	-	-	946	2,062	0.6
1990	-	-	-	1,835	9,648	1.0
1991	600	0.1	70	2,478	12,804	0.9
1992	660	0.1	55	1,800	6,600	0.9
1993	580	0.1	29	4,900	12,700	2.6
1994	560	0.1	20	4,300	11,000	0.4
1995	580	0.1	43	5,800	19,100	0.6
1996	260	0.1	9	-	-	-
1997	660	0.1	67	-	-	-
1998	640	0.1	42	-	-	-
1999	540	0.2	125	-	-	-
2000	540	0.2	96	-	-	-
2001	620	0.1	60	3,452	16,451	0.8
2002	600	0.1	79	2,816	10,895	0.8
2003	540	<0.1	26	4,072	21,486	1.0
Ten-yr. average	554	0.1	57	4,088	15,786	0.7

<sup>a</sup> Brood routes were not conducted from 1985-1990.

<sup>b</sup> Telephone survey data were not collected at the regional level from 1996-2000.

Table 11. Estimated turkey harvest in the Southwest Region, 1985-present.

Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1985						
Controlled	4	20	20	7	7.3	51
General	-	-	158	18	22.4	404
1986						
Controlled	6	30	30	12	-	-
General	-	-	228	58	12.1	700
1987						
Controlled	6	30	30	12	7.1	85
General	-	-	352	78	14.3	1,119
1988						
Controlled	4	22	22	-	-	-
General	-	-	518	72	24.4	1,757
1989						
Controlled	4	22	22	7	-	-
General	-	-	280	39	27.7	1,079
1990						
Controlled	2	10	9	0	-	42
General	-	-	270	33	25.4	838
1991						
Controlled	2	10	9	4	7.0	28
General	-	-	596	61	26.0	1,587
1992						
Controlled	0	-	-	-	-	-
General	-	-	736	93	23.7	2,200
1993						
Controlled	0	-	-	-	-	-
General	-	-	1,491	235	20.4	4,784
1994						
Controlled	0	-	-	-	-	-
General	-	-	1,730	269	20.1	5,396
1995						
Controlled	0	-	-	-	-	-
General	-	-	2,671	385	21.9	8,428
1996						
Controlled	1	15	13	10	9.2	92
General	-	-	2,682	494	19.0	9,397
1997						
Controlled	1	15	10	8	11.5	92
General	-	-	3,064	610	13.4	8,164
1998						
Controlled	1	30	24	11	10.4	114
General	-	-	3,420	700	14.4	10,100
1999						

Table 11. Continued.

Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
Controlled	1	75	75	38	5.7	217
General	-	-	5,300	1,280	14.4	18,424
2000						
Controlled	1	75	75	32	9.9	318
General	-	-	6,401	1,276	15.3	19,555
2001						
Controlled Spring	1	75	71	38	8.4	319
General Spring	-	-	5,680	988	18.4	18,140
Controlled Fall	1	750	403	315	3.0	948
2002						
Controlled Spring	1	70	66	32	8.6	275
General Spring	-	-	5,737	910	19.8	18,055
Controlled Fall	1	750	623	281	5.6	1,560
2003						
Controlled Spring	1	67	62	37	5.1	189
General Spring	-	-	5,797	1,230	15.4	18,961
General Fall	-	-	1,499	580	7.8	4,529

<sup>a</sup> Controlled hunts were not offered from 1992-1995.

<sup>b</sup> Fall hunt. All others are spring hunts.

Table 12. Turkey transplant history for the Southwest Region, 1966-present.

Year	Sub-species <sup>a</sup>	Release site-Unit	Number of birds released	New or supplemental release
1966	M	SF Boise River-39	12	N
1967	M	Wildhorse River-22	19	N
1970	M	Payette River at Banks-32	14	N
1979	M	Pine Creek-31	5	N
1982	R	Fort Boise WMA-38	24	N
	M	SF Salmon River-25	18	N
	M	Payette River at Banks-32	15	S
	M	Hornet Creek-22	4	S
	M	Fruitvale-22	1	S
	R	Kennedy WMA-38	16	N
	R	Goodrich Creek-22	19	N
1983	M	SF Boise River-39	15	S
	M	MF Boise River-39	15	N
	M	Cottonwood Creek-39	14	N
1984	R	Boulder Creek-40	27	N
1985	R	Boulder Creek-40	2	S
1986	M	Dead Dog Creek-39	17	N
	R	C.J. Strike WMA-40	14	N
1987	M	Porter Creek-39	10	N
	M	Harris Creek-39	10	N
1988	M	Harris Creek-39	10	S
	M	Porter Creek-39	7	S
	M	Eagleson Summit-39	11	N
1989	R	Boise River at Caldwell-38	14	N
1990	M	Cottonwood Creek-31	25	N
	M	Dukes Creek-22	28	N
	M	Indian Creek-22	28	N
	M	WF Brownlee Creek-31	28	N
	M	Hornet Creek-22	13	S
	M	Stack Rock-39	20	N
1993	M	Robie Creek-39	22	S
	M	Thorn Creek-39	24	N
	M	Wilderness Ranch-39	29	S
	M	Corral Creek-39	25	N
	M	Ola-32A	22	N
	M	Squaw Creek-32A	46	N
	M	Sturgill Creek-31	37	N
	R	Payette River-32	5	S
	R	Boise River-38	26	N
	R	Boise River-38	27	N
1994	R	Boise River-38	24	N
	R	Boise River-38	29	N
	M	Ola-32	22	S
	M	Squaw Creek-32	24	S
1995	M	Alder Creek-33	27	N
	M	MF Payette River-33	30	N

Table 12. Continued.

Year	Sub-species <sup>a</sup>	Release site-Unit	Number of birds released	New or supplemental release
1996	R	Payette River WMA-38	20	N
1997	R	Payette River WMA-32	18	N
	R	Payette River WMA-32	17	N
	M	Bunch Creek-33	18	N
	M	MF Payette River-33	33	S
	M	Keithly Creek-31	27	N
	M	Dennett Creek-33	27	N
1998	M	Little Weiser River-32	17	N
	M	Mann Creek-31	19	S
	M	SF Boise River-39	17	S
	R	Payette River WMA-32	17	N
	R	Payette River WMA-32	20	S
1999	R	Letha-32	24	N
	R	Payette River-32	26	N
	M	SF Boise River-39	17	S
2000	M	Snake River at Archer-64	27	N
2002	M	Blackfoot River-69	38	N
2003	M	NEVADA	33	-

<sup>a</sup> M = Merriam's; R = Rio Grande.

Table 13. Mourning dove call-count survey results and estimated harvest in the Southwest Region, 1985-present.

Year	Call-count routes <sup>a</sup>		Telephone survey <sup>b</sup>		
	Miles counted	Doves heard/mile	Hunters	Birds harvested	Birds per hunter day
1985	-	-	4,326	44,746	2.6
1986	-	-	3,226	29,434	2.3
1987	-	-	2,635	26,675	2.5
1988	-	-	1,878	19,390	2.1
1989	-	-	2,490	19,295	2.0
1990	-	-	2,578	30,910	3.1
1991	600	4.5	2,410	25,733	2.4
1992	660	1.5	3,200	29,900	2.0
1993	580	0.3	7,100	73,200	2.1
1994	560	4.6	6,100	70,700	2.4
1995	480	2.2	7,200	66,100	2.3
1996	260	2.3	-	-	-
1997	660	2.2	-	-	-
1998	640	1.6	-	-	-
1999	540	3.9	-	-	-
2000	540	3.3	-	-	-
2001	620	3.2	-	-	-
2002	600	2.4	-	-	-
2003	540	2.6	-	-	-

<sup>a</sup> Data collected during pheasant brood route counts. Counts were not taken from 1985-1990.

<sup>b</sup> Telephone survey data at the regional level were not collected after 1995; harvest is reported directly to the USFWS by hunters.

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>4</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b>	<u>April 1, 2003 to March 31, 2004</u>		

**MAGIC VALLEY REGION**

**Pheasant**

**Abstract**

Alfalfa harvest in May and early June continues to contribute to poor pheasant nest success. August roadside surveys yielded 0.31 pheasants per mile (PPM) in 2003, which was up significantly from 2002 and slightly higher than the previous ten-year mean. In 2003, harvest increased by 16% from 2002 but was only 27% of the estimated harvest in 1985. In the long-term, pheasant populations are expected to remain low given current farming practices. Occasional short-term increases will occur during years when the first alfalfa harvest is delayed by rain, allowing increased nesting success.

**Population Surveys**

August roadside surveys are used to monitor pheasant population trends and forecast hunting seasons. Using data from 1976-1996, the PPM index was positively and significantly correlated ( $r = 0.90$ ,  $df = 19$ ,  $P < 0.001$ ) with harvest estimated by telephone survey sampling.

The 2003 PPM index of 0.31 was more than double the 2002 index and was higher than the previous ten-year average of 0.25 (Table 1). Alfalfa harvest was slightly disrupted by precipitation and cool temperatures that persisted through about May 8. However, conditions remained dry throughout the remainder of May and June, allowing most harvest activities to proceed without delay.

Roadside survey data typically reflect higher pheasant densities in the western portion of the Magic Valley Region than the eastern portion. From 1991-2003, the PPM index averaged 0.34 on western routes (Jerome, west Twin Falls, west Lincoln, Gooding, and Elmore counties) and 0.16 on eastern routes (Minidoka, Cassia, east Twin Falls, and east Lincoln counties). In the eastern portion of the Region, winters are typically more severe and habitat loss has been greater than in the western portion. However, since 2001, no differences in the PPM index for eastern and western routes are evident.

No data were collected for estimating age ratios in October or hatching chronology.

No winter sex ratio data was collected during the 2003-2004 reporting period.

### **Harvest Characteristics**

Both pheasant hunters and pheasant harvest have declined precipitously in the Region since the mid-1980s. In 2003, harvest increased by 17% from 2002 but was only 27% of the estimated harvest in 1985 (Table 2).

### **Stocking**

Pheasant stocking to provide “put-and-take” hunting opportunity occurred on BLM/Bureau of Reclamation tracts in Minidoka County (525 pheasants) and at Niagara Springs WMA (960 pheasants). Additionally, 50 pheasants were stocked at Niagara Springs WMA for the youth-only pheasant season.

### **Management Studies**

Pheasant research was conducted in the Region from 1990-2002. Research results are presented in separate reports (Musil 2003, Musil in press).

### **Management Implications**

Pheasant populations in the Magic Valley declined dramatically during the early to mid-1980s following a series of severe winters. Pheasant numbers have remained depressed because of a shortage of winter habitat and lack of undisturbed nesting cover. Current farming practices are not compatible with supporting the higher density of pheasants that occurred in the Magic Valley during the 1950s and 1960s. The widespread use of sprinkler irrigation has resulted in larger field sizes, less linear habitat (fence rows and ditches), and fewer uncultivated weedy areas, reducing the quality and quantity of winter and nesting habitat. In addition, the number of acres of farmland planted to alfalfa has increased to support the needs of the area’s growing dairy industry. The increase in alfalfa acres has had negative effects on pheasants because alfalfa is harvested earlier (mid- to late May instead of early June) and more frequently (4-5 cuttings instead of three) now than it was 15 years ago. The result is that fewer pheasants can nest successfully in alfalfa, which is usually the best nesting cover available.

In the long term, the status of pheasant populations will be closely related to agricultural practices and their effect on habitat. Occasional short-term increases will occur during years when the first alfalfa harvest is delayed by rain, allowing increased nesting success. The current trend in intensive clean farming practices is expected to continue and further declines in pheasant habitat quantity and quality will follow. The Magic Valley Region will continue to give priority to habitat improvement (HIP, Pheasant’s Forever, BLM/IDFG Cooperative Wildlife Program) in pheasant recovery efforts. Providing adequate nesting habitat is currently viewed as the weak link in our habitat recovery efforts.

## Quail

### Abstract

No population surveys were conducted specifically for quail in 2003. Harvest data collected by telephone survey and check stations in 2003 suggest that quail numbers in 2002 and 2003 were lower than the ten-year average.

### Population Surveys

Only 7 of 28 August roadside routes survey quail habitat, resulting in poor predictive capabilities from survey data (Table 3). A sample of quail wings (N = 53) collected on opening weekend resulted in a ratio of 2.12 juveniles/adult.

### Harvest Characteristics

Harvest data suggest that quail numbers remained below the ten-year average. The estimated quail harvest in 2003 (4,706 birds) was slightly higher than 2002 but substantially lower than the 1993-2002 mean of 10,177 birds (Table 3).

The index of quail harvested per 100 hunters interviewed at check stations in 2003 was also slightly higher than in 2002 and well below the ten-year average (Table 4).

### Trapping and Transplanting

Thirty-eight California quail captured in southwestern Idaho were released at the Big Cottonwood WMA in January 1996 to reestablish a quail population there. No releases have been made since then. A fall population of approximately 50-75 quail has been observed annually on the WMA since the initial release suggesting a stable population. Suitable habitat is limited and no future releases are planned.

### Management Implications

California quail in the Magic Valley Region are associated primarily with the Snake River and its tributaries west of Highway 93. Opportunities to enhance habitat will be pursued through HIP, and through riparian improvement opportunities with BLM, whenever possible. Increased residential development along the Snake River is a serious threat to quail habitat. Increased attention to zoning and development plans may help slow the loss of habitat.

## Forest Grouse

### Abstract

No population surveys were conducted. Check station data suggest a substantial decline in blue and ruffed grouse harvest in 2003, while telephone survey data suggest a slight increase in harvest. Hunter interviews suggest that ruffed grouse declined in the South Hills (Twin Falls County) after reaching the highest levels ever recorded in 2001 and 2002.

## **Population Surveys**

No surveys were conducted during the 2003-2004 reporting period. Observations by hunters and agency personnel indicate that the distribution of ruffed grouse in the South Hills has expanded to include most of the available habitat since their introduction during 1987-1989. The sample of wings collected for ruffed grouse (eight wings) and blue grouse (18 wings) was inadequate to estimate 2003 reproduction.

## **Harvest Characteristics**

Telephone survey data suggest that harvest of blue and ruffed grouse in 2003 was 14% higher than 2002 and 30% lower than the ten-year average. Data suggest that forest grouse has increased in popularity since the 1980s. From 2001-2003, approximately 3,000 hunters pursued forest grouse annually in the Region compared to 450-800 hunters from 1985-1990 (Table 5).

At 2001 and 2002 check stations, the number of ruffed grouse checked (primarily from the South Hills, Twin Falls County) increased to the highest levels ever recorded. In 2003, the number of ruffed grouse checked declined substantially and reflected low bird numbers. The number of blue grouse checked also decreased in 2003 from the high level of 2002 (Table 4).

## **Management Implications**

Blue and ruffed grouse harvest will be monitored at sage-grouse and big game check stations. Ruffed grouse drumming routes, established in Unit 54 to monitor status of the introduced grouse population, have been discontinued.

## **Sage-grouse**

### **Abstract**

Sage-grouse populations in the Magic Valley Region have increased substantially since 1994 when grouse numbers were very low. The number of males counted on leks in 2003 increased by 40% from 2002 levels. Sage-grouse production in 2003, measured from wing collections, was 1.79 juveniles/adult hen, lower than the 1965-2001 average of 2.01 juveniles/adult hen. Opening weekend check station data indicate an increase in harvest commensurate with the increased grouse populations. In 2003, the Magic Valley Region had 41% of the statewide sage-grouse harvest and hunters. The long-term decline in sage-grouse populations has resulted from substantial loss and fragmentation of habitat from large range fires and the effects on habitat of successive years of drought during the late 1980s and early 1990s.

## **Population Surveys**

The Magic Valley Region conducts lek routes annually to monitor sage-grouse population trends. In 2003, the number of males observed on 12 comparable routes increased 40% from the 2002 level. The number of males counted was 90% higher than was documented in 1994 when sage-grouse numbers had declined to a very low level. Lek data suggest that sage-grouse

populations in the Region increased from 1995-1999 and then declined slightly from 2000-2002 before increasing again in 2003 (Figure 1).

Sage-grouse wings (N = 655) were collected at ten check stations and with wing barrels located at Shoshone Basin and Browns Bench. Estimated sage-grouse production in 2003 was 1.79 juveniles/adult hen, 10% lower than in 2002 and 11% lower than the 1965-2003 mean of 2.01 juveniles/adult hen. Since 1994, the juvenile/hen ratio has exceeded 2.00 only once (Table 6).

Sage-grouse brood routes are not conducted in the Magic Valley Region.

### **Harvest Characteristics**

Opening weekend check station data for 2003 show increased sage-grouse harvest and hunter success. Telephone survey data of hunter harvest was not available at time of this report. In 2003, the Magic Valley Region accounted for 41% of the statewide sage-grouse harvest and 41% of the sage-grouse hunters.

Ten check stations are operated annually during opening weekend. Check station data reflect a reduction in hunter participation and harvest since 1996 because of declines in sage-grouse populations and the implementation of more restrictive hunting seasons. In 2003, opening weekend harvest increased 27% from 2002 and was only 40% of the average harvest of 1,678 grouse from 1965-2002. Opening weekend hunter success improved from 0.52 birds/hunter in 2002 to 0.61 birds/hunter in 2003 but remained lower than the 1965-2001 average of 0.72 birds/hunter. The effort expended to harvest a grouse in 2003 was the same as the 1965-2003 average of 6.7 hours/bird (Table 7).

### **Climatic and Habitat Conditions**

Hatching and early brood-rearing conditions from mid-May to mid-June were generally favorable. Precipitation during April and early May exceeded the average in many areas, contributing to good nesting and early brood-rearing habitat. Very hot and dry conditions persisted from mid-May through mid September, resulting in degraded late brood-rearing habitat.

Hunting conditions on opening weekend were warm and breezy with temperatures reaching the mid 70s in the afternoons. A few localized rain showers occurred during the week preceding the opener, but conditions generally remained very dry.

### **Management Implications**

Sage-grouse populations in the Region declined precipitously from 1987-1994. Sage-grouse numbers then increased steadily from 1995-1999 before declining slightly from 2000-2002 and increasing again in 2003. Habitat loss and fragmentation are the primary cause of long-term sage-grouse declines. Fires have consumed more than a million acres of sagebrush-dominated habitat in south-central Idaho during the past 15 years. Combined with drought conditions, these fires have had catastrophic effects on sage-grouse nesting, brood-rearing, and winter habitats.

The increase in sage-grouse numbers since 1995 can be attributed to recovery of sagebrush in some burned areas. Reversing the long-term downward trend in sage-grouse numbers is contingent on further reestablishment of sagebrush in burned areas. Regional personnel will continue to review and comment on BLM and USFS land treatment projects affecting sage-grouse habitat.

Revision of the Idaho Sage-grouse Management Plan will be a priority in the upcoming year. The Magic Valley Region will continue to participate in two local working groups that are addressing sage-grouse management issues in the Shoshone Basin and the Jarbidge areas. Plans for those two groups are in the final stages of completion. In those portions of the Magic Valley Region that do not have a local working group, interagency teams will be convened to address sage-grouse management issues for the plan revision.

## **Sharp-tailed Grouse**

### **Abstract**

Sharp-tailed grouse populations in the Magic Valley Region rebounded in 2003 after declines in 2001 and 2002. Lek counts and harvest data reflect the increase in grouse numbers. Forty-six grouse were reintroduced into suitable habitat in the House Creek area, approximately 20 miles west of the Shoshone Basin reintroduction area. The Shoshone Basin population has expanded to approximately 200 mi<sup>2</sup>, although only three active leks were documented in 2003.

### **Population Surveys**

Sharp-tailed grouse leks were surveyed on established routes and in conjunction with trapping efforts. In Power, Oneida, and Cassia counties, the mean size of 27 comparable leks was 8.7 birds/lek in 2002 and 11.6 birds/lek in 2003, reflecting an upturn in the population.

### **Harvest Characteristics**

Sharp-tailed grouse harvest in the Magic Valley Region is primarily from Oneida and Power counties (Greater Curlew area), although an increasing number of grouse are being harvested from eastern Cassia County. Telephone survey data for sharp-tailed grouse harvest was not available at the time of this report. Sharp-tailed grouse harvest data for the Magic Valley Region portion of the Greater Curlew area is displayed in the Southeast Region section of this report.

### **Trapping and Transplanting**

Idaho's Columbian sharp-tailed grouse transplanting program began in 1992 with the goal of reestablishing populations of this subspecies in Idaho and other western states where suitable habitat exists. During the past 17 years, Columbian sharp-tailed grouse populations in southeastern Idaho have increased substantially and expanded their distribution as a result of abundant high quality habitat provided by private lands enrolled in the CRP program. These healthy, increasing grouse populations are providing a convenient source of birds for reintroduction efforts. During 1992-2003, 787 Columbian sharp-tailed grouse (468 males and

319 females) were trapped in southeast Idaho for reintroduction projects in Idaho, Oregon, Washington, and Nevada. Four hundred four grouse were released in the Shoshone Basin and House Creek areas, Twin Falls County, Idaho, and 383 birds were provided to the other states.

During 2003, transplanting efforts in Idaho were initiated in the House Creek area in southwest Twin Falls County. Forty-six grouse (37 males and 9 females) were released at the Aslett "House Creek Ranch" using a soft release technique developed in previous years. In addition to having suitable habitat for Columbian sharp-tailed grouse, the House Creek area was selected for reintroduction efforts because it is relatively near Shoshone Basin (20 miles) and the Snake Mountains in Nevada (29 miles) where other reintroduction efforts have occurred. It is hoped these new populations will eventually link together. A progress report was prepared summarizing the House Creek release and subsequent monitoring activities (Smith and Remming 2004).

The newly reintroduced sharp-tailed grouse population in Shoshone Basin appears to be doing well based on reported observations by the public and agency personnel. Observations have been made in the Cherry Springs, Indian Springs, Hopper Gulch, Nat Soo Pah, Pine Tit, Parker Spring, and Lost Creek areas and suggest the population has expanded to over 200 mi<sup>2</sup>. Only three active leks were documented in 2003, but others undoubtedly exist.

### **Management Implications**

Columbian sharp-tailed grouse numbers are currently strong as a result of the abundant habitat provided by the CRP program and mountain shrub communities on adjacent BLM lands. A statewide database of sharp-tailed grouse leks has been completed, which will facilitate the tracking of lek activity and attendance. Current sharp-tailed grouse population levels justify liberal hunting opportunity. The popularity of sharp-tailed grouse hunting has increased in recent years as both resident and non-resident hunters learn about southeast Idaho's healthy grouse populations. Results of the grouse reintroduction efforts in Shoshone Basin are encouraging. Reintroduction efforts in the House Creek area will continue during the 2004-2005 reporting period.

## **Chukar Partridge**

### **Abstract**

No chukar surveys were conducted in the Region; however, telephone survey and check station data, and reports from hunters indicated the highest chukar numbers and best chukar hunting in at least 19 years.

### **Population Surveys**

No surveys for chukar populations were conducted in the Magic Valley Region during the 2003-2004 reporting period.

A sample of chukar wings (N = 151) was collected at opening weekend check stations to provide an index to the current year's production. Most of the wings collected were from the Bennett Hills. Production estimated from the wings was 4.2 young/adult. In 2002, the production index was 2.4 juveniles/adult (N = 81).

### **Harvest Characteristics**

The estimated chukar harvest was the highest recorded in the Region during the past 19 years. Hunters took an estimated 11,110 birds in 2003, an increase of 66% from 2002, and more than double the 1985-2002 average of 4,046 birds annually. It should be noted that harvest within the Magic Valley Region in Owyhee and Elmore counties is included with the Southwest Region data (Table 8).

Chukar harvest and population trend is monitored at ten opening weekend sage-grouse check stations. Chukar partridge checked per 100 hunters in 2003 (13.02) was also the highest recorded in the past 19 years and was well above the 1993-2002 mean of 5.3 (Table 4).

### **Management Implications**

No specific chukar population surveys will be undertaken in the Region. Riparian habitat improvement in chukar areas will be encouraged, whenever possible, to benefit populations.

## **Gray Partridge**

### **Abstract**

Roadside survey and opening weekend check station data suggested average numbers of gray partridge in intensively farmed areas and higher densities of birds where sagebrush and/or CRP lands were an important part of the habitat.

### **Population Surveys**

Roadside survey data suggest little change in gray partridge numbers from 1997-2003 (Table 9); however, these routes do not adequately sample uncultivated partridge habitat and thus do not provide data adequate to predict fall population status. A small sample of wings (N = 67) collected at opening weekend check stations resulted in a production index of 1.91 juveniles/adult.

### **Harvest Characteristics**

Telephone survey data suggest a 164% increase in gray partridge harvest from 2002 (Table 9.) Estimated harvest from 1985-2003 has ranged from 1,900 birds to 22,000 birds demonstrating the extreme population fluctuations observed in this species.

Partridge harvest and population trend is monitored at ten opening weekend check stations. The numbers of gray partridge checked per 100 hunters in 1999-2003 were the highest during the

past 19 years. In 2003, success increased to 4.3 partridge/100 hunters, which is higher than the 1993-2002 average of 3.7 partridge/100 hunters (Table 4).

### **Management Implications**

August roadside surveys and opening weekend check stations will continue to be used to monitor the status of gray partridge populations in the Region. From 1997-2003, roadside survey data suggests relatively stable numbers of partridge, but the number of birds checked on opening weekend in 1999-2003 increased to well above the long-term average. One possible explanation for the disagreement in these two indices is that roadside routes sample primarily farmland habitats, while opening weekend check stations sample sagebrush-dominated habitats. Weather-related factors have a substantial effect on short-term population fluctuations, but improving habitat remains the key to sustaining healthy populations in the long term. The Magic Valley Region will continue to give priority to habitat enhancement (HIP, Cooperative Wildlife Program, Pheasants Forever) for gray partridge management.

## **Wild Turkey**

### **Abstract**

The Magic Valley Region has limited opportunities to establish wild turkey populations. Efforts have been undertaken to establish a small population at the Big Cottonwood WMA. One hundred fifty-two Rio Grande turkeys have been released at Big Cottonwood WMA since 1988 and have dispersed into available habitat on the Sawtooth National Forest. In 2003, three 4-permit hunts were authorized on the Big Cottonwood turkey population and ten hunters took ten turkeys.

### **Trapping and Transplanting**

From 1988-2001, 152 Rio Grande turkeys were released at the Big Cottonwood WMA (Table 10). The population has expanded south to Trapper Creek and Oakley and up onto the Sawtooth National Forest. During 2002 and 2003, a flock of turkeys has been observed in the Third Fork of Rock Creek. An estimate of the population is unavailable, but the goal of developing a self-sustaining population has been achieved.

### **Harvest Characteristics**

In 2003, three 4-permit hunts were authorized on the Big Cottonwood turkey population. One of the hunts was for youth hunters only. All ten hunters that hunted were successful (Table 11).

### **Management Implications**

Opportunities to establish self-sustaining turkey populations in the Magic Valley Region are limited without supplemental feeding during winter. Releases in Units 53 and 55 have failed to establish populations. Turkeys near Pine and Featherville in Unit 43 have essentially disappeared because of the severity of winters and lack of a winter food source. A small

population has been established at the Big Cottonwood WMA (Unit 54) and food plots planted to supplement their winter diet.

## **Mourning Dove**

### **Abstract**

Doves observed on roadside routes indicate dove abundance in August 2003 (3.4 doves/mi.) was higher than the 1993-2002 mean of 2.0 doves/mi.

### **Population Surveys**

Department personnel, in cooperation with the USFWS, collect data on four call-count routes in the Magic Valley Region.

On August 2003 roadside surveys, the number of doves observed (3.4 doves/mi.) was higher than the 1993-2002 mean of 2.0 doves/mi. (Table 12).

### **Banding**

During July and August 2003, 200 doves were trapped and banded at 11 locations in the Region as part of a USFWS study of dove survival and migration patterns. Banding activities will continue in 2004 and 2005.

### **Harvest Characteristics**

A telephone survey of hunters has not been conducted since 1996 (Table 12).

### **Management Implications**

Roadside survey data suggest that as many as 50% of the doves have migrated out of the Magic Valley area by the opening of the hunting season on September 1. The onset of cooler weather, usually in early September, triggers movement of the remaining doves. Spring call-count routes and August roadside surveys will be continued to monitor dove trends and abundance.

## **Cottontail Rabbits**

### **Population Surveys**

Cottontail rabbits are counted on the 28 roadside surveys conducted each August in the Magic Valley Region. Fifteen cottontails were observed on 2003 routes compared to 12 in 2002 and only four each year from 1999-2001.

## **Harvest Characteristics**

Hunters typically pass up cottontails on opening weekend. No cottontails were checked on opening weekend 2003, while four were checked in 2002, five in 2001, and none were checked in 2000 (Table 4).

## **Management Implications**

Habitat projects implemented for pheasants, gray partridge, and quail through the HIP program and BLM/IDFG Cooperative Wildlife Management Program will benefit rabbits.

## **Literature Cited**

- Musil, D. 2003. Upland Game Bird Ecology. Idaho Dept. Fish and Game. Federal Aid Wildlife Restoration Project W-160-R-30. 24pp.
- Smith, R. and M. Remming. 2004. Columbian sharp-tailed grouse reintroduction project, House Creek Area, Twin Falls County, Idaho. Progress Report, April-October 2003. Idaho Department of Fish and Game. 24pp.

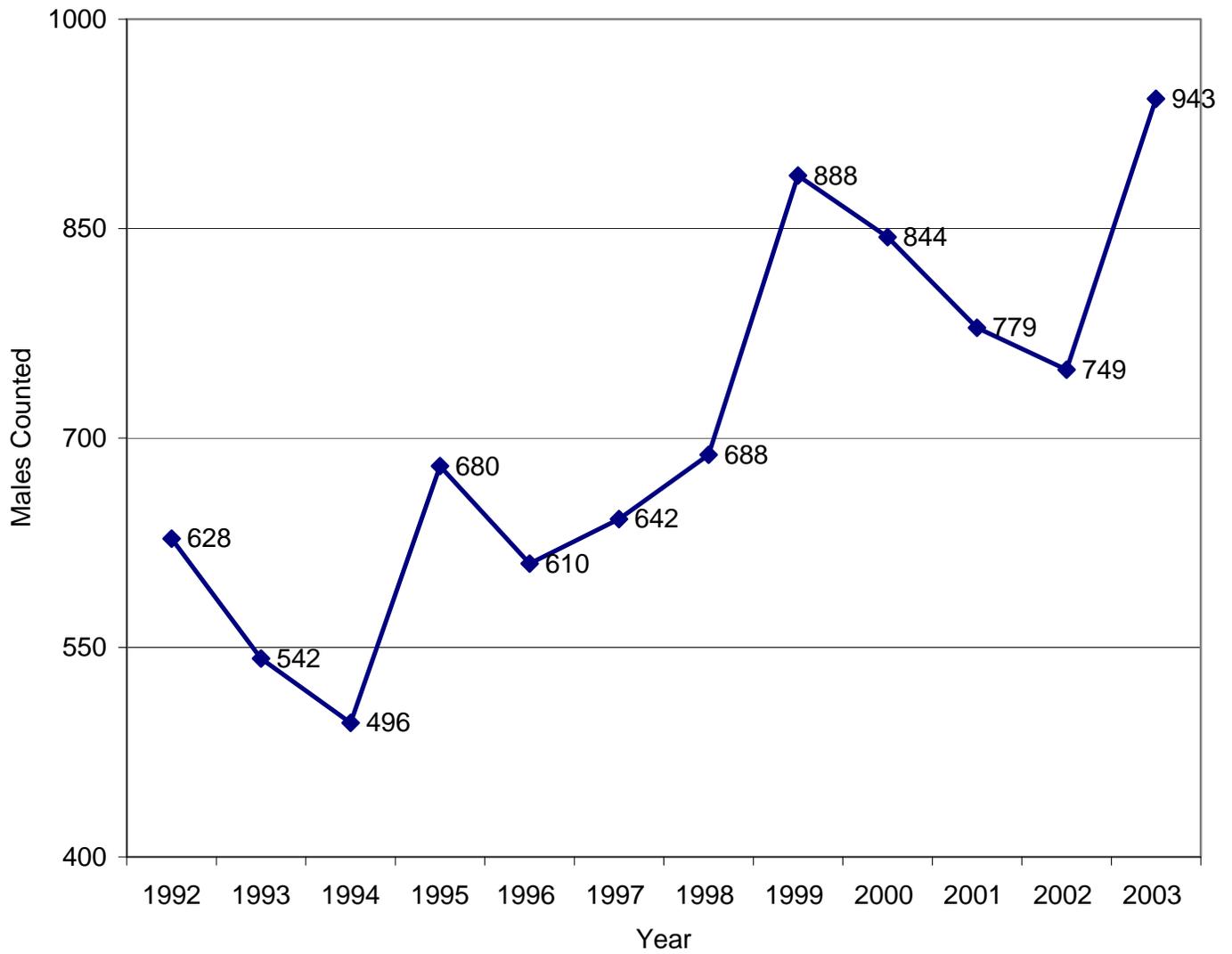


Figure 1. Total male greater sage-grouse counted on 12 comparable lek routes in the Magic Valley Region, 1992-present.

Table 1. Pheasant population characteristics and production in the Magic Valley Region, 1985-present.

Year	Winter sex ratio		Routes (miles) counted	Birds per mile	Percent unsuccessful females	Juv:100 adult females	Brood size	
	Hens per cock	N <sup>a</sup>					N <sup>a</sup>	Average
1985	3.2	359	12 (530)	0.47	11	670	31	6.6
1986	1.6	397	13 (768)	0.36	14	803	50	6.3
1987	1.8	490	13 (789)	0.25	6	631	50	6.1
1988	3.0	809	14 (858)	0.34	13	723	32	5.8
1989	2.1	884	14 (854)	0.27	16	554	24	6.1
1990 <sup>b</sup>	1.9	1,333	14 (854)	0.52	29	742	31	6.2
			28 (575)	0.54	30	447		
1991	-	-	28 (575)	0.33	43	529	22	4.9
1992	2.2	1,572	28 (575)	0.42	26	361	19	5.2
1993	1.3	455	28 (575)	0.22	35	465	8	6.9
1994	2.0	757	28 (575)	0.56	14	727	16	5.9
1995	1.9	1,483	28 (575)	0.13	33	683	8	4.8
1996	2.0	741	28 (575)	0.41	17	555	21	5.8
1997	-	-	28 (575)	0.12	22	611	7	5.6
1998	-	-	28 (575)	0.19	17	741	10	6.0
1999	1.4	271	28 (575)	0.27	13	870	13	6.9
2000	-	-	28 (575)	0.20	45	380	11	4.8
2001	2.7	214	28 (575)	0.14	20	530	8	6.6
2002	-	-	28 (575)	0.12	27	427	8	4.5
2003	-	-	28 (575)	0.31	23	636	14	6.1
Ten-year avg.	2.0	693	28 (575)	0.25	23	616	12	5.7

<sup>a</sup> Sample size.

<sup>b</sup> Survey was modified in 1990. Both the old and new surveys were conducted to allow continuity of trend data.

Table 2. Estimated pheasant harvest in the Magic Valley Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Birds per hunter	Birds per hunter day
1985	14,013	51,330	3.7	0.7
1986	12,288	33,810	2.8	0.6
1987	8,910	25,854	2.9	0.6
1988	6,707	25,278	3.8	0.8
1989	6,037	20,521	3.4	0.6
1990	8,644	36,602	4.2	0.8
1991	7,576	24,411	3.2	0.6
1992	6,603	27,347	4.1	0.7
1993	5,071	24,769	4.9	0.7
1994	3,802	24,629	6.5	1.0
1995	4,975	20,289	4.1	0.6
1996	7,200	17,551	2.4	0.6
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	5,491	19,368	3.5	0.6
2002	4,621	11,677	2.5	0.5
2003	5,579	13,622	2.4	0.6
Three-year average	5,230	14,889	2.8	0.6

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-2000.

Table 3. California quail population characteristics and estimated harvest in the Magic Valley Region, 1985-present.

Year	Brood routes <sup>a</sup>		Telephone survey <sup>b</sup>		
	Routes (miles) counted	Birds per mile	Hunters	Birds harvested	Birds per hunter day
1985	-	-	435	1,375	1.0
1986	-	-	615	4,170	1.8
1987	-	-	342	1,599	2.0
1988	-	-	534	2,685	1.4
1989	-	-	306	2,362	2.4
1990	28 (575)	0.15	946	6,446	1.6
1991	28 (575)	0.15	688	5,624	1.4
1992	28 (575)	0.06	726	3,199	0.8
1993	28 (575)	0.21	1,113	5,195	1.6
1994	28 (575)	0.18	955	5,300	1.3
1995	28 (575)	0.14	1,198	14,215	1.7
1996	28 (575)	0.08	1,642	19,003	2.3
1997	28 (575)	0.08	-	-	-
1998	28 (575)	0.13	-	-	-
1999	28 (575)	0.19	-	-	-
2000	28 (575)	0.04	-	-	-
2001	28 (575)	0.02	1,444	13,345	1.8
2002	28 (575)	0.23	1,250	4,001	1.1
2003	28 (575)	0.17	1,070	4,706	1.9
Ten-year average	28 (575)	0.13	1,267	10,177	1.6

<sup>a</sup> Brood routes were not conducted from 1985-1989.

<sup>b</sup> Telephone survey data at the regional level were not collected from 1997-2000.

Table 4. Trend of upland game species harvested per 100 hunters checked at stations on opening weekend of the grouse, quail, and partridge season in the Magic Valley Region, 1985-present.

Year	Sage grouse	Blue grouse	Ruffed grouse	Chukar partridge	Gray partridge	Mourning dove	CA quail	Cottontail/pygmy rabbit	Hunter numbers
1985	59.9	1.9	0.00	0.3	2.4	0.1	0.00	0.04	2,153
1986	77.0	0.4	0.00	1.7	3.7	0.5	0.07	0.11	2,824
1987	85.3	0.3	0.04	2.6	4.4	0.6	1.12	0.61	2,684
1988	85.1	0.1	0.00	2.5	2.6	1.6	1.46	0.41	2,459
1989	78.3	0.4	0.10	1.3	1.2	1.5	0.10	0.40	2,037
1990	118.3	0.6	0.13	1.7	2.6	0.3	0.25	1.88	2,393
1991	62.8	0.2	0.20	1.8	1.7	0.9	0.37	0.00	2,449
1992	47.0	0.3	0.54	1.1	0.9	0.3	1.03	1.08	1,852
1993	42.1	0.4	0.00	0.3	0.2	2.7	0.87	0.00	1,731
1994	72.7	1.1	0.25	1.1	2.0	0.8	4.30	0.00	1,629
1995	35.5	0.6	0.24	1.4	2.2	2.3	1.18	0.00	1,269
1996	55.3	0.8	0.51	6.9	3.7	0.1	6.27	0.10	989
1997	38.7	0.7	0.00	3.6	2.1	1.5	0.38	0.10	1,048
1998	53.0	1.2	0.00	5.1	3.4	0.5	0.00	0.00	938
1999	59.0	2.7	0.00	7.1	7.4	0.5	1.25	0.54	1,121
2000	50.2	2.2	0.30	8.5	7.9	2.6	1.68	0.00	1,011
2001	56.8	0.2	1.35	10.1	5.3	2.2	2.98	0.45	1,108
2002	49.0	1.9	1.18	8.5	2.8	0.7	0.45	0.36	1,103
2003	56.9	0.3	0.25	13.0	4.3	0.4	0.66	0.00	1,206
Ten-yr. avg.	52.7	1.2	0.41	5.3	3.7	1.2	1.92	0.16	1,142

Table 5. Estimated forest grouse harvest in the Magic Valley Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Birds per hunter	Birds per hunter day
1985	472	768	1.6	0.8
1986	724	2,322	3.2	0.8
1987	634	2,002	3.2	0.8
1988	804	3,243	4.0	0.9
1989	639	2,182	3.4	1.1
1990	765	3,097	4.0	0.7
1991	922	4,357	4.7	1.1
1992	1,102	3,226	2.9	0.9
1993	2,814	4,329	1.5	0.4
1994	1,910	5,544	2.9	0.7
1995	1,990	5,138	2.6	.05
1996	1,408	5,631	4.0	1.0
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	2,847	10,001	3.5	0.8
2002	3,083	8,470	2.7	0.6
2003	2,951	9,641	3.3	0.7
Three-year average	2,960	9,371	3.1	0.7

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-2000.

Table 6. Greater sage-grouse production based on wing collections in the Magic Valley Region, 1985-present.

Year	Juv:100 females	Juv:100 adults	% unsuccessful females
1985	252	155	48
1986	244	161	37
1987	142	90	43
1988	120	77	56
1989	194	125	50
1990	239	146	48
1991	102	67	80
1992	117	63	78
1993	147	107	50
1994	323	213	76
1995	136	82	60
1996	159	104	61
1997	165	103	65
1998	205	138	65
1999	178	110	60
2000	121	76	68
2001	160	96	78
2002	199	138	71
2003	179	123	70
Ten-year average	183	118	67

Table 7. Estimated greater sage-grouse harvest in the Magic Valley Region, 1985-present.

Year	Check station			Telephone survey <sup>a</sup>			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1985	2,153	1,290	0.6	7.4	1,788	2,513	0.8
1986	2,824	2,169	0.7	5.6	2,280	4,158	0.9
1987	2,359	1,961	0.8	5.3	2,526	6,743	1.2
1988	2,459	2,092	0.8	5.3	2,969	6,451	1.0
1989	2,018	1,580	0.7	5.5	2,107	4,548	0.6
1990	2,375	2,833	1.1	3.9	4,205	20,584	1.5
1991	2,429	1,525	0.6	7.5	4,121	8,239	0.7
1992	1,847	870	0.4	9.9	3,256	7,710	0.9
1993	1,709	729	0.4	11.3	5,288	6,672	0.4
1994	1,647	1,213	0.7	6.2	4,177	11,331	0.9
1995	1,303	520	0.4	11.1	4,285	8,062	0.6
1996	938	555	0.6	6.5	6,615	8,269	2.8
1997	1,033	421	0.4	11.6	-	-	-
1998	888	497	0.6	7.2	-	-	-
1999	1,036	661	0.6	6.2	-	-	-
2000	1,009	556	0.6	7.7	2,513	3,280	0.6
2001	873	479	0.6	8.0	2,440	3,138	0.6
2002	1,029	540	0.5	8.4	2,677	3,066	0.5
2003	1,127	686	0.6	6.7	-	-	-
Ten-yr. average	1,088	613	0.6	8.4	3,785	6,191	1.0

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-1999. Telephone survey data was not available for 2003 at the time of this report.

Table 8. Estimated chukar partridge harvest in the Magic Valley Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Birds per hunter	Birds per hunter day
1985	764	2,092	2.7	0.7
1986	919	3,125	3.4	1.0
1987	1,151	3,394	2.9	0.8
1988	973	1,805	1.9	0.6
1989	594	1,546	2.6	1.0
1990	1,383	4,312	3.1	1.1
1991	721	3,871	5.4	1.9
1992	857	1,487	1.7	1.2
1993	1,763	4,360	2.5	0.6
1994	1,105	3,371	3.1	0.9
1995	1,584	5,788	3.7	0.9
1996	1,408	7,273	5.2	1.2
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	2,207	7,250	3.3	0.8
2002	1,753	6,966	4.0	1.1
2003	2,171	11,110	5.1	1.2
Three-year average	2,044	8,442	4.1	1.2

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-2000.

Table 9. Gray partridge population characteristics and estimated harvest in the Magic Valley Region, 1985-present.

Year	Production				Telephone survey <sup>a</sup>			
	Routes (miles) counted	Birds per mile	Birds	Brood size	N <sup>b</sup>	Hunters	Birds harvested	Birds per hunter day
1985	12 (530)	<0.02	12	9.0	2	923	3,644	0.9
1986	13 (768)	0.20	156	11.8	13	1,223	4,012	0.7
1987	13 (789)	0.24	192	8.2	22	1,183	4,427	0.9
1988	14 (858)	0.18	149	8.9	13	757	2,578	0.7
1989	14 (854)	0.20	170	10.6	13	628	1,921	0.6
1990 <sup>c</sup>	14 (854)	0.19	157	10.1	15	1,773	9,361	1.1
		0.35	195	-	-			
1991	28 (575)	0.18	111	9.7	9	1,295	2,805	0.5
1992	28 (575)	0.22	123	7.5	11	1,038	3,932	0.8
1993	28 (575)	0.13	71	8.4	17	1,886	6,741	0.9
1994	28 (575)	0.21	112	11.2	10	1,555	5,188	0.7
1995	28 (575)	0.08	45	11.2	4	2,092	8,834	0.8
1996	28 (575)	0.41	244	14.6	16	3,050	22,053	1.1
1997	28 (575)	0.11	62	10.2	6	-	-	-
1998	28 (575)	0.15	83	11.9	7	-	-	-
1999	28 (575)	0.11	63	12.2	5	-	-	-
2000	28 (575)	0.15	86	7.1	8	-	-	-
2001	28 (575)	0.10	54	7.7	8	2,751	10,133	0.6
2002	28 (575)	0.09	49	9.4	5	1,162	2,753	0.6
2003	28 (575)	0.14	77	10.7	7	2,789	7,277	0.8
Ten-year average	28 (575)	0.16	88	10.6	7	2,233	9,373	0.8

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-2000.

<sup>b</sup> Sample size.

<sup>c</sup> Survey was modified in 1990. Both the old and new surveys were conducted to allow continuity of trend data.

Table 10. Turkey transplant history for the Magic Valley Region, 1982-present.

Year	Sub-species <sup>a</sup>	Release site-Unit	Number of birds released	New or supplemental release
1982	R	Niagara Springs-53	20	N
1983	R, M	Almo-55	19	N
1984	R	Almo-55	10	S
1988	R	Big Cottonwood-54	17	N
1994	R	Big Cottonwood-54	6	S
1995	R	Big Cottonwood-54	14	S
1996	R	Big Cottonwood-54	8	S
1998	R	Big Cottonwood-54	55	S
1999	R	Big Cottonwood-54	12	S
2001	R	Big Cottonwood-54	40	S

<sup>a</sup> M = Merriam's; R = Rio Grande.

Table 11. Estimated turkey harvest in the Magic Valley Region, 1985-present.

Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1985						
Controlled	2	10	10	4	5.0	20
1986						
Controlled	3	15	15	5	8.4	42
1987						
Controlled	6	21	21	4	15.3	61
1988						
Controlled	6	21	21	9	6.9	62
General	-	-	93	0	-	56
1989						
Controlled	6	21	21	9	-	-
General	-	-	31	3	39.6	119
1990						
Controlled	3	6	6	2	3.2	19
General	-	-	18	1	39.0	39
1991						
General	-	-	58	3	62.7	118
1992						
General	-	-	8	2	4.0	8
1993						
General	-	-	10	0	-	118
1994	0	-	-	-	-	-
1995	0	-	-	-	-	-
1996	0	-	-	-	-	-
1997						
Controlled (youth)	1	3	3	3	-	-
1998						
Controlled (youth)	Canceled	-	-	-	-	-
1999	0	-	-	-	-	-
2000	0	-	-	-	-	-
2001	0	-	-	-	-	-
2002						
Controlled	1	3	3	3	1.7	5
Controlled (youth)	1	3	3	3	2.7	8
2003						
Controlled	2	8	8	8	3.4	27
Controlled (youth)	1	4	2	2	1.0	2

<sup>a</sup> Regular controlled hunts were closed from 1991-2001 and reopened in 2002. A controlled youth-only hunt was initiated in 1997, closed from 1998-2001, and reopened in 2002.

<sup>c</sup> General season was initiated in 1988 and discontinued in 1994.

Table 12. Mourning dove August roadside survey results and estimated harvest in the Magic Valley Region, 1985-present.

Year	August roadside routes		Telephone survey <sup>a</sup>		
	Routes (miles) counted	Doves heard/mile	Hunters	Birds harvested	Birds per hunter day
1985	-	-	1,593	21,505	2.89
1986	7 (413)	2.0	1,703	18,122	3.92
1987	13 (788)	2.5	1,384	15,121	2.02
1988	15 (911)	2.0	1,003	9,333	2.89
1989	14 (854)	2.4	1,273	10,424	3.11
1990 <sup>b</sup>	14 (829)	4.8	1,208	17,828	3.43
	28 (575)	3.1			
1991	28 (575)	2.0	1,290	17,983	3.12
1992	28 (575)	1.8	1,303	16,991	4.12
1993	28 (575)	1.8	3,680	33,644	1.7
1994	28 (575)	3.3	2,266	26,633	3.2
1995	28 (575)	1.8	2,802	26,238	2.3
1996	28 (575)	2.2	3,262	47,091	2.6
1997	28 (575)	2.2	-	-	-
1998	28 (575)	2.4	-	-	-
1999	28 (575)	3.7	-	-	-
2000	28 (575)	1.3	-	-	-
2001	28 (575)	2.2	-	-	-
2002	28 (575)	2.5	-	-	-
2003	28 (575)	3.4	-	-	-

<sup>a</sup> Telephone survey data at the regional level were not collected after 1996; harvest is reported directly to the USFWS by hunters.

<sup>b</sup> Survey was modified in 1990. Both the old and new surveys were conducted to allow continuity of trend data.

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>5</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b> <u>April 1, 2003 to March 31, 2004</u>			

**SOUTHEAST REGION**

**Pheasant**

**Abstract**

Subjective evaluation of pheasant numbers indicates relatively stable populations in parts of the Southeast Region and gradual increases in others. Hunter check stations were operated at two locations on opening weekend. A telephone harvest survey to provide estimates of total regional harvest, effort, and participation was conducted.

**Population Surveys**

No population surveys have been conducted in the Region since 1999. Brood route surveys were discontinued at that time due to low numbers of birds seen. A history of pheasant population characteristics and production is presented in Table 1.

**Harvest Characteristics**

A slight increase in hunter numbers and birds harvested was seen at the American Falls and Tilden Bridge check stations in 2003 compared to 2002. Birds harvested per hunter day and hours expended per bird remained stable.

A regional telephone harvest survey was conducted in 2003. Pheasant harvest increased from 5,183 birds in 2002 to 13,404 birds in 2003 (Table 2). Birds per hunter day also increased from 0.3 in 2002 to 0.7 in 2003.

Analysis of trend information from both check station and telephone survey data in recent years suggests pheasant populations have remained at levels lower than those of ten to 20 years ago.

**Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003. Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region.

Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Release of Pen-Reared Pheasants**

There were 2,500 fully-grown game-farm cocks released on the Sterling WMA during fall 2003. Game-farm birds have been released on the WMA historically to provide hunters with additional opportunity. Bag limit for pheasants on the WMA remained three birds. Hunters hunting on WMAs where game-farm pheasants were released were required to obtain a WMA pheasant permit.

### **Management Implications**

Declining habitat quality due to changes in farming practices has resulted in a decline in pheasant numbers in the Southeast Region from levels of ten to 20 years ago. Until the quantity and quality of available habitat increases, pheasant numbers will likely remain below historical levels. The U.S. Department of Agriculture's CRP program enrolled over 400,000 acres in the Southeast Region during 1985-1995 (25% have potential as pheasant habitat), but its effect on pheasant production is unclear at this time. The CRP program was extended for another ten years beginning in 1997. During the initial 1997 enrollment period, 288,978 acres in the Southeast Region were accepted. It is currently unknown what impact a decrease in CRP acreage in the Southeast Region will have on pheasant populations. The Department's HIP program, begun in 1987, is also contributing toward increasing available cover and forage locally by capitalizing on private land development.

### **Management Studies**

A research project to evaluate effects of intensive habitat management and predator removal on pheasants was initiated in 1995 within selected Bingham County sites (Connelly et. al. 1995). That program was moved to south-central and southwest Idaho in 1998.

## **Forest Grouse**

### **Population Surveys**

Data on age characteristics of forest grouse populations are collected in the Southeast Region from voluntary wing drop barrels placed during hunting season. Fourteen wing barrels were placed throughout the Region during 2003. Wide variations in numbers of wings collected make it difficult to draw conclusions about individual year's harvest or populations based on this data.

A total of 136 blue grouse wings were collected in 2003, a 103% increase from 2002 (Table 3). The ratio of juveniles:100 adults for blue grouse decreased from 200 in 2002 to 115 in 2003, lower than the ten-year average.

A total of 863 ruffed grouse wings were collected in 2003, a 226% increase from 2002 (Table 3). The ratio of juveniles:100 adults decreased from 225 in 2002 to 113 in 2003, less than the ten-year average.

### **Harvest Characteristics**

In recent years, harvest data on forest grouse has been collected from two sources; the telephone survey and voluntary wing drop barrels. Telephone survey data provides information on numbers of hunters, birds harvested, and hunter success. Wing barrels provide more immediate feedback to managers plus information on sex and age of birds harvested.

A telephone harvest survey was conducted in 2003. According to the 2003 survey, forest grouse harvest increased significantly from 8,810 birds in 2002 to 29,479 birds in 2003 (Table 4). This was a 235% increase in harvest from the previous year.

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Management Implications**

Management of forest grouse consists largely of data collection and analysis of impacts to habitat. Indications from harvest and production data over the last 15 years suggest a trend in more hunters harvesting a greater number of birds. Populations of forest grouse can vary widely from year to year, based on annual production.

## **Sage-grouse**

### **Abstract**

Estimates of sage-grouse production in 2003 indicated an increase throughout southeast Idaho compared to 2002 levels; however, sample sizes were very small. Male grouse counted on leks was lower than in 2002 on most routes.

### **Population Surveys**

Lek count routes in recent years have included four leks in Bingham and Power counties, 16 leks in Oneida County, 35 leks in Butte and Blaine counties, and three leks each in Bear Lake and Caribou counties (Table 5). The number of birds on most leks is lower than the levels of the 1980s.

Reproductive information for sage-grouse was derived from wing collections at wing barrels and a hunter check station. Due to a closure of hunting on the Big Desert from 1996 to 2002, no wings were collected from that area during that period (Table 6). Following the reopening of that area in 2002, 140 wings were collected during the 2003 season.

Due to the closure to hunting of the Curlew Grasslands in 2002, no wings were collected. Wings collected from Caribou County were included in the Bear Lake data set (Table 6).

A total of 144 sage-grouse wings were collected in 2003 (Table 6). The overall ratio of juveniles:100 adults was 62. It is difficult to relate this level of production to recent years since, from 1996 to 2001, nearly all wings were collected in the Curlew Valley; in 2002, nearly all wings were from the Big Desert. This ratio of juveniles:adults has decreased from 2002 and is less than the ten-year average.

### **Harvest Characteristics**

A hunter check station was operated at American Falls on opening weekend of the season in 2003. Hunting effort appeared to be very low compared to the years before the season was closed in 1996. Bag and possession limits and season length were significantly reduced from earlier years.

Telephone survey data for the 2003 harvest was not available at the time of this report.

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Management Studies**

Thirty-three sage-grouse were radio-collared in the Greater Curlew Area during spring 2002. Birds were monitored through the nesting, brood-rearing season and into the winter months, primarily to identify areas of use during those periods. Monitoring was continued through spring 2002, although no additional birds were marked.

### **Management Implications**

Production of sage-grouse appeared to increase; however, sample sizes were small. Hunter harvest, success, and/or lek count data suggest populations at low levels. Big desert harvest increased but may be a result of high concentrations of birds. A continuing decline in lek counts in the Curlew Valley led to a recommendation to close the area to hunting in 2002. Persistent

drought during the late 1980s and early 1990s and long-term declines in habitat quantity/quality may partially explain the downward trend of populations over the years.

An advisory group consisting of representatives of several interest groups and government agencies was formed during 1998 to examine the status and trend of sage-grouse and their habitat in the Greater Curlew area, and to offer suggestions for future management. The Curlew working group should complete and provide management suggestions by the next report.

## **Sharp-tailed Grouse**

### **Abstract**

Age-ratio data of wings indicated an increase in sharp-tailed grouse production during 2003 compared to 2002. The ratio of juveniles:100 adults was near the most recent ten-year average. Two of the five established lek routes in the Region were checked in 2003.

### **Population Surveys**

Wing barrels placed throughout the Region provide the majority of wings collected. Data analysis of sharp-tailed grouse wings (N = 398) indicated a decrease in the ratio of juveniles:100 adults (70:100) from 2002 levels (Table 8). The 2003 ratio was less than the previous ten-year average of 106.

Two of five established lek routes in the Region were surveyed during 2003 (Table 9). The Pocatello Valley route increase from 49 to 96 males observed. The Downey route decreased from 42 to 32 males observed.

### **Harvest Characteristics**

Telephone harvest survey data was not available at the time of this report. Tables 10 and 11 show the 2000-2002 harvests inside and outside the Greater Curlew Area and region wide, respectively.

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Management Implications**

Currently, the single most important factor affecting sharp-tailed grouse populations in the Southeast Region is believed to be the CRP program. During 1985 to 1997, over 400,000 acres

of cropland have been planted with various grass/forb mixtures within present sharp-tailed grouse range. During the 1997 reenrollment period, 288,978 acres were accepted for another ten years. Much of this acreage lies within sharp-tailed grouse range. Recent harvest data suggest a substantial increase in populations has occurred in the last decade.

### **Trapping and Transplanting**

See Magic Valley Region section.

## **Chukar Partridge**

### **Population Surveys**

Few, if any, chukar partridge wings are collected in voluntary hunter wing barrels. Chukars are occasionally sighted incidental to deer and elk surveys during winter. Little suitable habitat and restricted populations exist within the Southeast Region. Areas known to support limited chukar populations at present are the northeast corner of Unit 70 near Pocatello; the Blackrock area in Unit 71; and several portions of Unit 73 near Malad, including east of Interstate Highway 15 and the Samaria Mountains. Private, unauthorized releases of pen-raised chukars are frequent occurrences. Survival of those birds is believed to be extremely low, with no evidence of self-supporting populations resulting.

### **Harvest Characteristics**

Harvest information on chukar partridge in past years has been collected via the telephone survey. In 2003, 792 hunters harvested 3,335 birds, compared to 193 birds harvested by 230 hunters in 2002 (Table 12).

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Management Implications**

Management of these populations will be incidental to other upland game bird species. The main source of information on status of populations is currently incidental sightings and reports. Lack of suitable habitat will continue to limit populations.

## **Gray Partridge**

### **Population Surveys**

No data were collected on gray partridge populations. Some gray partridge wings are collected in voluntary hunter wing barrels; however, sample sizes are generally small and have not been analyzed for several years in the Southeast Region.

### **Harvest Characteristics**

Estimates vary widely from year to year, due primarily to small sample sizes from the Region. A regional telephone harvest survey was conducted during 2003. Gray partridge harvest increased substantially from the previous year. Hunters harvested 8,607 birds in 2003, compared to 2,293 birds in 2002 (Table 12).

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Management Implications**

Management of these populations will be incidental to other upland game bird species. The CRP program has had a positive effect on habitat suitability and presumably gray partridge populations. The telephone harvest data and incidental reports suggest a stable or increasing population over the past decade.

## **Wild Turkey**

### **Abstract**

Six controlled hunts with a total of 195 permits resulted in an estimated 2003 spring harvest of 67 turkeys. Hunters harvested an estimated 535 turkeys during the general fall season. Hunter success varies annually. No ground surveys were conducted.

### **Population Surveys**

Winter distribution surveys were conducted along the Snake River during the winters of 1987-1988, 1988-1989, and 1992-1993. These surveys indicated that good quality turkey habitat was limited and that populations had not continued to grow at rates documented earlier following the initial introduction. Comments from local landowners during the surveys and declining hunter success rates indicated that a decrease in total population size probably occurred after 1984, with

little or no recovery to date. No surveys were conducted in that area during 2003. Even under good snow conditions, surveys provide limited useful data.

Incidental reports indicate increasing numbers and expanded range of turkeys in Franklin County, due in part to unauthorized releases of turkeys of unknown origin. Turkeys have been sighted in parts of Units 73, 74, 75, and 78, in addition to the release areas in Unit 77.

### **Harvest Characteristics**

Following introductions of wild turkeys from South Dakota, three consecutive spring hunts with five permits each were initiated in Franklin County in 1995, and increased to 20 permits in 1999. In 2000, permits were increased to 30 for each hunt, and a general fall either-sex hunt was initiated. The hunt area was also expanded to include all of Units 73, 74, 75, and 77. The permit level was increased to 50 per hunt in 2002.

The 2003 spring harvest, as estimated by the telephone harvest survey, showed a total of 67 birds taken in the Region (Table 13). The fall general harvest was estimated at 535 birds taken by 852 hunters.

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Trapping and Transplanting**

Wild turkeys have been transplanted into three general areas in the Southeast Region during the last two decades; the Snake River bottoms upstream from American Falls Reservoir, along the Bear River in Franklin County, and in Unit 71 southeast of Pocatello.

During the winter of 2003, 42 turkeys were released in Unit 69 along the Snake river near Firth (Table 14).

### **Management Implications**

The telephone survey of hunters and incidental field reports provide the data on populations in the Southeast Region. To obtain additional information, increased emphasis has been placed on landowner input and sportsmen contacts.

## **Mourning Dove**

### **Population Surveys**

Wing barrels provide only a limited amount of data on mourning doves. Sample sizes are generally too small for analysis.

Call-counts are conducted on three established routes in the Southeast Region in conjunction with the USFWS. Routes are located in Oneida, Caribou, and Bear Lake counties. Results from mourning dove call-counts in 2003 were slightly higher than the previous five-year average (Table 15).

### **Harvest Characteristics**

Harvest information on mourning doves is collected via the USFWS harvest survey. No regional telephone harvest survey has been conducted since 1995.

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Management Implications**

Management decisions rely heavily on population and harvest statistics collected nationwide by the USFWS.

## **Rabbits and Hares**

### **Population Surveys**

No population surveys were conducted in 2003.

### **Harvest Characteristics**

Sample size tends to be small and estimates of participation and harvest are widely variable. A regional telephone survey was conducted during 2003. Cottontail rabbit harvest increased from 146 animals in 2002 to 7,190 animals in 2003 (Table 16).

### **Climatic Conditions**

Environmental conditions during the critical months of nesting were good during spring 2003.

Drought conditions persisted with precipitation for the 2003-2004 winter below normal; snow-pack measurements averaged 60-80% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

### **Management Implications**

In the past, limited data on rabbits and hares have been collected in the Southeast Region. It is unlikely that this situation will change; however, continued efforts will be made to consider the habitat requirements of rabbits and hares in land-use management.

### **Literature Cited**

Connelly, J. W., S. Antrim, G. Nohrenberg, and K. P. Reese. 1995. Upland game ecology. Job Progress Report W-160-R-22. Idaho Department of Fish and Game, Boise, Idaho.

Table 1. Pheasant population characteristics and production in the Southeast Region, 1984-1999.

Year	Winter sex ratio <sup>b</sup>	Brood routes <sup>a</sup>						Brood size	
		N <sup>c</sup>	Routes (miles counted)	Birds per mile	Percent unsuccessful females	Juv:100 adult females	N	Average	
1984	2.5	2,388	-	-	-	-	7	5.7	
1985	3.8	453	-	-	-	-	-	-	
1986	4.0	436	-	-	-	-	12	5.2	
1987	1.4	81	-	-	-	-	-	-	
1988	-	-	-	-	-	-	-	-	
1989	-	-	-	-	-	-	-	-	
1990	1.9	264	10 (200)	0.04	50	650	7	3.7	
1991	-		10 (200)	0.09	83	180	2	5.5	
1992	-		10 (200)	0.28	55	400	5	8.8	
1993	1.5	10	10 (200)	0.01	0	500	1	5.0	
1994	1.5	10	10 (200)	0.01	0	0	0	0.0	
1995	-	-	8 (160)	0.06	0	500	2	5.0	
1996	-	-	10 (200)	0.11	0	566	3	5.7	
1997	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	
1999	-	-	-	-	50	250	2	5.0	

<sup>a</sup> Brood routes have not been conducted since 1999 due to low numbers of birds seen.

<sup>b</sup> Hens per cock.

<sup>c</sup> Sample size for winter sex-ratio determination.

Table 2. Estimated pheasant harvest in the Southeast Region, 1984-present.

Year	Check station <sup>a</sup>			Telephone survey <sup>b</sup>			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1984	1,234	565	0.5	8.5	907	2,565	0.7
1985	897	350	0.4	9.5	7,169	18,293	0.5
1986	495	107	0.2	17.0	5,043	8,133	0.5
1987	480	161	0.3	10.8	3,319	9,089	0.6
1988	276	87	0.3	11.7	3,561	11,532	0.6
1989	456	243	0.5	7.9	2,290	6,688	0.7
1990	222	141	0.6	6.2	3,485	12,526	0.6
1991	287	149	0.5	7.5	3,525	15,839	0.8
1992	263	188	0.7	4.9	4,520	20,368	1.0
1993	232	76	0.3	11.6	2,628	11,967	0.6
1994	232	91	0.4	8.6	2,884	10,245	0.7
1995	240	107	0.4	8.1	2,092	9,402	0.6
1996	308	177	0.6	6.1	-	-	-
1997	282	102	0.4	9.8	-	-	-
1998	300	162	0.5	7.9	-	-	-
1999	284	176	0.6	5.8	-	-	-
2000	250	137	0.6	7.1	-	-	-
2001	290	147	0.5	5.9	4,201	8,342	0.5
2002	233	116	0.5	6.7	2,536	5,183	0.3
2003	236	131	0.6	6.7	4,263	13,404	0.7
Ten-year average	266	135	0.5	7.3	3,195	9,315	0.6

<sup>a</sup> Check stations were operated on opening weekend only at American Falls and Tilden Bridge.

<sup>b</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 3. Forest grouse production in the Southeast Region based on wing collection, 1985-present.

Year	Blue grouse			Ruffed grouse	
	N <sup>a</sup>	Juv:100 adult females	Juv:100 Adults	N <sup>a</sup>	Juv:100 adults
1985	15	-	-	215	-
1986	31	-	182	242	235
1987	74	-	87	505	158
1988	67	291	156	204	152
1989	79	-	243	186	110
1990	60	-	155	170	128
1991	92	268	93	119	358
1992	157	368	142	216	65
1993	45	520	137	29	93
1994	64	717	205	340	227
1995	52	-	117	97	64
1996	157	915	313	461	271
1997	36	-	227	162	195
1998	64	-	-	238	170
1999	86	-	129	245	175
2000	151	-	184	537	220
2001	229	-	97	760	188
2002	67	-	200	265	225
2003	136	-	115	863	113
Ten-year average	104	-	176	397	185

<sup>a</sup> Sample size.

Table 4. Estimated forest grouse harvest in the Southeast Region, 1984-present.

Year	Hunter report cards <sup>a</sup>				Telephone survey <sup>b</sup>		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1984	-	-	-	-	1,621	2,889	0.6
1985	70	105	1.5	1.3	2,041	7,650	0.7
1986	142	176	1.2	2.1	2,284	15,739	1.2
1987	286	450	1.6	2.0	1,986	13,890	1.6
1988	141	172	1.2	2.7	3,037	16,962	1.0
1989	107	119	1.1	2.9	2,763	10,490	0.7
1990	206	276	1.3	2.4	2,916	12,556	0.8
1991	271	298	1.1	2.4	2,943	14,800	0.9
1992	481	691	1.4	2.6	4,398	24,897	0.9
1993	94	57	0.6	6.1	6,927	18,275	0.6
1994	-	-	-	-	4,664	22,363	0.7
1995	-	-	-	-	3,232	11,860	0.6
1996	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-
2001	-	-	-	-	4,646	19,783	0.9
2002	-	-	-	-	2,902	8,810	0.7
2003	-	-	-	-	5,201	29,479	1.2
Three-year average	-	-	-	-	4,250	19,357	0.9

<sup>a</sup> Hunter report cards were discontinued in 1993.

<sup>b</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 5. Maximum number of male greater sage-grouse counted on lek routes in the Southeast Region, 1984-present.

Year	Bingham, Power, and Oneida counties					
	Herriott Lake	Jugalard Lake	Rock Lake	Mosby well #2	Curlew route <sup>a</sup>	Rockland route <sup>b</sup>
1984	18	0	41	0	-	-
1985	31	28	48	0	-	-
1986	19	55	66	0	-	-
1987	78	96	118	3	-	-
1988	71	112	92	0	-	-
1989	47	69	68	-	-	-
1990	57	88	93	-	-	-
1991	41	72	60	-	-	-
1992	-	-	-	-	-	-
1993	18	24	39	-	-	-
1994	-	-	-	-	-	-
1995	41	0	49	0	-	-
1996	5	0	49	-	16	13
1997	0	0	23	0	22	6
1998	15	0	17	0	11	17
1999	8	0	12	0	30	59
2000	45	0	8	0	22	99
2001	46	0	6	0	13	54
2002	25	0	5	0	6	63
2003	54	0	47	0	13	94
Year	Bear Lake and Caribou counties					
	Bloomington Bottoms	Bloomington Mine	Sheep Creek	Trail Creek	Slug Creek #1	Slug Creek #2
1984	-	-	-	33	17	-
1985	-	-	-	24	12	-
1986	-	-	-	31	15	-
1987	-	-	-	38	15	-
1988	-	-	-	24	11	-
1989	-	-	-	27	8	-
1990	-	-	-	32	8	10
1991	-	-	-	22	7	26
1992	-	-	-	28	8	24
1993	-	-	-	20	8	5
1994	-	-	-	13	6	10
1995	-	-	-	8	1	0
1996	-	-	-	6	0	0
1997	-	-	-	6	2	3
1998	-	-	-	12	3	4
1999	67	29	-	8	4	2
2000	15	27	45	10	0	0
2001	10	23	63	15	0	0
2002	8	15	38	15	0	0
2003	14	0	40	-	-	-

Table 5. Continued.

Butte and Blaine counties						
Year	Route #1 <sup>c</sup>	Route #2 <sup>d</sup>	Route #3 <sup>e</sup>	Route #4 <sup>f</sup>	Route #5 <sup>g</sup>	Fingers Butte <sup>h</sup>
1987	185	102	155	191	237	-
1988	137	129	166	145	246	-
1989	61	52	75	93	92	-
1990	92	54	96	99	79	-
1991	51	31	84	103	137	-
1992	47	11	62	41	63	-
1993	31	6	30	12	42	-
1994	20	29	53	8	55	-
1995	61	10	47	11	54	-
1996	54	13	71	4	22	-
1997	54	14	67	2	19	-
1998	79	15	62	1	19	73
1999	107	-	20	-	15	59
2000	149	-	38	-	58	158
2001	126	-	53	-	62	193
2002	148	-	67	-	68	142
2003	141	-	98	-	146	229

<sup>a</sup> South 13, North 13, Baker, Little Rock Spring, Ketchum, Huffman Springs, West Huffman.

<sup>b</sup> Marble, Exchange, Smith/Pett, South Funk, North Funk, East Jacobson, West Jacobson, North Huffman, West Strong.

<sup>c</sup> Frenchman's, Detmer's Dugout, Watertank, Quaking Aspen Airstrip, Detmer's, West Big Lake, Big Lake.

<sup>d</sup> East Big Lake, McCarty, Big Lake, Dugout, Rocky Lake.

<sup>e</sup> Sunset Lake, Ryegrass, Prairie, South Crossroads, Crossroads, South Big Lake.

<sup>f</sup> Reynolds, Lava Bluff, Osborne, Pitfall, Wakkinen, Firebomb, Turnaround, Weather Station.

<sup>g</sup> Rattlesnake, Cox's Well, South Cox's Well, East Cox's Well, Silvertank, Antelope Lake, Houghland's Well, South Antelope Lake, Hill #1, Hill #2.

<sup>h</sup> Six Mile, Wildhorse Butte, Cir. Water Tank, 3 Red Tanks, Pratt Lake, Pratt Lake S., Coyote Waterhole, Smith Trough #2, Finger's Well Res., Smith Round Tank.

Table 6. Greater sage-grouse production in the Southeast Region based on wing collections, 1984-present.

Year	N <sup>b</sup>	Juv:100 females <sup>c</sup>	Juv:100 adults <sup>d</sup>	N <sup>e</sup>	% unsuccessful females <sup>c</sup>
Power/Bingham (Big Desert) unit <sup>a</sup>					
1984	124	268	202	31	52
1985	852	344	224	171	60
1986	-	302	190	-	49
1987	-	200	125	-	41
1988	818	108	77	331	-
1989	-	230	149	-	-
1990	378	267	164	88	6
1991	-	91	62	-	78
1992	127	84	57	55	84
1993	77	162	103	19	47
1994	307	291	198	60	80
1995	240	85	56	109	60
2002	96	431	-	16	62
2003	140	106	65	52	38
Holbrook (Curlew) unit <sup>f</sup>					
1985	90	575	329	12	-
1986	-	154	216	-	37
1987	-	165	109	-	44
1988	78	152	95	25	-
1989	-	277	161	-	-
1990	77	183	133	24	-
1991	-	186	130	-	86
1992	135	127	82	48	85
1993	60	138	94	8	63
1994	112	380	211	14	64
1995	20	70	47	10	40
1996	28	229	133	-	100
1997	30	200	114	-	0
1998	22	143	83	-	71
1999	18	275	157	-	50
2000	25	67	47	-	58
2001	9	100	80	4	75
Bear Lake unit					
1986	-	59	93	-	-
1987	-	216	146	-	15
1988	38	383	153	6	-
1989	-	334	191	-	-
1990	126	282	168	28	-
1991	-	135	93	-	57
1992	105	177	110	31	74

Table 6. Continued.

Year	N <sup>b</sup>	Juv:100 females <sup>c</sup>	Juv:100 adults <sup>d</sup>	N <sup>e</sup>	% unsuccessful females <sup>c</sup>
1993	26	767	767	8	33
1994	35	244	169	5	80
1995	19	186	144	7	43
1996	18	1,400	350	-	100
1997	14	200	133	-	25
1998	8	133	100	-	33
1999	19	50	36	-	40
2000	9	133	80	-	100
2001	3	-	-	-	-
2002	8	-	60	3	100
2003	0	-	-	-	-
Southeast Region					
1984	124	268	202	31	52
1985	942	360	232	183	60
1986	1,601	289	184	-	49
1987	480	199	125	-	42
1988	934	115	81	362	42
1989	-	235	151	-	60
1990	581	256	161	156	41
1991	-	98	70	-	72
1992	367	121	79	134	82
1993	163	190	126	30	53
1994	454	305	199	173	79
1995	279	90	60	126	58
1996	46	375	188	-	100
1997	51	186	104	-	14
1998	30	140	88	-	60
1999	37	114	76	-	43
2000	34	80	55	-	67
2001	12	175	140	4	75
2002	104	379	225	19	68
2003	144	98	62	56	39
Ten-year average	119	194	120	76	60

<sup>a</sup> Big Desert harvest season closed from 1996 through 2001.

<sup>b</sup> Sample size for total wings collected.

<sup>c</sup> Females = adults + yearlings.

<sup>d</sup> Adults = adults + yearlings.

<sup>e</sup> Sample size for total adult and yearling female wings collected.

<sup>f</sup> Harvest closed in 2002.

Table 7. Estimated greater sage-grouse harvest in the Southeast Region, 1984-present.

Year	Daily bag <sup>b</sup>	Check station				Telephone survey <sup>a</sup>		
		Hunters	Birds	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1984	1	53	21	0.4	7.7	733	1,817	0.9
1985	3	274	113	0.4	11.3	1,550	4,630	1.0
1986	3 (2)	264	177	0.7	7.6	1,848	7,082	1.3
1987	3 (2)	341	450	1.3	3.4	2,002	6,076	1.3
1988	3 (2)	393	491	1.2	4.3	1,862	7,962	1.1
1989	3 (2)	402	283	0.7	7.1	1,922	4,118	0.7
1990	3	344	498	1.4	3.2	2,073	6,004	0.8
1991	3	314	153	0.5	9.7	2,063	3,743	0.6
1992	3	168	52	0.3	15.1	2,242	5,077	0.6
1993	3	112	13	0.1	40.7	3,123	4,332	0.4
1994	3	167	109	0.6	7.6	2,528	4,401	0.5
1995	3	122	35	0.3	15.5	1,462	2,559	0.5
1996	1	-	-	-	-	-	-	-
1997	1	-	-	-	-	-	-	-
1998	1	-	-	-	-	-	-	-
1999	1	-	-	-	-	-	-	-
2000	1	-	-	-	-	743	669	0.4
2001	1	-	-	-	-	551	489	0.3
2002	1	37	11	0.3	13.1	430	422	0.4
2003	1	31	23	0.7	3.6	-	-	-

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-1999. Telephone survey data was not available in 2003 at the time of this report.

<sup>b</sup> From 1986 to 1989, the bag limit for areas off the Big Desert were smaller (two) than for those on the Desert. From 1996-2001 the Big Desert was closed to harvest. The Curlew Grassland was closed to harvest in 2002.

Table 8. Sharp-tailed grouse production in the Southeast Region based on wing collections, 1986-present.

Year	Juv:100 Adults <sup>a</sup>	N <sup>b</sup>
1986	97	130
1987	99	238
1988	76	147
1989	118	219
1990	69	210
1991	105	187
1992	96	382
1993	110	187
1994	173	289
1995	58	190
1996	126	224
1997	163	227
1998	130	379
1999	75	429
2000	59	399
2001	84	182
2002	118	155
2003	70	398
Ten-year average	106	287

<sup>a</sup> Includes data from Malad City Area and Pocatello Creek.

<sup>b</sup> Sample size.

Table 9. Maximum number of sharp-tailed grouse counted on lek routes in Oneida, Power, and Bannock counties in the Southeast Region, 1995-present.

Year	Arbon Route <sup>a</sup>	Curlew Route <sup>b</sup>	Pocatello Valley Route <sup>c</sup>	Rockland Route <sup>d</sup>	Downey Route <sup>e</sup>
1995	92	23	78	50	-
1996	43	46	31	53	84
1997	36	57	46	24	68
1998	-	40	46	-	72
1999	-	-	108	-	102
2000	-	-	76	-	60
2001	-	-	64	-	42
2002	-	-	49	-	42

<sup>a</sup> Symantha's, Ag, Howe, Cow, 1994.

<sup>b</sup> Duffin, Vanderhoff, Hill, Bowen, N-13.

<sup>c</sup> Thorpe, Davis, Jensen, N. Peterson, Peterson, Marble.

<sup>d</sup> No Name, Roy, Benson, Quiet, Daryl.

<sup>e</sup> 1B021, 1B026, 1B027, 1B028, 1B033, 1B036, 1B039

Table 10. Estimated sharp-tailed grouse harvest in the Greater Curlew Area of the Southeast Region, 2000-present.

Year	Greater Curlew Area				
	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
2000	887	2,004	2,443	2.3	0.8
2001	656	1,337	1,706	2.0	0.8
2002	473	986	1,288	2.1	0.8
2003	836	2,122	2,203	2.5	1.0
Four-year average	713	1,612	1,910	2.3	0.8
Year	Outside the Greater Curlew Area				
	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
2000	912	1,712	2,336	1.9	0.7
2001	763	1,377	2,130	1.8	0.6
2002	702	1,215	1,771	1.7	0.7
2003	899	2,644	2,760	2.9	1.0
Four-year average	819	1,737	2,249	2.1	0.8

Table 11. Estimated sharp-tailed grouse harvest in the Southeast Region, 1984-present.

Year	Hunter report cards <sup>a</sup>				Telephone survey <sup>b</sup>		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1984	-	-	-	-	307	285	0.4
1985	-	-	-	-	219	456	1.0
1986	-	-	-	-	331	495	0.9
1987	117	157	1.3	2.9	64	2,118	2.0
1988	99	133	1.3	3.0	361	2,286	1.1
1989	144	166	1.2	3.1	573	1,448	0.8
1990	167	238	1.4	2.5	1,152	4,632	1.2
1991	162	198	1.2	3.2	1,127	4,864	1.1
1992	284	408	1.4	3.4	1,601	6,198	1.2
1993	158	184	1.2	3.4	2,721	5,071	0.5
1994	-	-	-	-	2,042	4,570	0.6
1995	-	-	-	-	1,706	3,899	0.6
1996	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-
2000	-	-	-	-	1,799	3,716	0.8
2001	-	-	-	-	1,419	2,714	0.7
2002	-	-	-	-	1,175	2,201	0.7
2003	-	-	-	-	-	-	-
Three-year average	-	-	-	-	1,464	2,877	0.7

<sup>a</sup> Hunter report cards were only collected from 1987-1993.

<sup>b</sup> Telephone survey data at the regional level were not collected from 1996-1999. Telephone survey data was not available for 2003 at the time of this report.

Table 12. Estimated gray and chukar partridge harvest in the Southeast Region, 1985-present.

Year	Gray partridge			Chukar partridge		
	Hunters	Birds	Birds per hunter day	Hunters	Birds	Birds per hunter day
1985	564	2,416	0.1	339	463	0.3
1986	414	1,257	0.4	400	1,164	0.7
1987	445	933	0.5	139	243	1.9
1988	582	4,938	1.1	266	854	0.8
1989	388	933	1.1	374	366	0.5
1990	944	3,854	0.8	400	1,164	0.7
1991	1,200	8,622	1.4	294	822	0.8
1992	1,204	6,500	1.1	430	2,540	1.0
1993	1,946	6,308	0.7	835	2,010	0.6
1994	1,180	4,814	0.9	656	1,592	0.6
1995	1,076	3,737	0.7	568	1,442	0.5
1996	-	-	-	-	-	-
1997	-	-	-	-	-	-
1998	-	-	-	-	-	-
1999	-	-	-	-	-	-
2000	-	-	-	-	-	-
2001	1,376	3,798	0.6	247	952	0.7
2002	984	2,293	0.3	230	193	0.3
2003	1,269	8,607	1.5	792	3,335	1.5
Three-year average	1,210	4,899	0.8	423	1,493	0.8

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 13. Estimated turkey harvest in the Southeast Region, 1984-present.

Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1984						
Controlled	2	20	20	4	21.0	84
1985						
Controlled	2	20	15	3	35.3	106
1986						
Controlled	6	20	14	2	17.5	35
1987						
Controlled	9	45	45	11	12.0	132
1988						
Controlled	9	45	32	6	23.2	139
1989						
Controlled	9	45	39	5	-	-
1990						
Controlled	5	30	20	6	25.7	154
1991						
Controlled	2	10	10	3	15.0	45
1992						
Controlled	2	10	10	4	10.0	40
1993						
Controlled	2	10	10	1	45.0	45
1994						
Controlled	2	20	20	6	12.0	72
1995						
Controlled	6	30	30	6	16.7	100
1996						
Controlled	6	30	30	15	6.7	100
1997						
Controlled	6	60	44	32	3.4	110
1998						
Controlled	8	175	154	86	-	-
1999						
Controlled	8	205	178	116	5.0	581
2000						
Controlled	6	135	113	64	5.5	349
General	-	-	382	159	7.3	1,168
2001						
Controlled	6	135	133	67	6.6	445
General	-	-	493	190	6.7	1,276
2002 <sup>a</sup>						
Controlled	6	205	168	69	8.8	605
General	-	-	623	165	14.5	2,389
2003						
Controlled	6	195	163	67	8.0	539
General	-	-	852	535	4.5	2,383

<sup>a</sup> No data for Hunt 68A-3.

Table 14. Turkey transplant history for the Southeast Region, 1982-present.

Year	Sub-species <sup>a</sup>	Release site	Number of birds released	New or supplemental release
1982	R	Snake River	36	N
1984	R	Snake River	28	N
1990	M	Snake River	14	S
1993	M	Bear River	20	N
1994	M	Snake River	64	S
1994	M	Bear River	32	S
1999	U	Deep Creek, Bear River	15	S
2000	U	Oneida Narrows	50	S
2001	U	Unit 71	136	N
2003	H	Snake River, Unit 69	42	S

<sup>a</sup> H = Hybrid; M = Merriam's; R = Rio Grande; U = Unknown.

Table 15. Mourning dove call-count survey results and estimated harvest in the Southeast Region, 1984-present.

Year	Coo-Count Routes		Telephone Survey <sup>a</sup>		
	Routes Counted	Doves Heard/Mile	Hunters	Birds	Birds/Hunter Day
1984	3	1.5	455	824	1.8
1985	2	0.4	452	1,358	0.7
1986	3	0.4	221	453	1.3
1987	2	0.6	292	1,030	1.0
1988	3	0.9	97	122	1.5
1989	2	1.0	266	708	1.4
1990	1	0.8	908	9,865	1.8
1991	2	0.8	397	1,733	1.9
1992	3	2.0	882	15,061	2.1
1993	3	0.7	2,628	25,326	2.2
1994	3	0.9	2,060	16,313	2.7
1995	3	0.6	1,848	15,150	2.1
1996	3	0.4	-	-	-
1997	3	0.7	-	-	-
1998	3	0.5	-	-	-
1999	3	0.5	-	-	-
2000	3	0.4	-	-	-
2001	3	0.2	-	-	-
2002	3	1.1	-	-	-
2003	3	0.6	-	-	-

<sup>a</sup> Telephone survey data at the regional level were not collected after 1995.

Table 16. Estimated cottontail rabbit harvest in the Southeast Region, 2001-present.

Year	Hunters	Harvest	Days	Rabbits/hunter day
2001	686	3,080	2,666	1.2
2002	29	146	58	2.5
2003	590	7,190	7,819	0.9

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>6</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b>	<u>April 1, 2003 to March 31, 2004</u>		

**UPPER SNAKE REGION**

**Pheasant**

**Population Surveys**

No population survey was conducted during this reporting period; however, general observations suggest pheasant populations remain extremely low in the Region.

**Harvest Characteristics**

No check stations were operated during the 2003 pheasant season (Table 1).

The statewide telephone survey provided data on pheasant harvest and hunting effort from 1983 through 1996. No telephone survey was conducted from 1997-2000. A survey conducted for the 2003 season provided an estimate of 954 hunters harvesting 2,654 pheasants from the Upper Snake Region (Table 1). This is a 33% increase in hunters and 54% increase in harvest from the 2002 estimate.

**Habitat Conditions**

Pheasants are distributed at low densities on and around agricultural land in the Upper Snake Region. Pheasant habitat is marginal due to periodic severe winters and agricultural practices inconsistent with quality pheasant habitat. There are patches of habitat supporting a few pheasants scattered throughout the area, including Howe, Montevue, Mud Lake WMA, Market Lake WMA, and the agricultural lands associated with the Snake River Plain. Habitat is primarily restricted to fence rows, irrigation ditches, riparian areas, and waste areas. A common practice is to burn these patches of cover in the spring prior to nest initiation. Hence, available nesting cover occurs as widely dispersed small patches of residual cover, hay fields, and fall-seeded small grain.

One food plot of standing barley totaling four acres and one corn food plot totaling two acres was planted in Jefferson County; three corn food plots totaling eight acres and one standing barley plot of two acres was planted in Bonneville County; and one plot consisting of 2.4 acres

of wheat, 0.6 acres of corn, 0.6 acres of sunflower, and 1.2 acres of millet were seeded in Custer County through the Department's HIP program during this reporting period. Three corn food plots totaling four acres were also planted in Bonneville County by Pheasant's Forever. The Department's tree planter was also loaned out to private individuals in Jefferson, Madison, and Bonneville counties to plant over 20 windbreaks.

Habitat projects were done on the WMAs in the Region for pheasants. At Market Lake, four plots totaling 28 acres of wheat and 16 acres of corn were planted and left standing for pheasant food and cover. At Deer Parks Wildlife Mitigation Unit, four plots totaling 136 acres of wheat were planted and left standing for pheasants and other wildlife.

### **Stocking**

Nine hundred game-farm pheasant cocks were released at Mud Lake WMA, 900 at Market Lake WMA, and 600 at Cartier WMA during the 2003 hunting season. An additional 50 game-farm cock pheasants were released at Market Lake WMA for the special youth pheasant hunt on October 4-5, 2003. Adult hunters hunting on WMAs where game-farm pheasants were released were again required to obtain a WMA pheasant permit in 2003. A sample of WMA pheasant permit buyers was used to obtain an estimate of hunter participation and pheasant harvest of pen-reared pheasants on WMAs. The sample hunters were first sent a mail-out survey followed by a telephone survey of non-respondents. The estimates indicated 317 adult hunters and 71 junior mentored hunters hunted game-farm pheasants on Mud Lake WMA in 2003; the adult hunters harvested an estimated 885 pheasants. Three hundred thirty-eight adult hunters and 129 junior mentored hunters hunted game-farm pheasants on Market Lake WMA in 2003; the adult hunters harvested an estimated 861 pheasants. One hundred sixty-eight adult hunters and 49 junior mentored hunters hunted game-farm pheasants on Cartier Slough WMA in 2003; the adult hunters harvested an estimated 341 pheasants. There were no harvest estimates for the junior mentored hunters.

### **Management Implications**

Pheasant habitat quantity and quality in the Region has diminished since the 1950s and 1960s due to changing agriculture practices. Loss of habitat combined with periodic severe winters and low recruitment restrict pheasant numbers in the Upper Snake Region. Although some winter habitat improvement projects have been implemented in the Region, little has been done to improve nesting habitat.

Pheasant populations have been low since the early 1980s. Harsh winters in 1983-1984 and 1984-1985 seemed to start the decline. Although several winters since then have been unusually mild, populations have not recovered. Low recruitment, winter mortality, and limited habitat are the most likely factors holding densities to low levels. Research needs to be done in the Upper Snake Region to identify what can be done to increase recruitment.

## **Forest Grouse**

### **Population Surveys**

Forest grouse populations are not sampled in the Upper Snake Region because populations are patchy in distribution, making it difficult to efficiently obtain adequate sample sizes from enough areas to be meaningful.

Wings were examined to estimate forest grouse production. Eighty-seven ruffed grouse wings and 35 blue grouse wings were collected at check stations, wing barrels, or turned in to the Department during the 2003 season. Examination of these gave a young:adult ratio of 181:100 ruffed grouse and 169:100 blue grouse. However these sample sizes are too small to provide meaningful information throughout the Region.

### **Harvest Characteristics**

Harvest information has been collected from the statewide survey and from check stations operated during the opening weekend of the sage-grouse season (Table 2). Forest grouse checked at check stations are taken in conjunction with sage-grouse hunting. Drastic reductions in sage-grouse hunting opportunity occurred beginning in 1996. Consequently, 2003 hunter numbers were again only a fraction of historical levels. Fourteen blue grouse and nine ruffed grouse were checked at sage-grouse check stations in 2003. Check station data have been used to calculate an index of forest grouse per 100 hunters checked on the opening weekend of sage-grouse season. The number of forest grouse in the bag of sage-grouse hunters provides a rough index to their abundance in or near areas inhabited by sage-grouse. The number of forest grouse per 100 hunters in 2003 was below the ten-year average.

Statewide survey harvest data for the Region are presented in Table 2. No statewide survey was conducted from 1997-2000. A statewide survey conducted for the 2003 season estimated 4,291 hunters harvested 21,116 forest grouse in the Region. This is a 56% increase in hunters and 23% increase in harvest from the 2002 estimates.

### **Climatic Conditions**

Spring weather conditions during 2003 were warm and dry. Precipitation was below average from March through early May. Some forested areas received a light shower occasionally during the summer, but conditions generally remained dry throughout the summer. Wing data indicate these conditions provided for only average chick survival.

### **Management Implications**

The forest grouse hunter participation and harvest estimates have fluctuated widely in the past ten years. The number of birds checked at check stations on opening day of the sage-grouse season has varied between eight and 60 with a mean of 32. Both the check station and statewide telephone survey data indicate that forest grouse numbers fluctuate; however, the two data sets do not correspond in annual fluctuations.

## **Sage-grouse**

### **Distribution Surveys**

Sage-grouse are distributed throughout the Upper Snake Region in sagebrush grasslands. No distribution surveys were conducted during this reporting period.

### **Population Surveys**

Seventeen lek routes were counted in 2003. Three of these routes were new in 1995, two were new in 1997, and one was new in 1998. The Antelope Creek route was not counted in 2003. Of the nine traditional routes, all but one route, the Little Lost route, had more grouse than 2002 (Table 3). The number of grouse counted on routes fluctuates from year to year due to previous year's production and other factors relative to counting. Most routes are showing an increase in grouse since the early 1990s, but are still below Idaho State Management Plan objectives and the 1970s and 1980s levels.

### **Production**

The juvenile to adult female ratio is determined from hunter-harvested sage-grouse wings. These data indicate below average production in 2003 (Table 4); however, sample size since 1996 has been inadequate to get a good estimate of production.

### **Season Framework**

The sage-grouse season was changed in 1996 from what had existed the previous five years. Beginning in 1990, the sage-grouse season was 30 days long with a three-sage-grouse bag limit and six-sage-grouse possession limit. In 1996, three different season structures occurred in the Region (closed to hunting, seven-day season with a one-grouse bag limit and two-grouse possession limit, and a 23-day season with a two-grouse bag limit and a four-grouse possession limit). From 1996 through 2001, the season remained the same. The reasons for these season changes were to 1) implement research to evaluate whether hunting mortality is compensatory or additive, 2) evaluate the effects of habitat fragmentation on recruitment, 3) identify causes for low recruitment, and 4) address public concern about declining sage-grouse numbers.

In 2002, the areas closed to sage-grouse hunting (except for the INEEL) were reopened (Area Two) with a seven-day season, one-grouse bag and two-grouse possession limit. Area Two included Bonneville County, Butte County south of Highways 20/26 and 22/33 east of the Arco-Minidoka Road, the entire Birch Creek drainage, Clark County, Fremont County, Jefferson County, Lemhi County within the Birch Creek drainage, Madison County, and Teton County. The rest of the Region (Area Three) continued with a 23-day season, two-grouse bag and four-grouse possession limit. Area Three included Butte County north of Highway 20/26 and State Highway 22/33 not within the Birch Creek drainage, and that part west of the Arco-Minidoka Road, Custer County EXCEPT that portion within the Salmon River drainage upstream from and including Valley Creek and Lemhi County EXCEPT that portion within the Birch Creek drainage. The 2002 season structure was continued for 2003.

## **Harvest Characteristics**

Three check stations monitor harvest characteristics. Check station data since 1995 reflects the reduced bag/possession limits with fewer hunters afield and fewer grouse harvested on opening weekend (Table 5). Birds per hunter day decreased a little in 2003 relative to 2002 while hours per bird harvested increased a little in 2003 relative to 2002, indicating more difficult hunting conditions in 2003 compared to 2002.

Starting in 2000, sage-grouse and/or sharp-tailed grouse hunters were required to purchase a validation on their hunting license. Survey data (Table 5) of these hunters in 2003 was not available at the time of this report. Estimates from the survey during 2000-present are not comparable with the telephone surveys done before 1996.

## **Climatic Conditions**

The spring and summer weather conditions in 2003 were warm and dry. These dry weather conditions are reflected in poor chick survival for 2003 (Table 4).

## **Habitat Conditions**

Sage-grouse habitat continues to be lost to agriculture, wildfire, and prescribed fire throughout the Region. Wildfire burned approximately 40,000 acres of the Deep Creek and Eddie Creek benches in August 2003. This area is primary brood-rearing and summer habitat for sage-grouse in the Medicine Lodge-Lidy lek areas. Another August wildfire burned approximately 12,000 acres in the vicinity of the Plano lek route. Extensive acreage of sagebrush has also been lost to wildfires on and around the INEEL since the summer of 1996. Reduced numbers of sage-grouse resulting from these habitat losses are expected to occur for the next several years.

## **Management Studies**

A research project was initiated in August 1997 to identify and evaluate causes of juvenile sage-grouse mortality. Information gained from this research will be published in a separate research progress report.

## **Management Implications**

Sage-grouse populations fluctuate from year to year relative to weather conditions and, over longer time, from habitat alterations. Harvest is dependent upon hunting conditions on opening weekend, bag and possession limits, season length, and grouse populations. The BLM, USFS, U.S. Sheep Experiment Station and INEEL have assisted the Department in conducting lek surveys in recent years. Long-term monitoring trends show population declines throughout the Region. Both quantity and quality of habitat have declined due to agriculture encroachment, sagebrush manipulation, loss of wetlands, and livestock grazing. Regional personnel are actively involved with other agencies and private landowners in planning sagebrush manipulation projects to minimize impacts to sage-grouse habitat; however, continued population declines

indicate more needs to be done to reduce sagebrush conversion and fragmentation and to improve grazing management.

A local working group of federal and state agency personnel, sportsmen, ranchers, and landowners from the Upper Snake Region was formed in November 1998 to address sage-grouse declines. Initially, fifty to sixty members met on a bi-monthly or monthly basis, but this number has dwindled to 15-20 over the past four years. During the past year, the members have developed a draft management plan and are in the final stages of finalizing this plan.

## **Sharp-tailed Grouse**

### **Population Surveys**

Three sharp-tailed grouse lek routes are surveyed in the Upper Snake Region (Table 6). The number of grouse attending leks in 2003 increased considerably from 2002 for the Sand Creek route but remained about the same for the Grassy and Pine Creek routes. All three routes were above the ten-year average (Table 6).

### **Production**

Wings were collected at wing barrels from the Sand Creek and Tex Creek areas throughout the season. Analysis of wings indicated that 2003 production was the lowest recorded since 1994 (Table 7), and 77% below the ten-year average.

### **Harvest Characteristics**

Trends in harvest of sharp-tailed grouse have historically been monitored through the Red Road check station on opening weekend of the sage and sharp-tailed grouse seasons (Table 8). However, in 1998, the sharp-tail season opened two weeks later on October 1. Consequently, no check station-derived harvest data was obtained on sharp-tailed grouse in 1998 or 1999. A check station was operated on the Sand Creek Road on opening day to obtain some harvest information in 2000, 2001, and 2002. Check station hunter numbers prior to 2000 also include sage-grouse hunters, but only sharp-tailed grouse hunters are included in the 2000, 2001, and 2002 data. No check station data were collected in 2003.

Starting in 2000, sage-grouse and/or sharp-tailed grouse hunters were required to purchase a validation on their hunting license. Survey results (Table 8) of these hunters in 2003 were not available at the time of this report. These estimates are not comparable with the telephone surveys done before 1996.

### **Climatic Conditions**

Weather conditions during the 2003 production season were warm and dry. This climatic condition is represented in the low young:adult ratio observed from harvested grouse in 2003 (Table 7).

## **Habitat Conditions**

Lands enrolled in the CRP program in Bonneville, Bingham, Teton, Madison, and Fremont counties provide some benefits to sharp-tailed grouse. Increased distribution of sharp-tailed grouse is being documented during the lek season, and they winter in areas enrolled in CRP, especially in Fremont, Madison, and Teton counties.

## **Lek Surveys**

Two wildlife technicians survey approximately 160<sup>2</sup> miles (102,400 acres) of potential sharp-tailed grouse habitat for leks in parts of Fremont, Madison and Teton Counties in March and April 2003. Dominant land use where grouse were found was enrolled in the federal CRP program, but leks were always found in close proximity to native shrub communities. Dominant shrub communities consisted of sagebrush, chokecherry, and aspen on north facing slopes and in draws. The maximum and minimum number of grouse found per lek was 33 and three, respectively, and averaged 12.3 grouse. The survey indicated that sharp-tailed grouse are present and well distributed throughout game management units 62, 64 and 65. Additional areas could have been searched if weather and field conditions had been more favorable. A final report with lek locations was prepared by the technicians and is available from the Upper Snake Region Office.

## **Management Implications**

Sharp-tailed grouse production and/or recruitment were very low from 1992-1994 and again in 2003. Unfavorable weather conditions may have been responsible. Drought conditions prevailed throughout the spring and summer in 1992 and 2003, while 1993 and 1994 were abnormally cool and wet. Production, based on wing analysis, improved markedly from 1995-1998, but has been low again since then. These fluctuations may also be the result of small sample size or weather related. Birds attending leks on the Sand Creek route was up in 2003, while the Grassy and Pine Creek routes were about the same as in 2002 and above the ten-year average.

Additions to Department-owned parcels of habitat are being sought for the Sand Creek and Tex Creek WMAs. Lands enrolled in CRP provide additional habitat.

## **Chukar Partridge**

### **Population Surveys**

No production data were collected during this reporting period. However, large numbers of chukar were observed on Appendicitis Hills and in the Antelope Creek drainage of Unit 50 during deer and elk helicopter surveys conducted during January 2004.

## **Harvest Characteristics**

Table 9 presents the chukar harvest through opening weekend check stations (check stations are operated primarily for sage-grouse hunters) for the past ten years. A statewide survey was not conducted from 1997-2000. Statewide survey estimates for the Region in 2003 indicate a substantial increase in both hunters and chukar harvest in 2003 relative to 2002. Eight juvenile chukar were checked through the opening weekend of the sage-grouse season.

## **Management Implications**

Chukar partridge are not numerous in the Upper Snake Region. Habitat is limited by snow depth, duration of snow cover, and potentially water availability. Chukar have been more numerous and widely distributed in the past, but severe winters have reduced populations and restricted distribution to the most favorable sites. Remnant populations occur in the lower Big Lost, lower Little Lost, and lower Birch Creek valleys. These populations are well established but are susceptible to periodic weather-related declines.

Although operated primarily to check sage-grouse hunters, opening weekend check stations also provide minimal trend information on chukar harvest (Table 9). Results indicate fewer birds checked in 2003 than in 2002 and also fewer than the ten-year average. In mid-September, birds are often well dispersed and difficult to find. However, the statewide survey indicates that both chukar hunters and chukar harvest is increasing in the Region (Table 9).

## **Gray Partridge**

### **Population Surveys**

No population trend data were collected for this reporting period. However, large numbers of gray partridge were observed on Appendicitis Hills and in the Antelope Creek drainage of Unit 50 during deer and elk helicopter surveys conducted during January 2004.

### **Harvest Characteristics**

Harvest information is gathered from check stations operated at Sage Junction, Highway 20, and Red Road during opening weekend of the sage-grouse season and through a statewide combined mail-out and telephone survey. Table 10 shows the trend in gray partridge checked in the Upper Snake Region with no gray partridge checked in 2003. It should be noted that there has been a reduction in hunter participation since 1996 as a result of restricted sage-grouse hunting opportunity in the Region. Statewide survey estimates for 2003 indicate a decrease in both the number of hunters and gray partridge harvested in 2003 relative to 2002 (Table 10).

### **Habitat Conditions**

Gray partridge are distributed at lower elevations throughout the Upper Snake Region, but densities are relatively low. In drier years, the birds concentrate around moist areas and hay fields but have a more general distribution in years with normal precipitation. Nesting occurs in

and around hay or grain fields. Although gray partridge are capable of surviving winter conditions better than chukar partridge, severe winters cause increased mortality.

### **Management Implications**

Habitat improvement projects sponsored through the HIP program and Pheasants Forever indirectly benefit gray partridge. Cost-share seeding of grass/forb mixtures provided by the CRP program also benefits gray partridge in some locations.

## **Wild Turkey**

### **Population Surveys**

There were no population surveys conducted during this reporting period; however, turkeys have been observed along the lower South Fork Snake River and adjacent tributaries and habitat, the lower Henrys Fork, the lower Falls River, and the Snake River upstream of Roberts.

### **Harvest Characteristics**

One hundred permits were offered in a controlled hunt in Unit 50 in spring 2003. The harvest estimate was 45 turkeys (Table 11).

### **Climatic Conditions**

The 2003-2004 winter was characterized with mild temperatures and below normal snow. Spring nesting conditions in 2003 should have provided good nesting conditions.

### **Habitat Conditions**

Turkey habitat in the Region may be marginal for winter foraging, but no studies have been done to evaluate habitat quality.

### **Trapping and Transplanting**

No turkeys were released in the Region during this reporting period (Table 12).

Fifty-nine turkeys (Merriam's) were released on the Big Lost River below Mackay in February and March 1999. The first hunt on this population was offered in the spring of 2002.

A total of 670 turkeys (Merriam's) have been released in Units 63A, 67, and 69 since the 2000-2001 winter. Several of the Unit 63A releases were in the same general vicinity as the turkeys released during 1984 and 1988. The previous transplants were numerically small (12-16) and involved the Rio Grande subspecies. The previous transplants were unsuccessful in establishing a population and some evidence indicated that inadequate winter food was the primary limiting factor.

## **Management Implications**

Research is needed on the ecology, recruitment, habitat needs, and movements of the introduced river bottom turkeys in southeast Idaho. Some of the previously introduced populations have shown similar trends of not establishing viable populations or increasing for a few years and then becoming extinct.

## **Mourning Dove**

### **Population Characteristics**

Data from dove call-count routes are reported directly to the USFWS.

### **Harvest Characteristics**

No doves were checked at check stations on the opening weekend of the 2003 sage-grouse season. Harvest surveys have not been conducted since 1996. Hunters report harvest directly to the USFWS.

### **Management Implications**

The mourning dove is one of the most common nesting game birds in the Upper Snake Region. However, in many years the majority of birds have left the area prior to the season opening on September 1.

Management efforts are aimed at reducing sportsmen/landowner conflicts and improving habitat indirectly through HIP windbreaks, guzzlers, and CRP plantings. We will continue to take advantage of harvest opportunities as allowed by federal regulations.

## **Rabbits and Hares**

Starting in 2002, the pygmy rabbit season closed, leaving only cottontail rabbit and snowshoe hare available to hunters.

Rabbits are a low priority species in the Upper Snake Region. A statewide survey conducted for rabbit hunters estimated 514 hunters harvested 2,356 rabbits in the Upper Snake Region during 2003. Eighteen hunters also reported harvesting 18 snowshoe hare in the Region in 2003. In 2002, there was no reported rabbit harvest in the Region. No production or population information is collected on rabbit or hare populations.

Table 1. Estimated pheasant harvest in the Upper Snake Region, 1983-present.

Year	Check station			Telephone survey <sup>a</sup>			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1983	58	56	1.0	2.9	108	18	0.1
1984	163	106	0.7	4.9	4,827	2,565	0.7
1985	124	41	0.3	9.0	3,681	5,933	0.5
1986	17	6	0.4	5.0	880	2,188	0.6
1987	15	7	0.5	10.0	1,387	2,198	0.5
1988	27	17	0.6	3.5	1,113	1,815	0.4
1989	47	9	0.2	15.5	1,502	2,023	0.4
1990	20	5	0.3	11.2	1,561	4,325	0.6
1991	10	0	-	-	765	1,441	0.6
1992	18	2	0.1	27.8	856	273	0.2
1993	8	0	-	-	588	928	0.4
1994	3	0	-	-	356	487	0.3
1995	2	0	-	-	487	487	0.3
1996	0	0	-	-	450	0	0.0
1997	7	0	-	-	-	-	-
1998	2	0	-	-	-	-	-
1999	2	0	-	-	-	-	-
2000 <sup>b</sup>	4	0	-	-	-	-	-
2001 <sup>b</sup>	1	2	2.0	1.3	1,125	2,573	0.5
2002 <sup>c</sup>	-	-	-	-	719	1,718	0.6
2003 <sup>c</sup>	-	-	-	-	954	2,654	0.3
Three-yr. average	-	-	-	-	933	2,315	0.5

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-2000.

<sup>b</sup> Check station operated only on Sunday of opening weekend.

<sup>c</sup> Check station not operated on opening weekend.

Table 2. Estimated forest grouse harvest in the Upper Snake Region, 1983-present.

Year <sup>b</sup>	Check station					Telephone survey <sup>a</sup>		
	Hunters <sup>c</sup>	Number of grouse			Forest grouse/100 hunters	Hunters	Birds harvested	Birds per hunter day
		Blue	Ruffed	Total				
1983	1,711	79	1	80	4.6	-	-	-
1984	1,292	56	0	56	4.3	-	-	-
1985	2,796	45	7	52	1.6	1,198	3,176	0.9
1986	3,089	32	0	32	1.0	1,414	4,588	1.0
1987	2,932	59	14	73	2.0	1,482	4,653	1.1
1988	2,851	41	0	41	1.4	1,458	7,429	1.2
1989	2,150	67	3	70	3.0	1,688	9,295	1.0
1990	2,303	40	4	44	1.7	1,930	6,378	0.7
1991	2,250	38	0	38	1.7	1,917	7,102	1.3
1992	1,561	7	7	14	0.5	2,055	12,914	0.9
1993	1,565	4	4	8	0.3	4,639	12,029	0.6
1994	1,634	14	12	26	1.6	4,027	16,239	0.8
1995	1,133	20	0	20	1.9	3,432	11,474	0.5
1996	432	24	2	26	7.1	1,642	4,927	0.6
1997	455	15	5	20	4.4	-	-	-
1998	524	47	3	50	9.5	-	-	-
1999	526	37	4	41	7.8	-	-	-
2000	573	23	5	28	4.9	-	-	-
2001	611	13	7	20	3.3	3,675	23,213	1.1
2002	742	48	12	60	8.1	2,745	17,200	1.1
2003	751	14	9	23	3.1	4,291	21,116	0.9
Ten-yr. average	738	26	6	32	4.3	3,302	15,695	0.8

<sup>a</sup> Telephone survey data at the regional level were not collected from 1983-1984 and 1997-2000.

<sup>b</sup> A toxic chemical spill on I-15 on opening day 1992 resulted in some hunters being rerouted and missed by the Sage Junction check station.

<sup>c</sup> Number of hunters includes those hunting for forest grouse, sage-grouse, and partridge.

Table 3. Male greater sage-grouse counted on lek routes in the Upper Snake Region, 1983-present.

Year	Lek route <sup>a</sup>																		Total	Avg. <sup>g</sup>
	LBC	RR	J	ML	LL	L	P <sup>b</sup>	UBC	CC	MLk	SS <sup>c</sup>	TB <sup>d</sup>	SR <sup>d</sup>	I <sup>e</sup>	TF <sup>e</sup>	LBL <sup>e</sup>	AC <sup>e</sup>	UBL <sup>f</sup>		
1983	68	88	39	150	148	66	-	1	22	-	-	-	-	-	-	-	-	-	582	73
1984	37	86	58	183	174	75	-	-	136	-	-	-	-	-	-	-	-	-	749	107
1985	50	81	57	200	268	35	-	31	122	-	-	-	-	-	-	-	-	-	844	106
1986	31	130	39	231	122	55	-	40	35	-	-	-	-	-	-	-	-	-	683	85
1987	36	123	57	223	194	120	-	32	213	-	-	-	-	-	-	-	-	-	998	125
1988	39	100	44	100	200	105	-	-	40	-	-	-	-	-	-	-	-	-	628	90
1989	42	75	14	53	102	-	151	13	59	-	-	-	-	-	-	-	-	-	509	64
1990	43	77	-	42	90	183	181	26	85	31	-	-	-	-	-	-	-	-	758	91
1991	56	61	38	71	126	230	296	3	106	-	-	-	-	-	-	-	-	-	987	110
1992	28	106	35	67	87	67	182	0	90	-	-	-	-	-	-	-	-	-	662	74
1993	18	34	49	25	57	100	144	0	58	-	-	-	-	-	-	-	-	-	485	54
1994	29	53	71	67	57	80	79	0	120	-	-	-	-	-	-	-	-	-	556	62
1995	18	40	77	50	79	62	106	4	105	-	83	-	-	18	75	-	-	-	717	60
1996	6	69	90	35	48	26	48	8	61	-	88	-	-	15	54	-	-	-	548	46
1997	16	74	67	32	77	72	106	13	120	26	131	70	57	26	77	-	-	-	964	64
1998	25	52	159	96	67	71	131	11	112	31	110	185	96	58	103	62	31	-	1,400	82
1999	37	168	125	129	131	110	80	17	132	30	162	129	143	117	113	74	24	-	1,721	101
2000	30	153	104	159	157	210	122	19	181	19	213	165	116	70	135	50	29	-	1,932	114
2001	28	106	115	165	115	149	104	22	138	10	284	174	138	89	125	67	31	51	1,911	106
2002	61	111	82	101	109	180	84	12	135	11	153	74	61	148	110	81	35	-	1,548	91
2003	98	110	114	144	81	233	138	25	167	34	189	157	105	135	132	51	-	35	1,948	115
Ten-year avg.	35	94	100	98	92	119	100	13	127	23	157	136	102	75	103	64	30	43	1,325	84

<sup>a</sup> LBC = Lower Birch Creek, RR = Red Road, J = Jacoby, ML = Medicine Lodge, LL = Little Lost, L = Lidy, P = Plano, UBC = Upper Birch Creek, CC = Crooked Creek, MLk = Market Lake, SS = Sheep Station, TB = Table Butte, SR = Stibal Road, I = INEEL, TF = Tractor Flat, LBL = Lower Big Lost, AC = Antelope Creek, and UBL = Upper Big Lost.

<sup>b</sup> New route established in 1989.

<sup>c</sup> New routes established in 1995.

<sup>d</sup> New routes established in 1997.

<sup>e</sup> New routes established in 1998.

<sup>f</sup> New route established in 2001.

<sup>g</sup> Avg. = the average per route counted.

Table 4. Greater sage-grouse production based on wing collections in the Upper Snake Region, 1983-present.

Year	Juveniles:100 females	Juveniles:100 adults
1983	278	233
1984	154	133
1985	201	180
1986	234	201
1987	108	85
1988	90	69
1989	239	162
1990	279	173
1991	168	103
1992	155	106
1993	224	150
1994	200	136
1995	138	106
1996 <sup>a</sup>	673	246
1997 <sup>a</sup>	212	164
1998 <sup>a</sup>	281	178
1999 <sup>a</sup>	209	130
2000 <sup>a</sup>	171	127
2001 <sup>a</sup>	188	136
2002 <sup>a</sup>	276	213
2003 <sup>a</sup>	166	119
Ten-year average	251	156

<sup>a</sup> Inadequate sample sizes.

Table 5. Estimated greater sage-grouse harvest in the Upper Snake Region, 1983-present.

Year <sup>b</sup>	Check station			Telephone survey <sup>a</sup>			
	Hunters <sup>c</sup>	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1983	1,711	1,860	1.1	3.8	3,014	7,053	0.8
1984	1,301	1,107	0.9	4.7	2,088	3,351	0.9
1985	2,796	2,933	1.1	4.9	4,614	13,459	1.1
1986	3,089	3,711	1.2	4.3	5,119	18,515	1.3
1987	2,932	3,714	1.3	4.1	4,370	16,979	1.3
1988	2,851	2,635	0.9	5.7	4,461	13,370	0.9
1989	2,150	2,202	1.0	4.6	3,541	10,521	1.4
1990	2,303	2,812	1.2	4.0	4,650	16,862	1.2
1991	2,250	1,944	0.9	5.5	4,385	10,593	1.1
1992	1,561	1,077	0.7	7.4	3,660	4,990	0.6
1993	1,565	889	0.6	8.7	6,586	10,979	0.6
1994	1,634	1,131	0.7	7.2	3,765	8,728	0.8
1995	1,133	492	0.4	10.7	3,148	5,422	0.6
1996	432	202	0.5	7.6	1,543	2,536	0.6
1997	455	248	0.6	7.3	-	-	-
1998	524	336	0.6	6.5	-	-	-
1999	526	424	0.8	4.5	-	-	-
2000	573	387	0.7	5.6	1,672	2,221	0.6
2001	611	367	0.6	6.5	1,777	2,147	0.6
2002	742	610	0.8	4.3	1,877	2,532	0.6
2003	751	515	0.7	5.0	-	-	-
Ten-yr. average	738	471	0.6	6.5	2,297	3,931	0.6

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-1999. Telephone survey data was not available for 2003 at the time of this report.

<sup>b</sup> A toxic chemical spill on I-15 on opening day resulted in some hunters being rerouted and missed by the Sage Junction check station.

<sup>c</sup> Number of hunters includes those hunting for forest grouse, sage-grouse, and partridge.

Table 6. Sharp-tailed grouse counted on lek routes in the Upper Snake Region, 1983-present.

Year	Route – maximum male count		
	Sand Creek	Grassy	Pine Creek
1983	7	29	-
1984	10	17	-
1985	9	28	-
1986	19	40	-
1987	34	38	-
1988	10	56	-
1989	-	-	-
1990	25	12	-
1991	22	11	-
1992	-	26	-
1993	17	5	-
1994	24	5	-
1995	18	4	-
1996	22	4	-
1997	5	3	-
1998	39	13	-
1999	32	32	22
2000	43	28	21
2001	41	33	21
2002	29	21	29
2003	60	20	26
10-year average	31	16	24

Table 7. Sharp-tailed grouse production based on wing collections in the Upper Snake Region, 1985-present.

Year	Juveniles:100 Adults	N <sup>a</sup>
1985	131	120
1986	356	228
1987	93	326
1988	49	122
1989	167	72
1990	173	227
1991	270	122
1992	39	124
1993	39	38
1994	103	59
1995	285	50
1996	242	65
1997	338	92
1998	221	77
1999	176	243
2000	68	89
2001	61	134
2002	140	113
2003	38	73
10-year average	167	100

<sup>a</sup> Sample size.

Table 8. Estimated sharp-tailed grouse harvest in the Upper Snake Region, 1983-present.

Year	Check station				Telephone survey <sup>a</sup>		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1983	432	40	0.09	7.6	189	205	0.8
1984	402	25	0.06	8.0	98	25	0.3
1985	993	117	0.12	7.0	321	575	0.7
1986	1,050	225	0.21	5.2	134	206	0.6
1987	1,125	327	0.29	4.9	283	618	1.1
1988	890	94	0.11	7.2	283	1,199	1.0
1989	696	65	0.09	9.1	362	953	1.4
1990	772	112	0.15	5.4	366	2,905	2.3
1991	826	94	0.11	6.4	555	653	0.6
1992	645	65	0.10	8.8	393	967	1.4
1993	537	8	0.01	23.2	2,041	1,856	0.2
1994	496	22	0.04	7.9	1,423	1,723	0.4
1995	406	28	0.07	11.7	1,239	1,076	0.3
1996	199	6	0.03	9.3	1,543	1,433	0.3
1997	213	33	0.15	7.2	-	-	-
1998 <sup>b</sup>	-	-	-	-	-	-	-
1999 <sup>b</sup>	-	-	-	-	-	-	-
2000 <sup>c</sup>	39	19	0.49	6.4	1,019	2,107	0.7
2001 <sup>c</sup>	23	15	0.65	5.5	891	1,344	0.6
2002 <sup>c</sup>	4	0	-	-	793	1,295	0.6
2003 <sup>b</sup>	-	-	-	-	-	-	-
Ten-yr. average	197	18	0.09	8.0	1,151	1,496	0.5

<sup>a</sup> Telephone survey data at the regional level were not collected from 1997-1999. Telephone survey data for 2003 was not available at the time of this report.

<sup>b</sup> No check station data collected because the sharptail season opened later (1 October) than the sage-grouse season.

<sup>c</sup> Check station operated on October 1.

Table 9. Estimated chukar partridge harvest in the Upper Snake Region, 1983-present.

Year <sup>b</sup>	Check station		Telephone survey <sup>a</sup>				
	Hunters <sup>c</sup>	Birds harvested	Birds per hunter	Hunters	Birds harvested	Hunter days	Birds per hunter day
1983	1,711	24	0.014	-	-	-	-
1984	1,301	-	-	-	-	-	-
1985	2,796	11	0.004	-	-	-	-
1986	3,089	13	0.004	-	-	-	-
1987	2,932	36	0.012	-	-	-	-
1988	2,851	40	0.014	-	-	-	-
1989	2,150	15	0.007	-	-	-	-
1990	2,303	5	0.002	-	-	-	-
1991	2,250	29	0.013	-	-	-	-
1992	1,561	10	0.006	-	-	-	-
1993	1,565	0	0.000	-	-	-	-
1994	1,634	9	0.006	-	-	-	-
1995	1,133	13	0.011	-	-	-	-
1996	432	9	0.021	-	-	-	-
1997	455	10	0.022	-	-	-	-
1998	524	19	0.036	-	-	-	-
1999	526	6	0.011	-	-	-	-
2000	573	15	0.026	-	-	-	-
2001	611	24	0.039	213	383	752	0.5
2002	742	15	0.020	331	662	1,045	0.6
2003	751	8	0.011	490	820	1,283	0.6
Ten-yr. average	738	13	0.017	345	622	1,027	0.6

<sup>a</sup> Telephone survey data for chukar at the regional level were not collected prior to 2001.

<sup>b</sup> A toxic chemical spill on I-15 on opening day 1992 resulted in some hunters being rerouted and missed by the Sage Junction check station.

<sup>c</sup> Number of hunters includes those hunting for forest grouse, sage-grouse, and partridge.

Table 10. Estimated gray partridge harvest in the Upper Snake Region, 1983-present.

Year <sup>b</sup>	Check station			Telephone survey <sup>a</sup>			
	Hunters <sup>c</sup>	Birds harvested	Birds per hunter	Hunters	Birds harvested	Hunter days	Birds per hunter day
1983	1,711	164	0.096	-	-	-	-
1984	1,301	-	-	-	-	-	-
1985	2,796	83	0.030	-	-	-	-
1986	3,089	109	0.035	-	-	-	-
1987	2,932	98	0.033	-	-	-	-
1988	2,851	60	0.021	-	-	-	-
1989	2,150	7	0.003	-	-	-	-
1990	2,303	33	0.014	-	-	-	-
1991	2,250	28	0.012	-	-	-	-
1992	1,561	18	0.012	-	-	-	-
1993	1,565	7	0.004	-	-	-	-
1994	1,634	13	0.008	-	-	-	-
1995	1,133	2	0.002	-	-	-	-
1996	432	7	0.016	-	-	-	-
1997	455	11	0.024	-	-	-	-
1998	524	7	0.013	-	-	-	-
1999	526	26	0.049	-	-	-	-
2000	573	12	0.021	-	-	-	-
2001	611	1	0.002	825	2,319	2,516	0.9
2002	742	4	0.005	840	1,443	2,079	0.7
2003	751	0	0.000	626	761	1,758	0.4
Ten-yr. average	738	8	0.011	764	1,508	2,118	0.7

<sup>a</sup> Telephone survey data for chukar at the regional level were not collected prior to 2001.

<sup>b</sup> A toxic chemical spill on I-15 on opening day 1992 resulted in some hunters being rerouted and missed by the Sage Junction check station.

<sup>c</sup> Number of hunters includes those hunting for forest grouse, sage-grouse, and partridge.

Table 11. Estimated turkey harvest in the Upper Snake Region, 1987-present.

Hunt type <sup>a</sup>	Year	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
Controlled	1987	3	9	9	6	-	-
	1988	3	9	9	1	33	33
	1989	1	3	3	0 <sup>a</sup>	-	5
	2002	1	10		2		
	2003	1	100	81	45	430	

<sup>a</sup> Hunts were not offered from 1990-2001.

Table 12. Turkey transplant history for the Upper Snake Region, 1984-present.

Year	Sub-species <sup>a</sup>	Release site - Unit	Source	Number of birds released
1984	R	Archer - 63A	Texas	16
1984	R	Deer Parks - 63A	Texas	16
1988	R	Deer Parks - 63A	Council, Idaho	12
1999	M	Big Lost River - 50	Idaho	59
2000	M	Archer - 63A	Panhandle, Clearwater Regions	46
2000	M	Deer Parks - 63A	Southwest Region, ID	45
2001	M	Units 63A, 67	Panhandle, Clearwater Regions	416
2002	M	Units 63A, 67, 69	Panhandle, Southwest Regions	163

<sup>a</sup> M = Merriam's; R = Rio Grande.

**PROGRESS REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Upland Game Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-28</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>7</u>	<b>STUDY NAME:</b>	<u>Upland Game and Waterfowl</u>
<b>STUDY:</b>	<u>II</u>		<u>Population Status and Trends</u>
<b>JOB:</b>	<u>1</u>		
<b>PERIOD COVERED:</b>	<u>April 1, 2003 to March 31, 2004</u>		

**SALMON REGION**

**Pheasant**

**Abstract**

Small populations of pheasants exist in limited but stable habitats in the Salmon Region. Hunting pressure and harvest are relatively light.

**Population Surveys**

No production data were collected during this reporting period. Pheasant populations in Custer and Lemhi counties are restricted to small areas along major river bottoms. The limited populations have not been systematically surveyed in the past.

**Harvest Characteristics**

In addition to low overall numbers, pheasants exist primarily on private lands with limited public hunting access, so harvest rates are low (Table 1).

**Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations was below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

## **Habitat Conditions**

Pheasant habitat in Custer and Lemhi counties exists along the lower Lemhi and Pahsimeroi rivers and main Salmon River near Challis and Salmon. The habitat complex consists primarily of riparian areas, cattails, hay meadows, and cattle pastures. Cereal cropland is uncommon. This habitat complex has been relatively stable from year to year and unaffected by annual weather variations or changes in grain commodity markets. However, reductions in the small amount of cereal grain acreage over time have negatively impacted pheasants. Rural residential housing has been increasing, resulting in increased land clearing, more feral pets, and less hunting opportunity.

## **Management Implications**

Pheasants in the Salmon Region occur in limited geographic areas with declining habitat conditions, and they receive light hunting pressure. Although opportunities exist for minor habitat improvements, overall pheasant distribution and numbers are not likely to significantly improve in the foreseeable future. Overall, habitat available for pheasants and areas open to hunting will decrease concomitant with continued housing development. Harvest is currently limited by restricted access to private land, which is also unlikely to increase except for some opportunity associated with recent enrollment in the "Access Yes!" program.

## **Quail**

### **Abstract**

The small, exotic Gambel's quail population near Salmon appears to be at carrying capacity, indicating harvest could be initiated at a level near annual production.

### **Population Surveys**

No production data were collected during this reporting period.

### **Harvest Characteristics**

Hunting season is closed.

### **Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant

phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

### **Habitat Conditions**

Little is known of Gambel's quail habitat in the Region. However, there do not appear to be any major land use changes occurring that threaten current quail habitat conditions.

### **Management Implications**

A small, introduced population of Gambel's quail exists in isolated pockets within a few miles of Salmon. Little is known about this un hunted population. A few broods are usually reported each year and the population appears stable. Although limited in distribution, the population could likely support harvest. Opportunity and harvest would be primarily limited by access to private property. Although biologically justified, establishing a season on this population of exotic game birds may meet with public resistance because of its relatively small size and concerns of local people, many who feed quail on their property.

## **Forest Grouse**

### **Abstract**

Forest grouse populations, hunter effort, and harvest are primarily controlled by weather conditions during nesting and brood rearing. Minimal effort is therefore expended on production, habitat, or harvest data collection.

### **Population Surveys**

No systematic surveys such as established brood routes or drumming counts are maintained for forest grouse species. Information on forest grouse production has been obtained in the past from incidental brood counts made by Department personnel. However, sample sizes were small, and effort expended and areas sampled varied considerably between personnel and years. Because resulting data had little management value, incidental brood counts were discontinued in 1988.

### **Harvest Characteristics**

As a group, forest grouse account for more hunters, more hunter days, and more birds harvested than any other upland game species (Table 2).

### **Check Stations**

No check stations are maintained specifically for forest grouse. A few birds are checked incidentally in the field and at big game check stations.

## **Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

## **Habitat Conditions**

Although forest grouse habitat may be altered by natural (fire, forest diseases) or human-related (logging, mining, and grazing) forces, scale of such changes in the Salmon Region is generally not large enough to significantly impact overall grouse populations. However, large-scale wild fires during summer 2000 that set back succession in large areas of Units 27 and 28 may lead to future increases in forest grouse populations.

## **Management Implications**

Forest grouse populations in the Salmon Region are primarily controlled by weather conditions rather than by short-term habitat changes or hunter harvest. Beginning in 1986, hunting season length was increased from 72 to 100 days. Despite this increase, forest grouse harvest declined from 1985 to 1986. After the mild winter and spring of 1987, harvest in 1987 increased by 50%, suggesting a substantial population increase apparently unaffected by the 1986 increase in season length.

Given that populations are relatively unaffected by harvest, management strategies should emphasize maximum recreational opportunity and minimal data collection efforts.

## **Sage-grouse**

### **Abstract**

Sage-grouse lek counts and harvest decreased in 1992 and continued a downward trend through 1996. Harvest has apparently remained low, but little effort has been allocated toward local hunter contacts. Several leks showed an increase in number of birds in attendance from 1997-2003.

### **Population Surveys**

Salmon Region personnel have significantly increased sage-grouse lek data collection efforts in recent years, increasing number of leks visited from one in 1979-1981 to a peak of 21 leks in

1988. Data from individual leks or groups of leks show variability in terms of maximum male sage-grouse attendance (Table 3). However, several leks showed an increase in number of birds in attendance from 1997-2003. In general, spring lek counts in and of themselves are apparently not good indicators of fall harvest in the Salmon Region.

Ten radio transmitters were attached to sage-grouse at leks in the upper Lemhi River valley in spring 1997. Data collected on four female and six male sage-grouse revealed high mortality rates in yearlings and adults. This may, however, be an artifact of small sample size. Female home ranges were smaller than male home ranges. Two females left their winter ranges after a severe winter storm in January; one migrated 39 km to Lemhi, Idaho, and the other 80 km to the northern edge of the Snake River Plain. Both females showed high lek fidelity and successfully nested in spring 1998.

During late April and early May 2002, 15 sage-grouse (13 male, two female) were captured in several areas in the Salmon Region. Most birds were captured in Lemhi Valley; additional capture sites included Pahsimeroi Valley and Hat Creek/Deer Creek drainages. All birds were equipped with radio transmitters and leg bands. The project was part of a challenge cost-share agreement with the BLM, and the primary goal was to identify areas used by sage-grouse during winter. Two birds died before winter and two could not be located. Hunters did not harvest any radio-marked birds. Birds were located several times during winter and some demonstrated relatively long movements. Winter weather conditions were relatively mild, suggesting birds could use a wide range of locations that may not be suitable under more normal or severe winter conditions. Most birds wintered in the general vicinity of leks where they were captured and returned to the same leks in March 2003.

As part of the same cost-share agreement, approximately ten hours of helicopter survey time were allocated to searching for undocumented sage-grouse leks in several suitable habitat areas in the Salmon Region. Four previously unknown lek sites as well as several satellite leks were identified.

A second challenge cost-share project with BLM was initiated spring 2003 with a goal of identifying nest locations and brood-rearing areas in the upper Lemhi basin. During early April 2003, 12 females and five males were radio-marked. Ten of 11 hens that survived to nesting season initiated nests. Of those, three were successful ( $\geq 1$  egg hatched), but only one hen was observed with chicks. Six (four female, two male) of 17 sage-grouse marked in 2003 survived to March 2004; seven birds died and four were censored. Only one of 14 marked birds that survived to autumn was reported as harvested during the 2003 season (a banded hen that had shed the radio transmitter).

Sage-grouse production in the Salmon Region is highly variable depending upon spring weather conditions (Table 4). No sage-grouse brood route counts have been conducted since 1988.

### **Harvest Characteristics**

Hunter days and harvest reached a recent low in 1997 (Table 5).

Some hunters and birds from the Salmon Region are checked through the Howe and Sage Junction check stations in the Upper Snake Region. In addition, some roving field checks are made of sage-grouse hunters during opening weekends (Tables 6 and 7). Data from both types of field checks and from telephone surveys are somewhat correlated. Only 11 hunters were contacted in the Salmon Region in 2001, all in the upper Lemhi Valley.

### **Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

### **Habitat Conditions**

Documented loss of sage-grouse habitat in the Salmon Region has been minimal in recent years. Habitat losses that do occur are generally caused by sagebrush conversion on private lands, desert land entry on public lands, conifer encroachment into sagebrush habitats, or wildfire.

### **Management Implications**

The Lemhi and Pahsimeroi valleys are the most productive sage-grouse areas in the Region. The Lemhi Valley summer population is comprised of resident grouse and birds that migrate from wintering/breeding areas in lower Birch Creek to summer range in Lemhi Valley. We do not know if a similar condition exists in the Pahsimeroi Valley.

During 1986 and 1987, 196 sage-grouse were translocated into the Sawtooth Valley where populations had declined, but there was no apparent significant habitat loss. Reproduction was documented among these birds. No further translocations are planned for this area. Isolated reports of sage-grouse were received during the summers of 1994 and 1996, and fall 1997, but the Sawtooth population does not appear to be thriving.

Sage-grouse production is strongly dependent upon spring weather. Cold and wet conditions during hatching and brooding can significantly decrease production. Most sage-grouse nesting habitat throughout the Salmon Region can be subject to severe spring weather. This is a normal phenomenon for relatively high elevation sage-grouse range. A one- to two-year decline in productivity (indicated by harvest and lek counts) due to weather is not necessarily indicative of a declining population. Harvest management has little direct impact on populations.

## Chukar Partridge

### Abstract

Chukar numbers and hunting pressure are strongly weather dependent. Some potential still exists for habitat enhancement by fencing selected riparian brood-rearing areas and reducing acreage occupied by noxious weeds.

### Population Surveys

No production data were collected during this reporting period. Anecdotally, chukar production appeared quite high, likely a result of favorable weather conditions during peak hatching.

### Harvest Characteristics

Chukar harvest and hunter participation varies dramatically from year to year depending upon weather conditions and real or perceived availability of birds (Table 8). Estimates of regional harvest indicate an increasing trend in chukar harvest over the last decade, reaching a high of >14,000 birds in 2003.

### Climatic Conditions

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

### Habitat Conditions

Chukar habitats in the Salmon Region are generally stable. However, some areas are threatened by spotted knapweed (*Centaurea maculosa*) and other noxious weed invasions. Other habitats may be created or altered by wildfire. In areas where water may be limiting, Department personnel have cooperated with BLM and USFS to install guzzlers, primarily directed at other wildlife species but probably providing water for chukars as well.

The drought years of 1988-1994 may have exacerbated problems with domestic livestock grazing in riparian areas used by chukar for brood rearing. The Department is continuing to work on cooperative agreements to fence such sites on public lands.

## **Management Implications**

Chukar populations in the Salmon Region are primarily weather dependent. Hunting pressure varies dramatically depending upon chukar population levels. However, hunting has little, if any, direct impact on chukar populations.

Management direction should be to offer maximum recreational opportunity with minimal population monitoring efforts. Some habitat enhancement may be possible by fencing livestock out of selected riparian areas and working cooperatively with land management agencies to control noxious weeds.

## **Gray Partridge**

### **Abstract**

Gray partridge rank a distant third with regard to harvest among the Salmon Region's upland game birds. Due to limited, scattered habitat, gray partridge are not expected to significantly increase.

### **Population Surveys**

No production data were collected during this reporting period.

### **Harvest Characteristics**

Although ranked third among upland bird harvest, gray partridge represent a minor portion of upland game hunter effort and bag in the Salmon Region (Table 9).

### **Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

### **Habitat Conditions**

Although widely distributed, gray partridge habitat is not abundant in the Salmon Region. Nor is it likely to significantly increase because most agricultural lands are marginal for cereal crops and are better suited for livestock pasture or hay meadows.

## **Management Implications**

Information on distribution and population level of gray partridge in the Salmon Region is minimal. Hunter effort and harvest are moderate but may be increasing. Extensive efforts to collect more data are probably not justified.

## **Wild Turkey**

### **Abstract**

Small populations of turkeys appear to be established near Challis and south of Salmon, but they are not yet hunted. Between 1991 and 1999, 139 wild turkeys were released in the Salmon Region to augment existing groups and in novel areas. However, habitat limitations and access to private property may restrict ability to implement hunting seasons.

### **Population Surveys**

Small populations of wild turkeys exist along the Lemhi and Salmon rivers near Salmon and Challis. However, no systematic trend counts or brood route counts are conducted.

### **Harvest Characteristics**

No hunting is authorized in the Salmon Region.

### **Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

### **Habitat Conditions**

Potential wild turkey winter habitat exists in deciduous river bottoms along the Salmon River in the vicinity of Salmon, Challis, and North Fork. These habitat pockets may support small populations, but winter habitat (including landowner tolerance) appears limiting in the Salmon Region. Virtually all winter habitat is privately owned.

## **Trapping and Transplanting**

No activities occurred during the study period. Between 1991 and 1999, 139 wild turkeys were released in the Salmon Region to augment existing groups and in novel areas (Table 10).

## **Management Implications**

Current population levels can probably sustain limited recreational harvest. However, access to private lands, where most wild turkeys occur, will be critical to developing harvest management and opportunity. Available winter habitat and environmental conditions will likely limit wild turkey populations to low levels.

## **Mourning Dove**

### **Abstract**

Mourning doves breed in moderate numbers in the Salmon Region but are usually only lightly harvested here due to migration timing.

### **Population Surveys**

The Salmon Region contains a breeding population of mourning doves. The only population information is obtained from a call count in the southern portion of the Lemhi Valley. During 1985, 1986, and 1987, a total of four mourning doves were seen or heard along the route (Table 11). In 1988, the southern half of the route was relocated three miles to the east. The 1988 count on the old route was one mourning dove call and on the new route, the count was four calls plus nine birds seen. However,  $\leq 3$  birds were seen or heard annually from 1989 to 2001. Beginning in 2000, the western portion (approximately seven miles) of the route on Highway 28 was relocated to the north and east. The new section follows Lemhi Back Road from Leadore to Eightmile Creek.

As part of a national mourning dove banding project (under auspices of USFWS), staff in the Salmon Region established three capture locations: Salmon, Baker, and Ellis. We placed bands on 82 doves (approximately 40 each at Salmon and Baker sites) during July and August 2003. No doves were captured at the Ellis site.

### **Harvest Characteristics**

During years in which mourning doves delay their migration slightly, Salmon Region hunters are able to harvest moderate numbers of birds. In most years, harvest is low. Due to small sample sizes, telephone survey harvest data are imprecise at the county level.

### **Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions

were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

### **Habitat Conditions**

Mourning doves are common but not abundant throughout the Region, indicating that perhaps suitable habitat is limited. Most dove use is located in riparian willow habitats associated with cattle ranching operations; these habitats are relatively stable.

### **Management Implications**

The extended season (60 days) from 1983 to 1986 had little effect on harvest because many doves move out of the area soon after the September 1 opening date. Similarly, the 30-day season initiated in 1987 due to a general decline in mourning dove numbers in the western United States probably did not affect harvest in our area.

## **Rabbits and Hares**

### **Abstract**

Rabbits and hares receive little emphasis from sportsmen or wildlife managers in the Salmon Region.

### **Population Surveys**

No production data were collected during this reporting period.

### **Harvest Characteristics**

The Salmon Region contains huntable populations of both cottontails and pygmy rabbits. However, harvest seasons for pygmy rabbits were closed in 2002. Rabbits and hares appear to be of only incidental interest to sportsmen. Harvest apparently varies greatly from year to year, depending upon rabbit populations (Table 12).

### **Climatic Conditions**

Rainfall during summer months in 2003 was below average, with warm, dry weather during peak hatch periods for most species. Vegetative growth appeared below average. Winter conditions were generally mild with temperatures above normal, and snow accumulation at lower elevations below average. However, stressful conditions for upland game birds were created by a period of

cold temperatures following a storm in mid-winter. In general, animals entered winter in average to below average body condition, then encountered a mild to average winter, which should have produced moderate over-winter survival. Snow-pack (as measured at higher elevations) was approximately 70% of average by late winter. Onset of spring weather and associated plant phenology was apparently advanced by approximately 3-4 weeks. Water-year precipitation to date has been well below average, with very warm and dry early spring conditions.

### **Habitat Conditions**

Little is known of habitat conditions across the Region. There may be a slight downward trend as overall range conditions improve and sagebrush is converted to grassland.

### **Management Implications**

Rabbits and hares are generally of low interest to sportsmen; recreational opportunity still greatly exceeds demand. Very little management data neither is collected nor is it anticipated this effort would increase.

Table 1. Estimated pheasant harvest in the Salmon Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	388	1,199	1,018	3.1	1.2
1986	315	387	528	1.2	0.7
1987	339	497	797	1.5	0.6
1988	175	244	340	1.4	0.7
1989	289	231	642	0.8	0.4
1990	235	284	570	1.2	0.5
1991	155	200	985	1.3	0.2
1992	286	490	442	1.7	1.1
1993	340	804	1,422	2.4	0.6
1994	225	1,555	1,180	6.9	1.3
1995	223	223	569	1.0	0.4
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	206	365	875	1.8	0.4
2002	445	686	980	1.5	0.7
2003	60	60	119	1.0	0.5
Three-year average	237	370	658	1.6	0.6

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 2. Estimated forest grouse harvest in the Salmon Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	1,325	3,590	4,662	2.7	0.8
1986	835	3,086	3,354	3.7	0.9
1987	907	4,628	3,329	5.1	1.4
1988	956	4,762	5,411	5.0	0.9
1989	962	4,356	5,004	4.5	0.9
1990	930	3,708	5,453	4.0	0.7
1991	803	2,205	3,150	2.7	0.7
1992	1,378	9,647	10,042	7.0	1.0
1993	2,350	5,566	12,864	2.4	0.4
1994	3,184	11,557	21,277	3.6	0.5
1995	3,574	12,834	20,775	3.6	0.6
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	2,171	10,914	11,304	5.0	1.0
2002	1,941	6,636	7,544	3.4	0.9
2003	2,179	15,821	11,041	7.3	1.4
Three-year average	2,097	11,124	9,963	5.3	1.1

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 3. Male greater sage-grouse counted on North Lemhi lek routes in the Salmon Region, 1993-present.

Year	North Lemhi lek L-3	All North Lemhi leks L-3 to L-5
1993	0	0
1994	-	0
1995	-	0
1996	-	0
1997	14	17
1998	16	16
1999	0	0
2000	0	0
2001	0	18
2002	15	31
2003	19	28

Table 4. Greater sage-grouse production based on wing collections in the Salmon Region, 1979-present.

Year	Juv:100 females	Juv:100 adults	Unsuccessful females (%)
1979	275	149	60
1980	188	102	66
1981	118	75	45
1982	157	113	57
1983	275	133	36
1984	228	134	52
1985	150	72	53
1986	247	159	45
1987	126	61	53
1988	143	72	-
1989	177	98	-
1990	175	116	-
1991	168	100	69
1992	150	70	70
1993	149	100	56
1994	133	83	57
1995	78	40	-
1996	320	155	47
1997	257	189	43
1998	520	347	60
1999	325	173	63
2000	149	100	51
2001	218	117	55
2002	229	114	67
10-year average	238	142	55

Table 5. Estimated greater sage-grouse harvest in the Salmon Region, 1985-present.

Year	Check station <sup>a</sup>			Telephone survey <sup>b</sup>			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1985	180	228	1.3	6.5	667	976	0.8
1986	106	147	1.4	4.5	390	911	1.9
1987	117	265	2.3	3.0	625	2,852	2.0
1988	120	276	2.3	3.0	727	2,326	0.8
1989	125	192	1.5	3.6	560	974	0.8
1990	155	167	1.1	3.9	519	1,842	1.1
1991	91	153	1.7	4.1	760	2,122	0.8
1992	93	105	1.1	7.0	913	941	0.4
1993	84	48	0.6	13.1	1,670	2,620	0.6
1994	74	64	0.9	7.1	1,236	4,327	0.9
1995	79	25	0.3	23.9	1,117	2,132	0.4
1996	68	31	0.5	9.2	-	-	-
1997	42	19	0.5	11.1	-	-	-
1998	62	29	0.5	7.5	-	-	-
1999	56	50	0.9	4.1	-	-	-
2000	-	-	-	-	526	788	1.5
2001	-	-	-	-	440	571	1.3
2002	63	60	1.0	6.4	-	-	-
2003	52	50	1.0	7.9	-	-	-

<sup>a</sup> Howe and Sage Junction check stations.

<sup>b</sup> Telephone survey data at the regional level were not collected from 1996-1999 or from 2002-2003.

Table 6. Opening weekend field checks of greater sage-grouse hunters for the Lemhi Valley in the Salmon Region, 1981-present.

Year	Hunters	Birds harvested	Birds per hunter	Hours per bird
1981	105	199	1.9	2.6
1982	48	55	1.2	5.1
1983	133	128	1.0	4.0
1984	49	50	1.0	5.1
1985	117	81	0.7	9.2
1986	104	120	1.2	4.3
1987	97	134	1.4	4.2
1988	67	94	1.4	3.9
1989	34	30	0.9	5.1
1990	23	31	1.3	2.7
1991	-	-	-	-
1992	101	77	0.8	6.2
1993	-	-	-	-
1994	59	58	1.0	4.6
1995	18	12	0.7	5.2
1996	-	-	-	-
1997	6	0	0.0	-
1998	18	11	1.6	7.2
1999	19	22	1.2	3.5
2000	-	-	-	-
2001	11	5	0.5	13.2
2002	-	-	-	-
2003	-	-	-	-

Table 7. Opening weekend field checks of greater sage-grouse hunters for the Pahsimeroi Valley in the Salmon Region, 1981-present.

Year	Hunters	Birds harvested	Birds per hunter	Hours per bird
1981	108	134	1.2	3.7
1982	71	68	1.0	3.6
1983	13	4	0.3	11.0
1984	8	5	0.6	7.8
1985	55	46	0.8	3.7
1986	22	43	2.0	3.1
1987	44	57	1.3	-
1988	25	21	0.8	1.7
1989	33	38	1.2	1.7
1990	15	12	0.8	4.7
1991	-	-	-	-
1992	21	16	0.8	3.0
1993	-	-	-	-
1994	19	8	0.4	8.0
1995	2	1	0.5	6.0
1996	-	-	-	-
1997	13	5	0.4	4.4
1998	2	4	2.0	3.5
1999	-	-	-	-
2000	-	-	-	-
2001	-	-	-	-
2002	-	-	-	-
2003	-	-	-	-

Table 8. Estimated chukar partridge harvest in the Salmon Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	96	23	-	0.2	0.9
1986	166	263	-	1.6	1.1
1987	569	2,097	-	3.7	1.6
1988	529	2,548	-	4.8	1.1
1989	444	1,139	-	2.6	0.8
1990	499	4,964	1,460	9.9	3.4
1991	276	1,837	1,435	6.7	1.3
1992	713	7,809	3,725	11.0	2.1
1993	495	1,886	3,216	3.8	0.6
1994	862	4,027	3,765	4.7	1.1
1995	812	3,980	4,346	4.9	0.9
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	927	6,847	4,236	7.4	1.6
2002	1,276	7,080	4,282	5.5	1.7
2003	2,341	14,046	9,717	6.0	1.4
Three-year average	1,515	9,324	6,078	6.2	1.5

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 9. Estimated gray partridge harvest in the Salmon Region, 1985-present.

Year <sup>a</sup>	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	20	3	-	0.2	3.0
1986	49	35	-	0.7	1.8
1987	112	848	-	7.6	0.9
1988	38	38	-	1.0	0.6
1989	64	125	-	2.0	2.7
1990	89	96	-	1.1	0.8
1991	100	275	-	2.8	0.5
1992	45	0	-	0.0	-
1993	278	278	1,051	1.0	0.3
1994	318	1,292	1,704	4.1	0.8
1995	426	508	1,868	1.2	0.3
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	283	1,209	1,418	4.3	0.9
2002	322	966	1,057	3.0	0.9
2003	217	236	370	1.1	0.6
Three-year average	274	804	948	2.9	0.8

<sup>a</sup> Telephone survey data at the regional level were not collected from 1996-2000.

Table 10. Turkey transplant history for the Salmon Region, 1983-present.

Year	Sub-species <sup>a</sup>	Release site - Unit	M	F	Total	New or supplemental release
1983	R	Shoup Bridge area - 28	0	16	16	N
1983	M	Shoup Bridge area - 28	2	3	5	S
1985	R	Shoup Bridge area - 28	5	0	5	S
1991	M	Shoup Bridge area - 28	3	12	15	S
1991	M	Salmon River - 36B	4	21	25	N
1993	M	Fourth of July Creek drainage - 21A	13	12	25	N
1993	M	Salmon River - 36B	6	4	10	S
1999	M	Salmon River - 37	-	-	50	N
1999	M	Salmon River - 28	-	-	14	N

<sup>a</sup> M = Merriam's; R = Rio Grande.

Table 11. Mourning dove call-count survey results and estimated harvest in the Salmon Region, 1985-present.

Year	Call-count routes		Telephone survey <sup>a</sup>		
	Miles counted	Doves per mile	Hunters	Birds harvested	Birds per hunter day
1985	20	0.10	22	335	7.4
1986	20	0.00	114	1,037	3.6
1987	20	0.10	42	943	10.0
1988	20	0.05	68	431	3.2
	20 <sup>b</sup>	0.55			
1989	20	0.10	0	0	0.0
1990	20	0.05	31	4	1.0
1991	20	0.00	0	0	0.0
1992	20	0.05	0	0	0.0
1993	20	0.05	186	3,092	3.1
1994	20	0.05	150	1,274	2.4
1995	20	0.10	223	833	1.0
1996	0	-	-	-	-
1997	-	-	-	-	-
1998	0	-	-	-	-
1999	20	0.00	-	-	-
2000 <sup>b</sup>	20	0.00	-	-	-
2001	20	0.15	-	-	-
2002	20	0.30	-	-	-
2003	20	0.35	-	-	-

<sup>a</sup> New telephone survey methodology employed beginning in 1993 (results not directly comparable to previous results). Telephone survey data at the regional level were not collected after 1995.

<sup>b</sup> Route relocated.

Table 12. Estimated cottontail harvest in the Salmon Region, 1985-present.

Year	Hunters	Cottontails harvested	Days hunted	Cottontails per hunter	Cottontails per hunter day
1985	143	621	-	4.3	1.5
1986	126	38	-	0.3	0.5
1987	0	-	-	-	-
1988	19	75	-	3.9	1.3
1989	0	-	-	-	-
1990	117	757	-	6.5	6.5
1991	59	203	-	3.4	1.0
1992	64	31	11	0.5	2.8
1993	928	18,894	6,679	20.4	2.8
1994	880	23,150	4,851	26.3	4.8
1995	670	4,366	4,833	6.5	0.9
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	114	321	161	2.8	2.0
2002	29	58	58	2.0	1.0
2003	166	474	327	2.9	1.4
Three-year average	103	284	182	2.8	1.6

<sup>a</sup> New telephone survey methodology employed beginning in 1993 (results not directly comparable to previous results). Telephone survey data at the regional level were not collected from 1996-2000.

**APPENDIX A**  
IDAHO  
2003 SEASON  
UPLAND GAME RULES

# PHEASANTS - ALL VARIETIES



## AREA 1

Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone Counties.

Seasons	
2002	— October 12 through December 31
2003	— October 11 through December 31

Daily Bag Limit ..... 3 cocks  
Possession Limit After First Day of Season 6 cocks

## AREA 2

Bannock, Bear Lake, Bingham, Bonneville, Butte, Caribou, Cassia, Clark, Custer, Franklin, Fremont, Jefferson, Lemhi, Madison, Minidoka, Oneida, Power, and Teton counties.

Seasons	
<i>Area 2 seasons begin at noon on opening day and are as follows:</i>	
2002	— October 19 through November 30
2003	— October 18 through November 30

Daily Bag Limit ..... 3 cocks  
Possession Limit After First Day of Season . 6 cocks

## AREA 3

Ada, Adams, Blaine, Boise, Camas, Canyon, Elmore, Gem, Gooding, Jerome, Lincoln, Owyhee, Payette, Twin Falls, Valley, and Washington Counties (including all islands in the Snake River except Patch and Porter Islands).

Seasons	
<i>Area 3 seasons begin at noon on opening day and are as follows:</i>	
2002	— October 19 through December 31
2003	— October 18 through December 31

Patch and Porter Islands: Seasons begin on the dates shown above. Closing dates will correspond with those set by the Oregon Fish and Game Commission. Check with Southwest Region Office, (208) 465-8465, or see Oregon small game regulations.

Daily Bag Limit ..... 3 cocks  
Possession Limit After First Day of Season .... 6 cocks

## YOUTH PHEASANT SEASON

The Youth Pheasant Season opens on the first weekend of October. In Areas 2 and 3 the season begins at noon. It is open statewide and lasts 2 days. It is open for all licensed hunters 15 years of age or younger. All youth hunters must be accompanied by an adult 18 years or older. The daily bag limit is 3 cocks, and the possession limit after the first day of the season is 6 cocks.

\* One adult may take more than one youth hunter.

## WMA PHEASANT PERMIT

Hunting for pheasants on the 9 WMAs requires a WMA pheasant permit.

**Recording harvest:** The Department releases pheasants at 9 Wildlife management Areas (WMAs) in Southern Idaho. Any person 17 years old or older must have a valid WMA Pheasant Permit in possession while hunting pheasants at the following WMAs:

Area	Location Code	Area	Location Code
Fort Boise	01	Market Lake	06
Payette River	02	Mud Lake	07
Montour	03	Cartier Slough	08
C.J. Strike	04	Niagara Springs	09
Sterling	05		

**Permit Validation:** When a pheasant is reduced to possession, the hunter must immediately:

- Enter in the space provided, the month and day the pheasant was taken.
- Enter in the space provided, the location code (listed above) of the WMA where the pheasant was taken.
- It is not necessary to remove the notch from the permit for each pheasant taken.

## Distribution and Habitat

**Use:** Shaded area(s) show general distribution of this species. The ring-necked pheasant is widely distributed in agricultural areas.

Important habitat needs are grassy areas or other dense nesting cover at least 18 inches high, permanent cover that provides protection from winter weather, and abundant water and food (especially grain). Pheasants are common in this type of habitat along the Snake River Plain from the Oregon border to central Idaho. They are present in lower densities in agricultural habitats below 5,000 feet in eastern Idaho and below 4,000 feet in northern Idaho from Benewah County south to Whitebird.



## FOREST GROUSE -

Blue, Ruffed, and Spruce



ENTIRE STATE  
OPEN



Seasons	
2002	— September 1 through December 31
2003	— September 1 through December 31

Daily Bag Limit ..... 4 of any kind

Possession Limit After

First Day of Season ..... 8 of any kind



### Distribution and Habitat Use:

Shaded area(s) show general distribution of these species. Idaho's three species of forest grouse are all native to the state. In northern Idaho, ruffed grouse are the most common forest grouse. Good populations are also found in the mountains of central and eastern Idaho and southeastern Idaho west to the Sublett Mountains. Riparian habitats and other moist

mountain brush areas are commonly used by these birds. Blue grouse are more common than other grouse in most southern Idaho mountains. They favor high elevation sagebrush and mountain shrub areas for nesting, springs and stream banks for rearing young and rely heavily on Douglas fir for fall and winter food and cover. The sparsely-distributed spruce grouse are found in dense conifer forests, generally from the Salmon and Payette river drainages north.

## BOBWHITE & CALIFORNIA QUAIL

(No season on Gambel's and Mountain Quail)



### AREA 1

Bannock, Bear Lake, Bingham, Bonneville, Butte, Caribou, Clark, Custer, Franklin, Fremont, Jefferson, Lemhi, Madison, Oneida, Power, and Teton Counties; CLOSED.

### AREA 2

Ada, Adams, Benewah, Blaine, Boise, Bonner, Boundary, Camas, Canyon, Cassia, Clearwater, Elmore, Gem, Gooding, Idaho, Jerome, Kootenai, Latah, Lewis, Lincoln, Minidoka, Nez Perce, Owyhee, Payette, Shoshone, Twin Falls, Valley, and Washington Counties.

Seasons	
2002	— September 21 through December 31
2003	— September 20 through December 31

Daily Bag Limit ..... 10 of any kind

Possession Limit After

First Day of Season ..... 20 of any kind



### Distribution and Habitat Use:

Shaded area(s) show general distribution of these species. There are three introduced and one native species of quail in Idaho. The California (valley) quail, which occurs from Twin Falls west to the Oregon border and north to the Palouse Prairie, is the most common. Good populations live along rivers, streams and other areas of abundant water and brushy cover

below about 3,500 feet elevation. The bobwhite quail was introduced to Idaho in the 1880s and still exists in small, scattered populations in agricultural areas of the Boise Valley. The Gambel's quail was introduced near Salmon in 1917, and a small population still exists there. The season is closed on Gambel's quail. The mountain quail, a native bird, exists in small, scattered populations in dense mountain brush fields usually associated with riparian areas. It is rare in the mountains from Boise to Bennett Mountain, the Owyhee Mountains, and along the Little Salmon River, Main Salmon and lower Snake River. The season is closed on mountain quail.

# SAGE GROUSE



*Note: Twin Falls County and most of Cassia County are closed to the hunting of sharp-tailed grouse. Be sure of your target!*

## AREA 1

Ada, Adams, Benewah, Blaine County within the Salmon River drainage, Boise, Bonner, Boundary, Canyon, Cassia County south of Interstate 86 and east of Interstate 84, Clearwater, Custer County within the Salmon River drainage upstream from and including Valley Creek, Elmore County EXCEPT that portion south and east of US Highway 20 and north of Interstate 84, Gem, Idaho, Kootenai, Latah, Lewis, Nez Perce, Oneida County north and east of Interstate 84, Payette, Power County south of Interstate 86, Shoshone, Valley, and Washington Counties; CLOSED.

## AREA 2

Bannock, Bear Lake, Bingham, Blaine County east of the Arco-Minidoka road, Bonneville, Butte County south of US Highways 20/26 and 22/33 and the entire Birch Creek drainage, Caribou, Cassia EXCEPT that portion south of Interstate 86 and east of Interstate 84, Clark, Franklin, Fremont, Jefferson, Lemhi County within the Birch Creek drainage, Madison, Oneida EXCEPT that portion north and east of Interstate 84, Owyhee County north of the Juniper Mountain/Mud Flat/Poison Creek roads and Highway 78 to Grandview and the Snake River, Owyhee County east of the Bruneau River, Power County north of Interstate 86, Twin Falls and Teton Counties.

Seasons	
2002	— September 21 through September 27
2003	— September 20 through September 26

Daily Bag Limit ..... 1  
 Possession Limit After First Day of Season ..... 2

## AREA 3

Blaine County EXCEPT that part within the Salmon River drainage and that part east of the Arco-Minidoka Road, that part of Butte County north of US Highway 20/26 and State Highway 22/33 not within the Birch Creek drainage, and that part west of the Arco-Minidoka Road, Camas, Custer County EXCEPT that portion within the Salmon river drainage upstream from and including Valley Creek, Elmore County south and east of US Highway 20 and north of Interstate 84, Gooding, Jerome, Lemhi County EXCEPT that portion within the Birch Creek drainage, Lincoln, Minidoka, Owyhee County south of the Juniper Mountain/Mud Flat/Poison Creek roads and Highway 78 to Grandview and the Snake River and west of the Bruneau River.

Seasons	
2002	— September 21 through October 13
2003	— September 20 through October 12

Daily Bag Limit ..... 2  
 Possession Limit After First Day of Season ..... 4

**Sage/Sharp-tailed Grouse Permit Validation:**  
 Any person hunting sage or sharp-tailed grouse must have in possession their hunting license with a sage/sharp-tailed grouse permit validation. See pages 3-4.

**Vehicle restriction in Twin Falls County and Owyhee County:** See page 8.



**Distribution and Habitat Use:** Shaded area(s) show general distribution of this species. This native grouse is widely distributed in areas with large blocks of sagebrush habitat throughout southern Idaho. Sagebrush is a crucial winter food for sage grouse and also provides them with nesting and roosting cover during the rest of the year. Wet places, including agricultural lands, are important feeding areas for hens with chicks and are heavily used by sage grouse during the fall in dry years.

# SHARP-TAILED GROUSE



## AREA 1

Ada, Adams, Bannock County west of Interstate 15 and north of Interstate 86, Benewah, Bingham County west of Interstate 15, Blaine, Boise, Bonner, Bonneville County west of Interstate 15, Boundary, Butte, Camas, Canyon, Cassia County west of Interstate 84 north of the Malta-Sublett Road and west of the Malta-Strevell Road, Clark County west of Interstate 15, Clearwater, Custer, Elmore, Gem, Gooding, Idaho, Jefferson County west of Interstate 15, Jerome, Kootenai, Latah, Lemhi, Lewis, Lincoln, Minidoka, Nez Perce, Owyhee, Payette, Power County north of Interstate 86, Shoshone, Twin Falls, Valley, and Washington counties; CLOSED.

## AREA 2

Bingham and Clark counties east of Interstate 15, Franklin, Fremont, Jefferson County east of Interstate 15, Madison, and Teton counties, Bonneville County east of Interstate 15, Bannock County east of Interstate 15 and south of Interstate 86, Bear Lake, Caribou, Cassia County east of Interstate 84 and that portion west of Interstate 84 south of the Malta-Sublett Road and east of the Malta-Strevell Road, Franklin, Oneida, and Power County south of Interstate 86.

**Distribution and Habitat Use:** Shaded area(s) show general distribution of this species. Columbian sharp-tailed grouse were once distributed in grassland/mountain brush habitats throughout southern and western Idaho north to the Palouse Prairie. Habitat changes due to agricultural development and livestock grazing, and human development, among other factors, have reduced this grouse's range to areas mostly in southeastern Idaho. Agricultural lands enrolled in the Conservation Reserve Program are currently providing important habitat for this species and have led to increased populations since 1986. Good populations still exist from Fremont County south to Utah in grasslands associated with chokecherry, sagebrush, hawthorn, serviceberry, bitterbrush and other brushy cover. The season is closed on a small remnant population north of Weiser and a transplanted population in Shoshone Basin, south of Twin Falls.

Seasons	
2002	— October 1 through October 31
2003	— October 1 through October 31

Daily Bag Limit ..... 2  
 Possession Limit After First Day of Season ..... 4

*Note: Sharp-tailed grouse have recently been introduced into historical range south of Twin Falls. The area remains closed to hunting for sharptails to protect this population.*

**Sage/Sharp-tailed Grouse Permit Validation:** Any person hunting sage or sharp-tailed grouse must have in possession their license with a sage/sharp-tailed grouse permit validation. See page 3-4.

# CHUKAR & GRAY PARTRIDGE



ENTIRE STATE  
OPEN

## CITIZENS AGAINST POACHING

1-800-632-5999



Report Wildlife  
Crimes

### Seasons

2002 — September 21 through January 15, 2003  
2003 — September 20 through January 15, 2004

Daily Bag Limit ..... 8 Chukar and 8 Gray Partridge  
Possession Limit After First  
Day of Season ..... 16 Chukar & 16 Gray Partridge  
Vehicle restriction in Twin Falls County and Owyhee  
County: See Page 8.



**Chukar Partridge**  
**Distribution and Habitat**  
**Use:** Shaded area(s) show general distribution of chukar partridge. This species was introduced into Idaho from Asia. They are common in suitable habitat along the Salmon, Snake and Boise rivers, and along other river drainages of southern and central Idaho up to an elevation of about 5,000 feet. Chukar habitat consists of steep, rocky canyons with grassy and brushy vegetation.



**Gray Partridge**  
**Distribution and Habitat**  
**Use:** Gray partridge, another introduced species, are most common in agricultural regions, but can also be found in sagebrush/grassland areas. They are hardy birds able to withstand severe winter weather if adequate food is available. Gray partridge are widely distributed, but are most common in the state's agricultural valleys.

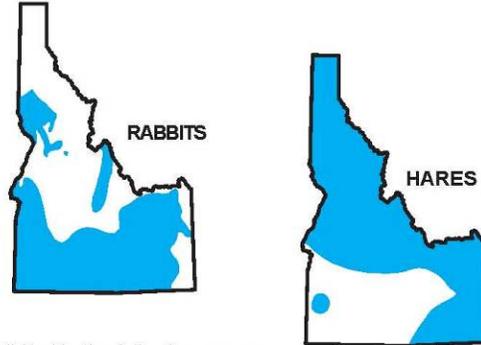
## UPLAND GAME ANIMALS — COTTONTAIL RABBITS AND SNOWSHOE HARES

### UNLAWFUL METHODS OF TAKE

**No person shall take upland game animals:**

- From one-half hour after sunset to one-half hour before sunrise.
- With a trap, snare, net, or shotgun using shotgun shells exceeding three and one-half (3 1/2) inches in length.
- From boats or other craft having a motor attached UNLESS the motor is completely shut off and forward progress has ceased, or the boat is drifting naturally, or it is propelled only by paddle, oars, or pole, or it is beached, moored, or resting at anchor.
- By the use or aid of any electronic call.

*Shaded areas show  
general distribution of  
these species.*



### AREAS CLOSED TO HUNTING

Hunting, killing, or molesting upland game animals is prohibited in the following areas:

- Craters of the Moon National Monument in Blaine and Butte counties.
- Harriman State Park Wildlife Refuge in Fremont County.
- Nez Perce National Historical Park in Clearwater, Idaho and Nez Perce Counties.
- That portion of Ada County within Veterans Memorial Park and the area between State Highway 21 and the New York Canal from the New York Canal Diversion Dam downstream to the Boise City limits.
- Yellowstone National Park in Fremont County.
- On any of those portions of federal refuges, State game preserves, State wildlife management areas, bird preserves, bird refuges, and bird sanctuaries for which bird hunting closures have been declared by legislative or Commission action.

SEASONS, BAG AND POSSESSION LIMITS - STATEWIDE			
SPECIES	SEASON	DAILY BAG LIMITS	POSSESSION LIMIT (After 1st day of season)
COTTONTAIL RABBITS	2002: SEP 1, 2002–FEB 28, 2003 2003: SEP 1, 2003–FEB 29, 2004	8	16
PYGMY RABBITS	<b>SEASON CLOSED</b>		
SNOWSHOE HARES	2002: SEP 1, 2002–MARCH 31, 2003 2003: SEP 1, 2003–MARCH 31, 2004	8	16

## AMERICAN CROWS

No person shall take American crows:

- From one-half hour after sunset to one-half hour before sunrise.
- With trap, snare, net, rifle, pistol or a shotgun using shells exceeding three and one-half (3 1/2) inches maximum length.
- From boats or other craft having a motor attached UNLESS the motor is completely shut off and forward progress has ceased, or the boat is drifting naturally or it is propelled only by paddle, oars, or pole, or it is beached, moored, or resting at anchor.



### AREAS CLOSED TO HUNTING

Areas closed to hunting of upland game birds are also closed to hunting of American crows. See page 8.

SEASONS, BAG AND POSSESSION LIMITS - STATEWIDE		
SPECIES	SEASON	DAILY BAG AND POSSESSION LIMITS
AMERICAN CROW	2002: OCT 1, 2002–JAN 31, 2003 2003: OCT 1, 2003–JAN 31, 2004	NO LIMITS

## FALCONRY



### GENERAL INFORMATION

**Birds of Prey or Raptors:** All falcons, hawks, owls and eagles.

**Falconry:** The sport of taking quarry by means of a trained bird of prey.

**Species from the following families may be used for falconry:**

- Accipitridae (except the bald eagle).
- Falconidae.
- Strigidae (Great horned owl only).

**Hunting season:** Upland game birds and upland game animals may be taken by falconry during firearms seasons established for those species. During these seasons, falconers may take regular bag and possession limits. During extended falconry seasons, special limits apply.

Migratory game birds may be taken by falconry during firearms seasons established for those species. However, during firearms seasons and extended falconry seasons, special bag and possession limits apply.

Falconers are now required to have state permits for raptor captive breeding, falconry, falconry capture (nonresidents only), falconry in-state transfer, and falconry meet (nonresidents only). Contact your local IDFG office for more information.

There are special requirements regarding the capture, possession, transfer and use of birds of prey in Idaho. Complete rules are available from: IDFG, P.O. Box 25, Boise, ID 83707.

### SPECIAL RESTRICTIONS ON HUNTING WITH BIRDS OF PREY

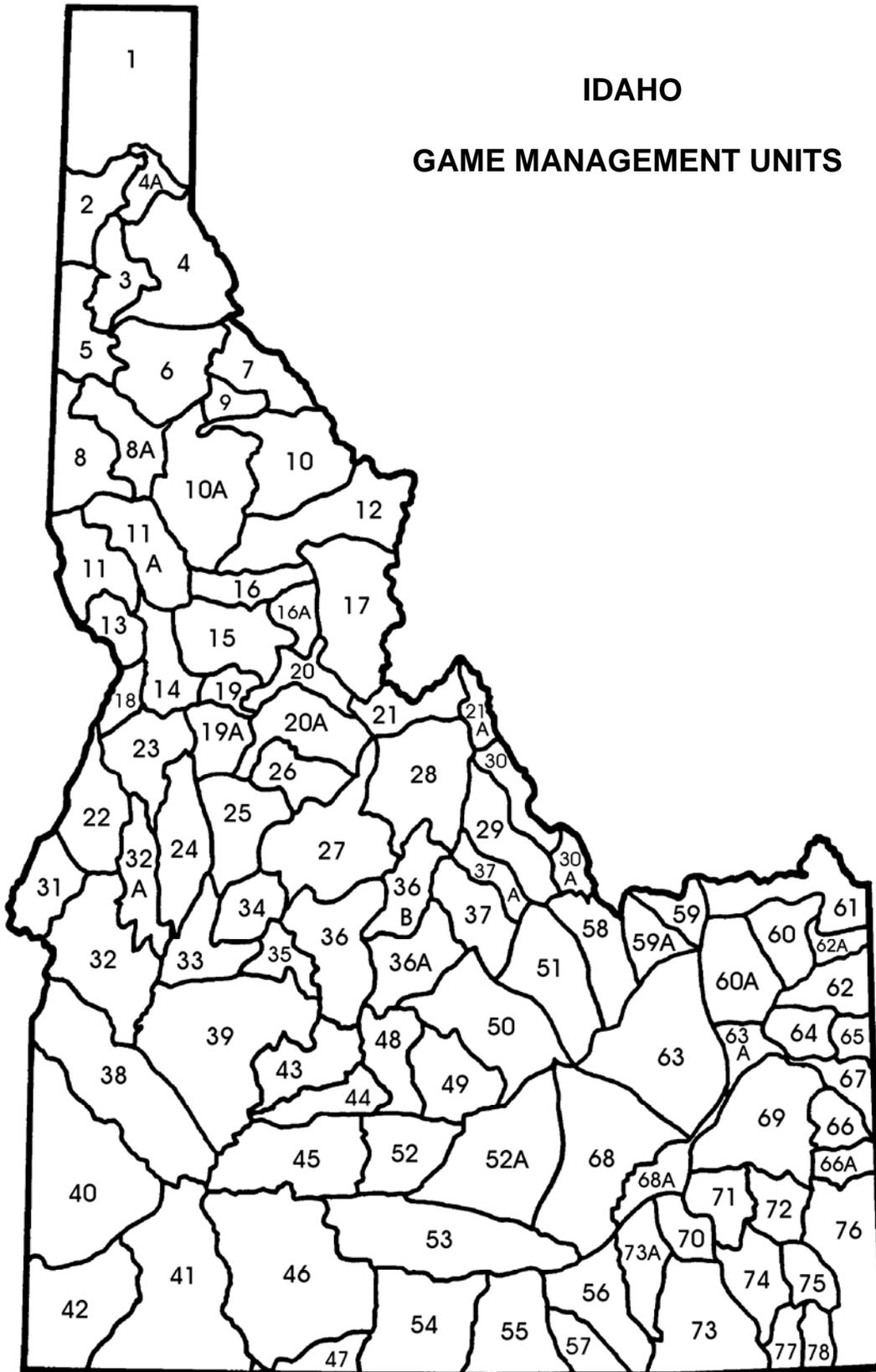
Anytime a hunting bird of prey kills quarry that may not be taken under established rules, seasons, bag limits, or license requirements, the falconer must leave the dead quarry where it lies. EXCEPT that the bird of prey may feed upon the quarry before leaving the kill site.

No person may carry a firearm or be accompanied by any person carrying a firearm while hunting by falconry.



# 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.

